mQuest

a product of cLueTec

mQuest® Manual

Version 22

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1   Introduction

1.1   mQuest modules

Modul	Funktion
QuestEditor (on the PC)	• Create and modify questionnaires
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QuestServer	• Server for questionnaire and record synchronization
QuestReport (based on the web)	• Overview of projects and project details • First evaluation of records
mQuest Client (on the mobile devices)	• conducting surveys
mQuest Online (based on the web)	• Conducting surveys in the browser

Project steps / interaction of the modules:

1. Questionnaire programming with the QuestEditor: Creation of questionnaires, modifying questionnaires, export of questionnaires or the texts contained within it.

2. File questionnaires on the QuestServer with SurveyManager

3. Loading the questionnaires from the QuestServer onto the mQuest Clients.

4. Execution of any number of surveys with mQuest Client (offline or online) on different devices (e.g. smartphones or tablets).

5. Synchronize the data sets from mQuest Client onto the QuestServer.

6. Display the data sets from the QuestServer and thereafter export the results for evaluation.

> ! You will receive more detailed information about the mQuest Client in the document **mQuest Client Manual.**

> **i** You will find the latest versions of all manuals online at https://www.cluetec.de/solutions/mquest/downloads/

1.2 Mobile operating systems

mQuest runs on mobile devices with the operating systems **Apple iOS** or **Google Android** installed.

Some functions are only available for certain operating systems. Functions which are only available for one Operating system are marked by *. See also Page 189 to find out which functions are supported by which operating system.

> **!** This documentation is mainly focused to devices with Google Android. This applies to the text as well as to the images.
>
> There are deviations of design, handling and the range of functions for Apple iOS devices (→ for further information see Page 189).

1.3   Access data

If your QuestServer is hosted by cluetec GmbH you will receive an invitation e-mail to your area on our server. The e-mail address corresponds to the username of your administrator login, the password will be assigned by you.

In case you host your own QuestServer standard users are pre-installed. Please note the following information regarding these users.

> ! Before your mQuest project goes live, you should first create your own administrator user accounts and afterwards delete the pre-installed user.

The following default user is included in your local installation:

Pre-installed user

username: **startadmin**

Password: **Startadmin42!**

1.4   Application Users and Access Rights

There are three types of application users with different roles: **questionnaire programmers, surveyors and administrators.**

Questionnaire programmers create questionnaires with the QuestEditor. In the QuestEditor there are no access rights. That means that anyone can modify questionnaires.

An **Administrator** has full access rights on the QuestServer with the SurveyManager and can manage questionnaires, their results as well as users on the QuestServer. For this purpose, user authentication in the SurveyManager is necessary.

A **Surveyor,** however, has only limited access rights. They can only access the QuestServer with the mQuest Client, for example, to load questionnaires or to transfer results. For this purpose, user authentication in the mQuest Client is necessary.

An **administrator** is preset in mQuest in delivery state of a local installation. ($\rightarrow$ See also Page 6).

1.5   Manual conventions

In the following, we will introduce you to typographic conventions and symbols we have oriented on during the creation of the reference manual.

Important points are displayed in **bold** letters.

You will find **calls for action** either numbered (as a sequence) or separated:

- **Numbered:**

1. Click on…
2. Then click on…

- **Separated:**

→ Click on…

This sign **>** stands for a sequence of menu items which you must successively click in order to open a certain window or to activate an action. If you read, for example, the following: **Questionnaire > Additional categories,** this means:

1. First, click on the menu item **Questionnaire.**
2. Click thereafter on the entry **Additional categories.**

Cross references, e.g. "(→ See also Page …)" refer to other positions in the document, which could be helpful for the actual matter. The cross references are interactive. That means you can directly jump to the according page by clicking on the reference.

There are different types of **tips,** which in each case, are captioned with another symbol**:**

> **!**   I am an **advice text.** I give you important information concerning your work with mQuest that you should absolutely observe.

> **i**   I am an **information text.** I give you useful tips and information for you to work with mQuest.

2   QuestEditor overview

With the QuestEditor you create the questionnaire, which you will use later on for your mQuest Client for your survey.
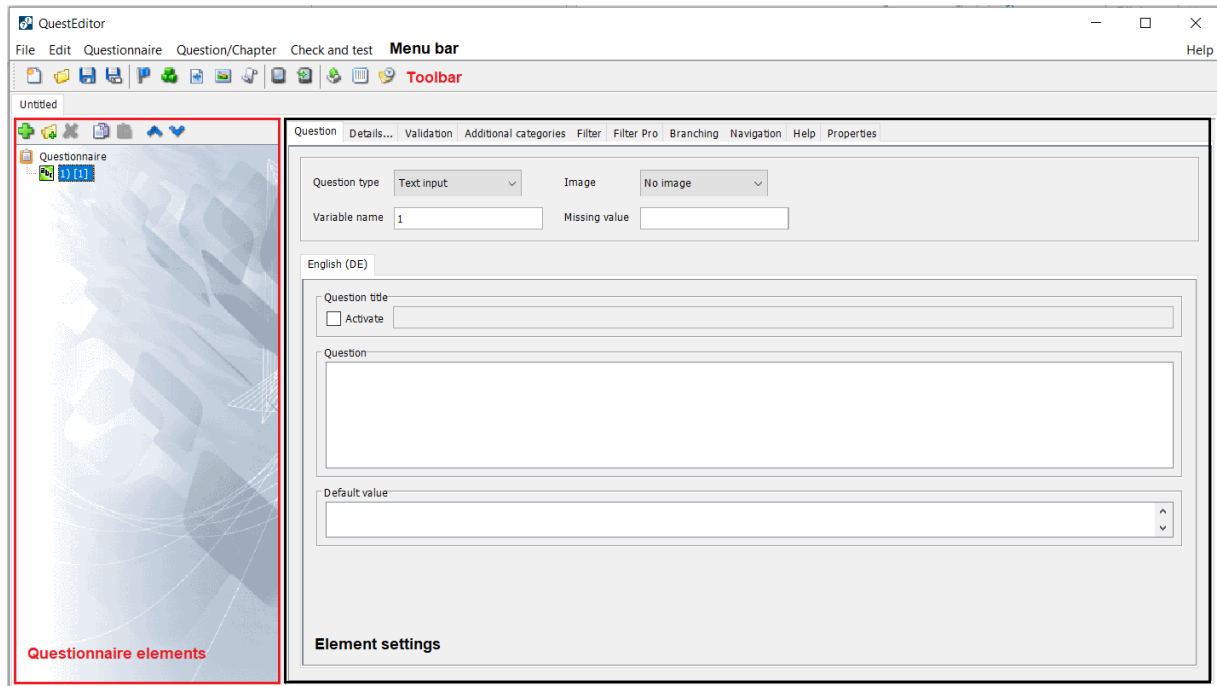
The largest part of the user interface is used by the two main areas beneath the toolbar.

Questionnaire elements:

In the left section you see the questionnaire elements and the questionnaire elements toolbar. In that section, the chapters and the created questions are listed in numerical order. The variable names are displayed in squared brackets after the according question number.

With the shortcut symbols in the questionnaire element toolbar, the same commands are executed as with the corresponding entries under the menu item **Question.**

Element settings:

The right section displays the settings to the different questionnaire elements, for example, questionnaire, questions, chapters and loops. Depending on the element and question type the displayed settings will vary.

> i   You can change the width of the main areas freely by clicking on the bar between both areas with the cursor, holding down the mouse button and pulling the bar to the right or to the left.

Menu bar:

In the menu bar located at the top edge of the QuestEditor you can find the menu items for using the QuestEditor:

FILE:

- **New**
  Creates a new and blank questionnaire

- **Open**
  Opens an already existing questionnaire

- **Close**
  Closes the current questionnaire

- **Close all**
  Closes all open questionnaires

- **Save**
  Checks and saves current questionnaire

- **Save as**
  Checks the current questionnaire and saves it under a new name

- **Language settings**
  Opens a new window in which you can choose the application language and default questioning language used in the tree view

- **Export**
  Exports the current questionnaire to different formats (→ See also Page 149)

- **Import**
  Imports a questionnaire text file into the current questionnaire (→ See also Page 153)

- **Exit**
  Exits the QuestEditor

EDIT:

- **Cut**
  Cuts out the highlighted text to the clipboard

- **Copy**
  Copies the highlighted text to the clipboard

- **Paste**
  Pastes the copied text from the clipboard to the current position of the cursor

QUESTIONNAIRE:

- **Language**
  Adjust the language settings of the questionnaire (→ See also Page 17)

- **Additional categories**
  Add or delete additional categories (→ See also Page 17)

- **Navigation**
  Adjust global navigation elements (→ See also Page 20)

- **Global Variables**
  Manage the Global variables (→ See also Page 19)

- **Quotas**
  Definition of the Quota variables (→ See also Page 80)

- **Images**
  Manage the images that shall be used in the questionnaire (→ See also Page 22)

- **Auto-completion lists**
  Manage the auto-completion lists of the questionnaire (→ See also Page 23)

- **Add file**
  Manage the attached files of your questionnaire (→ See also Page 22)

QUESTION:

- **Add question**
  Adds a new question in the questionnaire elements under the currently selected question or chapter

- **Add chapter**
  Adds a new chapter in the questionnaire elements under the currently selected question or chapter

- **Delete question / chapter**
  Deletes the currently selected question or chapter

- **Copy question / chapter**
  Copies the currently selected question or chapter into the clipboard

- **Paste question / chapter**
  Adds the copied question or chapter from the clipboard to the currently selected question or chapter

- **/ Move question / chapter up / down**
  Moves the currently selected question or chapter one position up or down

CHECK AND TEST:

- **Questionnaire-Test**
  Launches the current questionnaire in the mQuest Client Emulator (→ See also Page 147)

- **Questionnaire-Quick-Test**
  Launches the current questionnaire from the current question in the mQuest Client Emulator (→ See also Page 148)

- **Check Questionnaire**
  Checks questionnaire for fields which are not satisfactorily filled out and other discrepancies

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i   The questionnaire is automatically checked every time it is saved.

- **Show change history**
  Opens the change history (→ See also Page 105)

Toolbar:

Under the menu bar you will find the toolbar with the following symbols:

- (New)
- (Open)
- (Save)
- (Save as)
- (Manage languages)
- (Definition of global variables)
- (Definition of the quota variables)
- (Manage images)
- (Manage auto-completion lists)
- (Questionnaire-Test (Test questionnaire starting from first question))
- (Questionnaire-Quick-Test (Test questionnaire starting from current question))
- (Export questionnaire)
- (Show overview of the changes of the questionnaire)

3   Creating a questionnaire: QuestEditor

3.1   Global settings

Here you can undertake the general settings for the questionnaire.

3.1.1   Questionnaire data

With the **questionnaire data** you can carry out the optional settings in the questionnaire.

→ Click on the questionnaire element **Questionnaire** in the left area to open the questionnaire data.

- **Project name**
  Here you can enter a project name for the questionnaire. This name will then be used as the project questionnaire name in the SurveyManager and on the mQuest Clients. The project name is visible via the project data during the survey (→ See also **mQuest Client Manual**).

ℹ   If you do not enter a project name, the file name of the questionnaire will be used as the project name when you save the questionnaire for the first time.

The project name must contain only letters (no umlauts), numeric characters, hyphens (-), underscores (_), periods (.) or spaces.

- **Type**
  Here you can manage the actions of the questionnaire after the completion of a survey.

  - **continuous**
    After you have completed a survey, a new one automatically begins.

  - **standard**
    After you have finished a survey, a new one does **not** start automatically.

- **Canceled questionings**
  Here you can indicate how uncompleted surveys are treated.

  - **keep**
    The results up to cancellation of the survey are kept and are available for evaluation.

  - **delete**
    The results up to cancellation of the survey are deleted and are no longer available for evaluation**.**

---

i   Uncompleted surveys are marked accordingly in the results view in the SurveyManager (→ See also Page 180).

- **Default question heading**
  Here you can define a heading which will be displayed in every question of the questionnaire.
  If you have defined a **heading** for single questions, this heading will be displayed instead of the **default heading**.

  In **both kinds of headings** you can use variables and include e.g. answer texts or Global variables (→ See also Page 83).

- **Description**
  This text field is available for any purpose**.**

- **Created**
  This entry contains the time when the questionnaire was created.

- **Last filesave**
  This entry contains the time of the last saving.

- **Version**
  The questionnaire version gets incremented with every saving.

- **UUID**
  This entry contains the unique questionnaire ID and is generated automatically.

3.1.2   Languages

QuestEditor offers the possibility to create a questionnaire in different languages.

SET LANGUAGES:

➔ Click on **Questionnaire > Languages** to set the languages for the questionnaire (➔ See also Page 65).

3.1.3   Additional categories*

"Don't know" or "Refused" are typical additional categories. These are answers which you can make available, as an additional option, to the person being surveyed.

ADDING/REMOVING ADDITIONAL CATEGORIES:
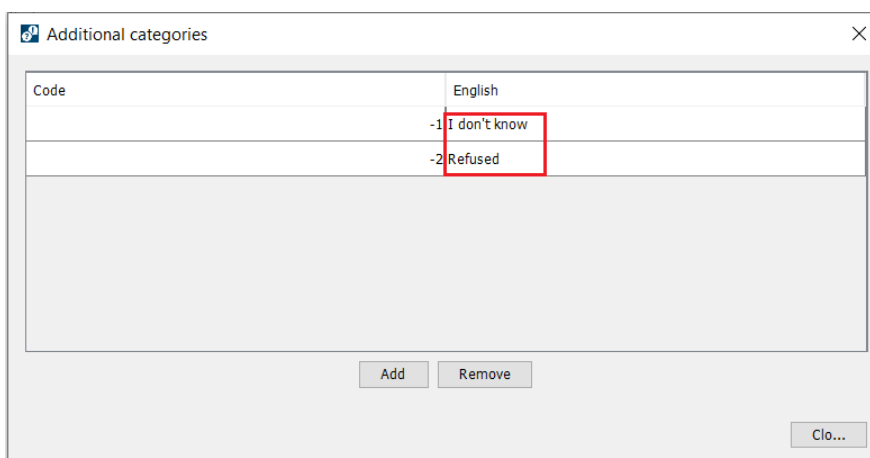
1. Click on **Questionnaire > Additional categories** and then on **add/remove** to add or to delete additional categories

A distinct number which serves for the identification of the additional category in the data sets is automatically generated for each additional category in the first column **Code**.

➔ You can change this code manually. However, it must be numeric and negative.

The second column header contains the language abbreviation of the language you selected.

2. Enter the additional categories in the cells of the language.

3.1.4   Navigation elements

Navigation elements enable you to maneuver throughout the interview on the mQuest Client in your questionnaire or to call up certain menu entries later.

> **i**   The navigation elements can be set up either globally for the entire questionnaire or for each individual question.

SETTING NAVIGATION ELEMENTS:

→ Click on **Questionnaire > Navigation** to carry out the global settings or select one question in the questionnaire elements and click on the tab **Navigation** to carry out the settings for this specific question (→ See also Page 43).

- **Next**
  Goes to the next question

- **Back**
  Goes to the previously asked question

- **Restart interview**
  Restarts the current survey. The already accumulated results of the survey will either be **kept** or **deleted**, according to your settings in the questionnaire.

> **i**   Appears only if the type under **Questionnaire > Questionnaire data** is set to **continuous**.

- **Pause***
  Pauses the survey. A paused survey can be continued later.

- **Help***
  Displays a help text for the current question

- **Hint***
  Displays a hint text for the current question

- **Project data**
  Displays the project data of the questionnaire. This contains the items **Project name**, **Description**, **Keep canceled questionings** (**yes** or **no**), **Created**, **Last filesave**, **Version** and **UUID**.

Enabling/Disabling Navigation elements:

If you would like a navigation element to be available/not available in the questionnaire:

1. Deactivate/Activate the small box of the concerning navigation element under **Enabled?**.

2. Click on **Close**.

Renaming Navigation elements:

You are not required to use the preset description of the navigation elements. You can freely rename each element.

1. In the column of the Language, double-click in the cell of the corresponding navigation element and enter the desired text.

2. Click on **Close**.

> **i**   Renaming navigation elements will only affect those navigation elements which use a text.
>
> Navigation elements consisting of only a symbol may be renamed but this will have no effect on their appearance.

3.1.5   Global variables

You can assign any value to the Global variables which you have defined in the QuestEditor on the mQuest Client at a later time. General information which is valid for several surveys will be entered once before the first survey and then will be carried over automatically into every other survey thereafter, as long as you have assigned the Global variables a new value. The Global variable will then appear in the result table in its own column (→ See also Page 180 for the result view in the SurveyManager).

Example	You create a Global variable with the description "City" in the QuestEditor. In the mQuest Client you can now give this Global variable a value. If you carry out 10 surveys in New York (NY) and 10 in Los Angeles (LA), then you have to assign the Global variable "City" the value "NY" or "LA" in each case only once. That way you assign the value "NY" to the global variable for the first 10 surveys, for the following 10 surveys you assign the value "LA". In the results table a column will be created for "City" and the surveys of the corresponding value "NY" or "LA" will be assigned.

Furthermore, the value of the Global variables can be displayed in texts or as a default text of **Text input** questions (➔ See also Page 84). At this point the assigned value of the Global variables appears during the survey. The Global variable can also be used in connection with formulas (➔ See also Page 69).

> **!**   Please note the rules for the notation of variable names (➔ See also Page 41).

Defining Global Variables:

1. Click on **Questionnaire > Global variables**.
   The following window opens.

2. Click on **Add**.

3. Double-click in the field **Variable name** and enter the desired Global variable name.

4. Click on **Close**.

You also have the possibility to use **predefined Global variables** in your questionnaire whose current value is then saved in every result. These variables must only be defined in the QuestEditor. You do not have to assign them a value in the mQuest Client.

- **gvLang**
  Language abbreviation for the language with which the survey has been carried out.

- **gvRotation**
  Global manual rotation with which the survey has been carried out (➔ See also Page 130 for setting up the rotation plan).

- **DeviceID**
  Unique device number of the mobile device on which the survey has been carried out.

- **gvUser**
  User of mQuest Client

- **gvParticipationKey**
  Participation key of mQuest Client (if used)

- **model**
  The model of the device the result was taken with

- **vendor**
  The manufacturer of the device the result was taken with.

3.1.6 Manage images

Here you can determine which images are generally available to you during the creation of the questionnaire.

> **i** You can only include images of the file type PNG (Portable Network Graphics). JPEG, GIF, TIFF, or the like cannot be included, but must be saved beforehand as a PNG with an image editing program.
>
> Images in file formats other than PNG can also be uploaded as media attachment and inserted manually (→ See also Page 22).

Adding images:

1. Click on **Questionnaire > Images**.
   The following window will open.
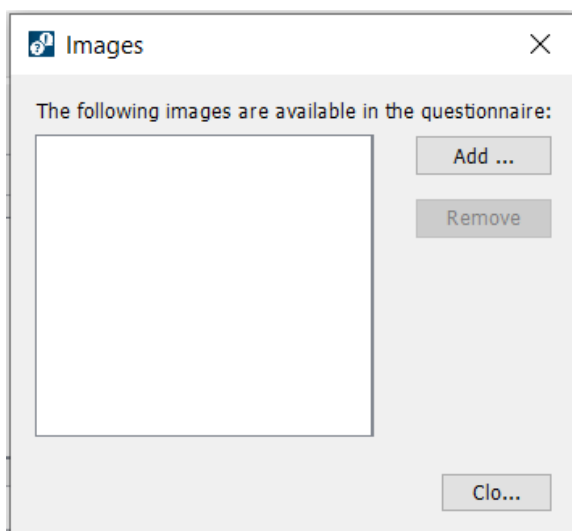
2. Click on **Add**.

3. Select a file.

Removing images:

1. Click on **Questionnaire > Images**.

2. Click on the file name of the image which you would like to remove from the selection.

3. Click on **Remove**.

3.1.7 Manage files

You can add media files to your questionnaire. These files can be added directly to the question text (→ See also Page 58). Possible files are images, audio files and videos.

ADD FILES:

1. Click on **Questionnaire > Add file**.

2. Click on **Add…** and select a file.

3. Click on **Open** and confirm the following dialog with **Yes**, if you want to use the file as a media attachment.

DELETE FILES:

1. Click on **Questionnaire > Add file**.

2. Select the desired file and click on Remove.

3.1.8   Manage auto-completion lists

An auto-completion list is helpful when there is a multitude of predefined answer possibilities to an open text input question. The user does not have to enter the entire answer with this feature, but instead, after input of the first letters, all answer possibilities which begin with these letters are displayed and the desired answer can be selected ($\rightarrow$ See also Page 44). You can also enable a full-text search with a property which allows searching for parts of words ($\rightarrow$ See also Page 87).

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i   Auto-completion lists are normal text files which always have to be saved with the extension **.acl or .macl**. The file name may only contain letters and numbers.

You can create two types of auto-completion lists, .acl and .macl lists:

.acl Lists:

You can create .acl lists in two different ways:

- **Simple Lists:**
  Only the answer possibility will be provided.

- **Lists with Codes:**
  The answer possibility and the corresponding code (e.g., a numerical code) are stored, separated by a semicolon.

The difference becomes visible only with the later interpretation of the questioning results ($\rightarrow$ See also Page 180).

CREATING SIMPLE AUTO-COMPLETION LISTS (WITHOUT CODES):

1. Open a text editor, such as **Notepad** under Windows (**Start > Programs > Accessories > Notepad**).

2. Enter the answer possibilities in the text file and insert a line break after every line.

For example:
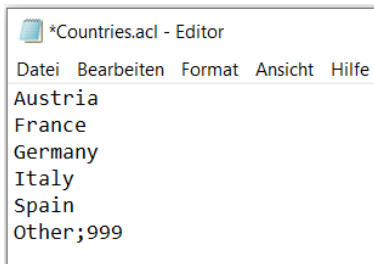
3. Save the file with the file extension **.acl**.

> **!** With this kind of auto-completion list the complete answer text is displayed in the results table in the table column (➔ See also Page 175).

CREATING AUTO-COMPLETION LISTS WITH CODES:

1. Open a text editor, such as **Notepad** under Windows (**Start > Programs > Accessories > Notepad**).

2. Enter the answer possibilities in the text file with their codes – separated by a semicolon – and insert a line break after every line.

For example:
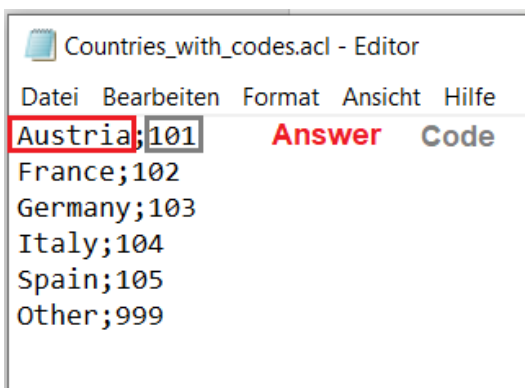
3. Save the file with the file extension **.acl**.

> **!** With the auto-completion lists with codes the answer possibilities will also be displayed on the mQuest Client. Contrary to the simple auto-completion list (without codes) the answer possibility is substituted directly after selection by the code, which is then saved in the results table (➔ See also Page 175).
>
> Do not use a code multiple times in the same auto-completion list. When displaying the survey results later, answers with the same code will be indistinguishable.

.macl Lists:

A .macl list offers you more possibilities than an .acl list. You can add any number of semicolon-separated columns in these lists.

The basic structure corresponds to the structure of the .acl lists with codes.

The answer possibilities are in the first column, the codes that will be saved in the data are in the second column.

Additionally, to the first two columns you can add further columns with information to the individual answer possibilities. You can use this information to pre-filter the answer possibilities that will be displayed for the question with the .macl list.

Example:
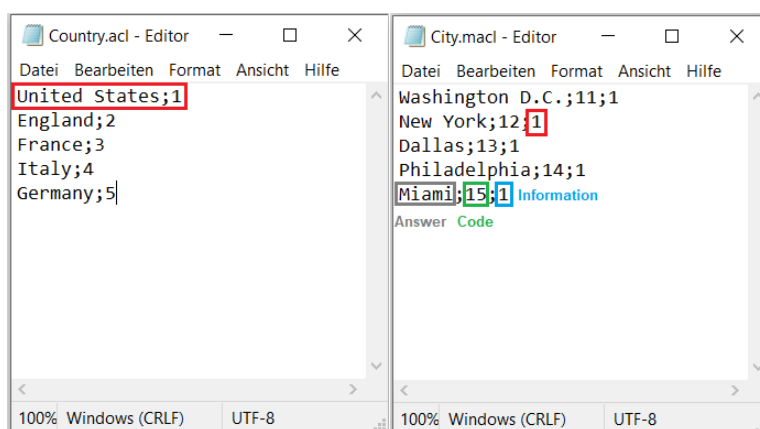
Example	In Q1 you ask the respondent about his or her homeland. Here you deposit the .acl auto-completion list "Country.acl" (on the left side of the graphic). In question Q2 the respondent shall indicate his or her hometown. At this question you place the "City.macl" list (on the right side of the graphic).
	By setting a property at Q2 you can pre-filter the answer possibilities with the help of the third column of the "City.macl" list. Thus, only cities of the chosen country will be displayed as possible answers.
	The property for this example would be: questioning_question_acl_sql_filter=value_2=Q1
	This property means: Compare the third value of the .macl list "City.macl" with the answer given in Q1 and show only matching entries of the .macl list.
	You can find this and other properties in chapter: Text replacement functions / text variables / Properties (→ See also Page 87)

MANAGING AUTO-COMPLETION LISTS:

To make the auto-completion lists available in the questionnaire:

1. Click on **Questionnaire > Auto-completion lists**.

2. Click on **Add**.

3. Select an .acl or .macl list and click on **Open**. You can select several lists at once with CTRL + click or SHIFT + click.
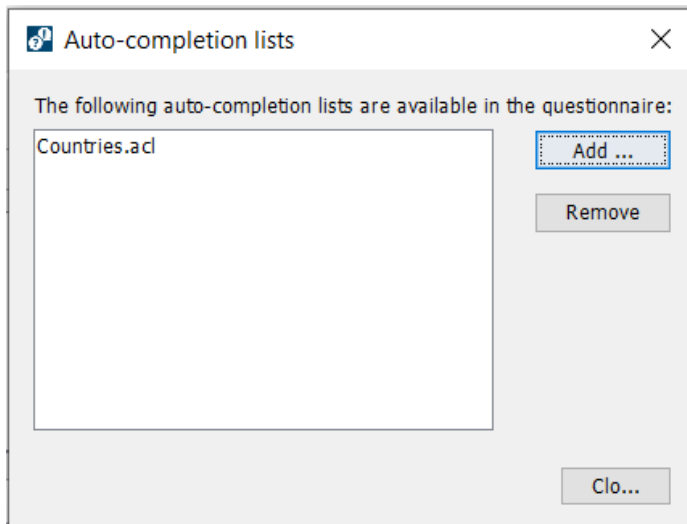
REMOVING AN AUTO-COMPLETION LIST:

1. Click on **Questionnaire > Auto-completion lists**.

2. Click on the file name of the suitable auto-completion list.

3. Click on **Remove**.

> **i**   An auto-completion list can only be removed if it is not used in a question.

MODIFYING AUTO-COMPLETION LISTS:

1. Change the ACL file in the text editor and save it under the same name.

2. Click on **Questionnaire > Auto-completion lists**.

3. Click on **Add**.

4. Select the changed file and click on **Open**.

3.2   Question types

There are different types of questions which are available to you. Every type of question offers different answer possibilities and configuration possibilities ($\rightarrow$ See also Page 37).

3.2.1   Message
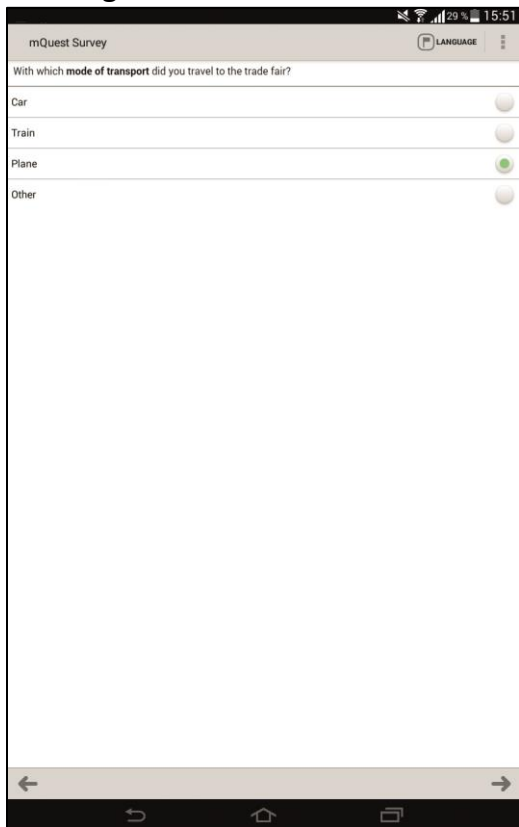
- **Message**

Displays an image or a text, e.g., in the greeting or for additional information to the following question.

3.2.2   Closed questions
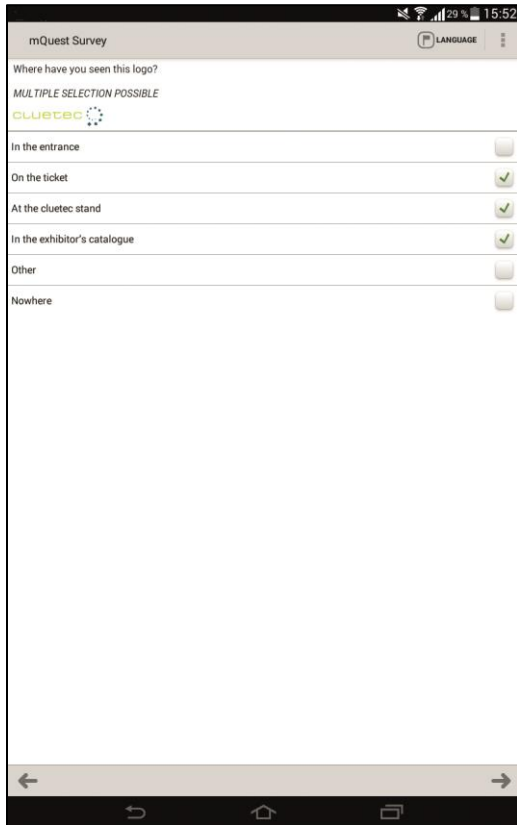
- **Single selection**

Presents answer possibilities from a **list** or an **ImageMap** (→ See also Page 52). Only one answer is possible.

An answer must be selected in order to continue the survey. If necessary, an additional category can be added, e.g. "Don't know" or "Refused" (→ See also Page 17).

- **Multiple selection**

Presents answer possibilities for selection of several answers in a **list** or in an **ImageMap** (→ See also Page 52). It is possible to select multiple answers.

- **Ranking**

Presents answer possibilities in a desired ranking order. It is possible to select multiple answers. The first selected answer is on the 1st position, the second answer is on the 2nd position etc.

3.2.3 Open questions

- **Media input**
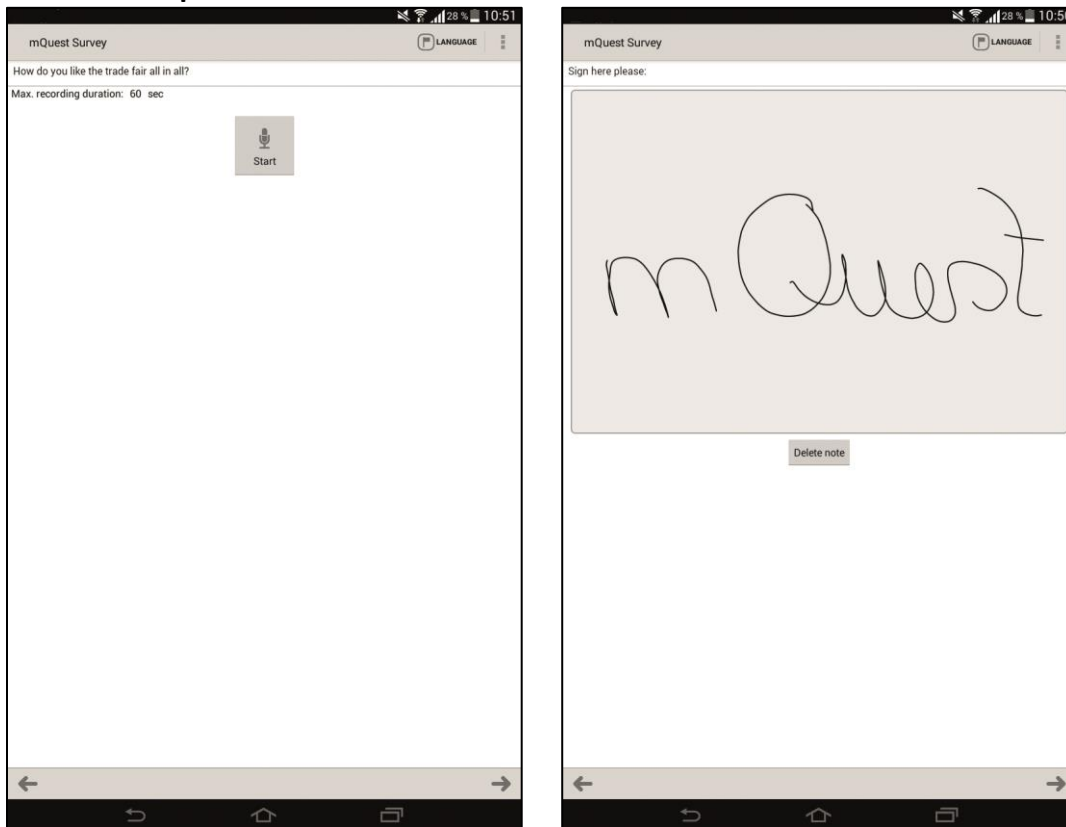
Enables an **audio**, **(markable/multiple) photo** or **video recording,** a **note** or the **capturing of GPS data** as an answer to a question. Additionally, there is the question type variant **Web,** with which you can start an external web application (e.g. internet browser app) within the mQuest application. With a markable photo it is possible to directly mark areas of the photo.

Web (available for Apple iOS)

The question type variant "Web" offers the possibility to open a web application within the mQuest app, without interrupting the survey. In the web module it is possible conduct a part of the survey outside the app. After the external part, the respondent will return automatically to the survey in the mQuest app. By using the property "questioning_question_web_module_resource", the URL of the web module will be set in the questionnaire.

To use given answers from the mQuest questionnaire in the web module, key-value pairs can be delivered to the web module. For this, the property "questioning_question_web_module_query" is used. The results are passed by mQuest as URL/Query parameters:
(e.g.: https://<webmodul-uri>?Key1=Value1&Key2=Value2)

To return to the app, the Web module must call a specific URI that must have the following structure:

"decluetecmquestsurvey://survey-module/<survey-name>/<varname>?<optional-result-query-parameters>".

The "surveyname" is the name of the questionnaire, as it was given via Survey Manager. The "varname" is the variable name of the question which started the web module.

Instead of the placeholder "optional-result-query-parameters", the result parameters of the survey part in the web module transported to the mQuest questionnaire. This is necessary, if the collected results of the web module shall be in the mQuest dataset as well. The results are transferred by the response link from the web module to the questionnaire. This also works via key-value pairs. (e.g.: decluetecmquestsurvey://survey-module/web-test/web-question?output-param-1=test&output-param-3=4711).

 These results are stored in the global variables with the property "questioning_question_web_module_response=".

Property	Possible values	Description
questioning_question_web_ module_resource=	URL	**(iOS only)** With that property you can set the URL for the Media-Choice-Type
questioning_question_web_ module_query=	Static text Text variables	With that property specific parameters can be given to the web module. The key parameters must be separated by a semicolon (;). Key and value are separated by colon (:). (e.g.: questioning_question_web_modul e_query= =input-param-1:$T{Q2};input-param-2:$G{gvLang};input-param-3:Static text with whitespaces)
questioning_question_web_ module_response=	result parameters	That property is used to define a mapping for the result query parameters, when returning to the app. You can specify key-value-pairs which must be separated by semicolons. Key and value are separated by colon (:). e.g.: questioning_question_web_modul e_response=output-param-1:gvFirstChoice;output-param-2:gvSecondChoice;

Alternatively, the option **File selection*** enables you to select a file stored on the device (left). If the selected file is an image file, a preview will be displayed (right).

- **Heat map**

Allows highlighting areas within a graphic.

- **Text input**

Presents a text field for the input of an open-ended answer.

- **Numeric input**

Presents a **text field** (top left) for the input of a decimal or whole number, a **scale** (top right), a **date input** (lower left) or a **time input*** (lower right).

- **Drag&Drop**
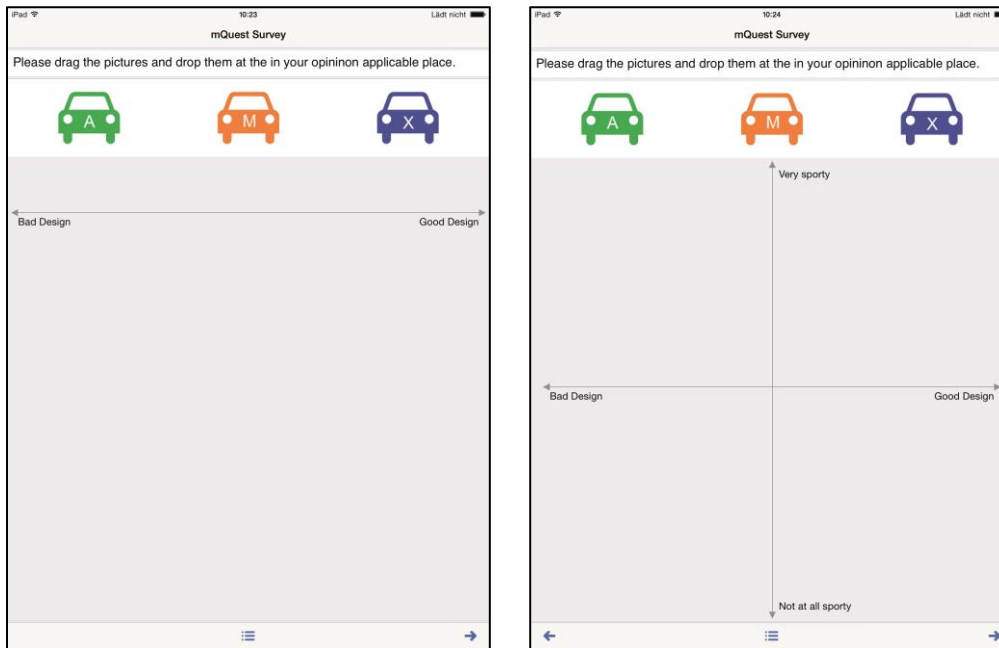
Enables the placing of pictures along an X-axis (left) or in a coordinate system with X-axis and Y-axis (right).

3.3   Creating a questionnaire

3.3.1   Creating questions and answers

i   In order to edit a QuestIon, it must be selected. A question is selected when it is highlighted in blue in the questionnaire elements.

If the question text is too long, it will not be completely displayed in the

questionnaire elements. If you would like to see the entire text, place the cursor on the question; after a short time the entire text will be displayed as a tool tip.
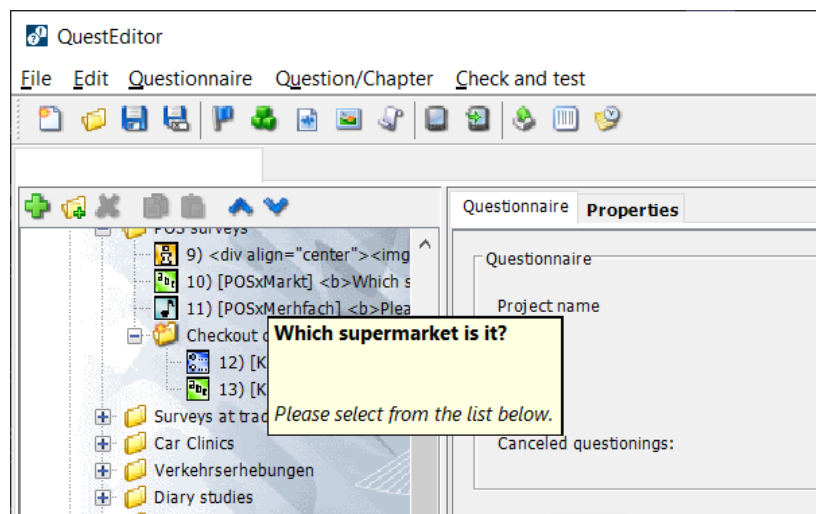
Basically, you always create the questions and answers in the same way:

1. Click on ![plus] in the toolbar to add a new question to the questionnaire elements.

2. Select the type of question in the **Element settings**.
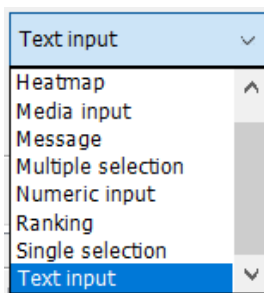
3. Enter a unique variable name. This will be assigned automatically; however, it should be changed.

> **!** Please note rules for the notation of variable names (→ See also Page 41).

4. Optionally enter a **Missing value** (the value has to be numerical with all question types except for **Text input**).

> **!** The missing value of a **Media input** question type is not allowed to be identical with any of the possible media file extensions (e.g., .wav, .mp3, .jpg, .tif, .avi, .mpg, .3gp, .mp4).

5. Optionally select an **Image** (→ See also Page 22). This appears on the mQuest Client always directly beneath the question text. For questions of the types of **Image Map** and **Heatmap,** images are required.

6. Optionally activate the check box **Question title** and enter a title for the question. It will be displayed in the title line of the question in the mQuest Client. (→ See also Page 15).

7. Enter the question text in the field **Question**.

8. With the **Drag&Drop** question type, enter the minimum and the maximum value for the X-axis and the Y-axis (if used) in the **Drag&Drop configuration** area. Enter the labels for the end points of the X-axis and the Y-axis (if used).

---

i   You can, for example, filter for the values of Drag&Drop questions, display the values or validate them.

In order to do this, use the following syntax:

Q5.1.2 > 25

The first digit (5) refers to the Drag&Drop question.

The second digit (1) references the answer position.

The third digit (2) indicates the axis whose value you would like to reference

(1 stands for the X-axis, 2 for the Y-axis).

If necessary, this is followed by the respective operator and a value.

---

9. With the **Single selection**, **Ranking** and **Multiple selection** question types, click in the answer area on **Add** and enter the text of the answer possibilities. Additionally, you can define answer codes in the column **Code** for these question types (→ See also Page 42).

Idx	Answer text	preselected	Code
1		○	1
2		○	2
3		○	3

(tabs: Answers | Include answers)

! There is a **Single answer** option with the **Multiple selection** question type. If during the survey on the mQuest Client, an answer marked as a **Single answer** is selected, no other answer is possible for this question. All the other selected answers will automatically be unselected. Single answers are, for example, "None" or "Not applicable".

Idx	Answer text	preselected	Code	Single answer
1		☐	1	☐
2		☐	2	☐
3		☐	3	☐

(tabs: Answers | Include answers)

---

i You can activate a preselection for one or more answers for the question type **Single Selection** and **Multiple Selection**. Simply check the box in the column **Pre-selected.**

---

10. With the **Drag&Drop** question type, click on **Add** in the **Drag&Drop items** area and create the picture files.
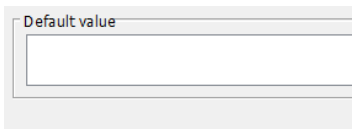
(Drag&Drop items | Include answers)

Add   Remove   ▲   ▼   ●

11. You can delete the answers and Drag&Drop elements again by clicking on **Remove**.

12. With the question types **Text input** and **Numeric input** you are able to optionally enter a **Default value**. The text or the number which is entered in this field will already be preset later on the answer line during the survey with the mQuest Client. This default value does not have to be taken over by the user; they can delete it at any time and

substitute it with another answer. With text variables you also have the possibility to use answers from other questions as a default value (→ See also Page 83).
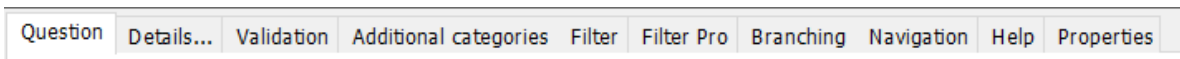
!   If the questionnaire is defined in multiple languages, the default value for the question type **Numeric input** is automatically set for all languages.

With the question type variants **Date** and **Time,** the default value must be specified in the following format: YYYYMMDD (Date) or HHMM (Time).

With the question type **Text input,** the default value in various languages can be different and therefore must be set for each individual language.

---

13. Conduct other settings through the different tabs in the **element settings**. These will be explained in the following chapters.

!   The entries in the field **variable name** and **missing value** are important in the later interpretation and evaluation of the results (→ See also Page 175).

The entry for **missing value** is placed in a result cell if a question was not asked, for example, because of a filter.

With the question type **Message,** you are not able to enter a **variable name** and a **missing value**.

!   Save your questionnaire in regular intervals and make backup copies.

---

i   You are also able to copy questions or chapters from one questionnaire to the other (→ See also Page 119.)

3.3.2   Rules for the notation of variable names

Variable names must be only characters and/or numeric characters. Furthermore, they must be unique, i.e., a variable name cannot be used multiple times in the questionnaire.

Special characters, spaces and reserved names (Beginn, Ende, Dauer, begin, end, duration, gvLang, gvRotation, DeviceID) are not allowed.

This applies to variable names of questions as well as to Global variables.

3.3.3   Answer codes

For questions with the question type **Single selection**, **Multiple selection,** and **Ranking** you can enter an answer code in the field **Code**. For **Single selection** questions and **Ranking** questions the answer code of the selected answer will be entered into the result table. For questions with the type **Multiple selection** the name of the answer column will contain the answer code (→ See also Page 175 for details to the result interpretation).

Without specification of an answer code the **ID** (column **Idx**) of the selected answer will always be entered in the result table.

ENTERING ANSWER CODES:

1. Select the desired question in the **questionnaire elements**.

2. Click in the field **Code** of the desired answer and enter a code.

An answer code is firmly tied to the accordant question. That means when you move a question, the code will move too.

---

i   Answer codes must be unique, i.e. an answer code may not appear multiple times within one question. This also applies to included answers.

!   If you would like to use a **numerical code**, you must separate decimal places with a period. If you use a comma instead of a period, the code is not interpreted as a number and this can lead to errors during a possible formula calculation with this code (→ See also Page 68). In addition, it can cause wrong mappings with the SPSS® Export (→ See also Page 184).

The maximal length of an answer code is **20 characters**.

RESET ANSWER CODES:

You can reset the answer codes of a question at any time.

1. Select the desired question in the **questionnaire elements**.

2. Click on the button 🔣 in the **Element settings** beneath the answer window.

    *All answer codes of the selected question will be reset. The codes are now equal to the corresponding answer ID in the column **ID**.*

> **!** If you reset the answer codes of included answers, you need to immediately ensure the uniqueness of these answer codes.
>
> I.e.: answer codes of included answers cannot be used in the question in which they are included or vice versa.

3.3.4   Navigation elements

You can adjust the navigation elements which are defined globally (→ See also Page 18) for every question individually.

ENABLING / DISABLING NAVIGATION ELEMENTS:

1. Select the desired question in the **Questionnaire elements**.
2. Click in the **Element settings** on the tab **Navigation**.

3. Click in the small box in the column **Enabled?** of the corresponding navigation element to enable / disable it for this question.

RENAMING NAVIGATION ELEMENTS:

→ Double-click in the language column of the corresponding navigation element and enter a new name.

> **i** Renaming navigation elements will only affect those navigation elements which use a text.
>
> Navigation elements consisting of only a symbol may be renamed but this will have no effect on their appearance.

3.3.5   Additional categories

The activation and deactivation of the additional categories work in the same way as the activation and deactivation of the navigation elements.

> **i** You cannot use any additional categories for the question types **Message** and **Media input.**

ACTIVATING / DEACTIVATING ADDITIONAL CATEGORIES:

1. Select the question in the **Questionnaire elements**.

2. Click in the **Element settings** on the tab **Add. categories**.

This tab contains a table listing the additional categories that are defined globally (→ See also Page 17).

3. Click in the small box on **Use this answer?** of the corresponding additional category to activate / deactivate it for this question.

3.3.6   Using auto-completion lists

Auto-completion lists can be used with the question type **Text input** and must be added beforehand in the global settings of the questionnaire (→ See also Page 23).

USING AUTO-COMPLETION LISTS:

1. Select the question in the **Questionnaire elements**.

2. Click on the tab **Details** in the **Element settings**.

3. In the drop-down menu **Auto-Completion List, choose** the list which you would like to use.

4. Optionally you can enter the max. number of matches in the input field **Max. matches Auto-completion list**. The match list will only be displayed on the mQuest Client when the number of matches is less than or equal to the set number of maximum matches. The number of displayed matches can then be fitted to the available space on the screen to avoid the need to scroll. The internal default value is 14.

3.3.7   Entering help and hint texts*

You can enter a help text and a hint text for every question. There is, in addition, the possibility to set an image for the help text or to replace the help text by a PDF file.

Help will be accessed later on the mQuest Client **Menu Button** > **Help**. You can access the hint via **Menu Button > Hint**.

> **!** The navigation elements for help and hint must be enabled.

ENTERING HELP AND HINT TEXTS:

1. Select the question in the **Questionnaire elements**.

2. Click on the tab **Help** in the **Element settings**.

3. In the text fields, enter the suitable texts and optionally select an image which should be displayed.

USING A PDF FILE AS HELP TEXT:

1. Prepare a PDF file with the desired contents.

2. Add the file to the questionnaire via **Questionnaire > Add file** (→See also Page 22).

3. Select the question in the **Questionnaire elements**.

4. Click on the tab **Help** in the **Element settings**.

5. Activate the checkbox **Help PDF** and select the desired PDF file.

> **i** If you would like to use a help text instead of a help PDF, activate the checkbox **Help image**.
>
> Please note that help texts can only be displayed on Android devices. Help PDF can be displayed both on Android devices and on iOS devices.
>
>
> When you would like to use the help function at question groups, you need to set the help resource at the first question of the question group chapter.

3.3.8   Defining input formats, setting attributes

With the help of the tab **Details** you can carry out more detailed settings for every question. The setting possibilities depend on the question type. Hence, the tab view differs depending on the question type.

Area properties:

- **Min. answers**
  Here you can specify how many answers to a question must at least be given for the question types **Multiple selection** and **Ranking**.

- **Max. answer/ Max. matches auto-completion lists**
  Here you can specify the maximal number of answers that may be given to the question types **Multiple selection** and **Ranking**. If an auto-completion list has been selected for the question type **Text input**, you can specify the max. number of matches that has to be reached so that the hit list will be shown (→ See also Page 44).

- **Editable result fields**
  Here you can specify, for the question type **Media input,** how many additional, at a later time editable result fields exist to a question in the result. Any text, e.g., a coding of an audio recording, can be entered there.

- **Order**
  Here you can change the order of how the answers in the later survey on the mQuest Client will be displayed for the question types **Single Selection**, **Multiple selection,** and **Ranking**. You have the following options:

  - **As entered**
    The order on the mQuest Client corresponds to the order of the answers from the element preferences.

  - **Rotating**
    In a survey the answers are displayed in order, but the selection of the start element rotates depending on the number of surveys on the mQuest Client.

  - **Random**
    The order of the answers is random.

> ℹ To avoid positioning effects, you can vary the order of the answers for **Single Selection, Multiple Selection,** and **Ranking**.
>
> → Place a checkmark next to the answer in the box **Fixed Position** if an answer should always be displayed in a certain position.
>
>

- **Max. recording duration (sec.)**
  Here you can specify, for the question type **Media input**, question type variant **Audio** or **Video,** the maximum recording duration for audio and video recordings in seconds.

> ! Please be certain that enough memory is available for recording, e.g., by additional memory cards on the mobile device.

- **Question type variant**
  Here you can specify, for the question types **Single selection**, **Multiple selection, Media input, Text input**, **Numeric input,** and **Drag&Drop,** how the answers in the later survey are displayed on the mQuest Client. Depending on the question type, there are different question type variants available.

- **Single / Multiple selection:**

  - **ImageMap***
  The answers are made available in an ImageMap (➔ See also Page 52).

  - **Vertical list**
  The answers are listed below each other.

- **Numeric input:**

  - **Date**
  Number fields for date inputs. Days, months and years can be set with a plus and a minus button.

  - **Scale**
  You can adjust the desired value with a slider on a horizontal scale. The scale always stretches from the min. value to the max. value that you defined in the **Format** area.

  - **Time**
  Number fields for time input. Hours and minutes can be set with a plus and a minus button.

  - **Numeric input**
  An input field that enables you to enter an integer or a decimal number is available.

- **Text input**

  - **Text**
  A text field will be shown in which the answer can be entered.

  - **Barcode/QR-Code***
  You can scan barcodes and QR Codes. The content of the code will be saved in the text field.

- **Media input**

  - **Audio**
    You can create an audio recording as an answer.

  - **Photo**
    You can take one or more photo(s) as an answer and, depending on the question type variant, directly mark areas of the photo.

  - **Location**
    The current GPS coordinates of the device are captured. Depending on your mobile device and settings, GPS, WiFi, and the current radio cell are used to determine your position.

  - **Video**
    You can record a video as an answer.

  - **Note**
    You can draw or write with your fingers as an answer.

  - **File Selection***
    You can select a file stored on the device as an answer. If the file selected is an image file, a preview will be displayed.

! With the question type variants **Photo** and **Video,** the external camera module starts, with which you can perform the recording.

In order to record pictures or videos, the mobile device needs to provide the required hardware. Please check the availability of the required functions timely; e.g. Apple iPads of the first generation do not provide a camera module.

For starting and stopping the recording with the external camera module, please refer to the manual of your mobile device.

---

i Audio files which have been recorded with Apple iOS devices can be played with QuickTime Player.

- **Drag&Drop**

  - **1-Dimensional**
  You can place the answers along the X-axis.

  - **2-Dimensional**
  You can place the answers in a coordinate system.

- **Further options:**

  - **Auto-completion list**
    Here you can specify, for the question type **Text input**, if and which auto-completion list should be available with this question.

  - **QuickClick**
    If this option is selected, once the question for the question type **Single selection** has been answered, the survey automatically jumps to the next question. With questions of the question type **Text input**, this option enables you to jump to the

next question by pressing the Enter key. With **Numeric inputs,** the option QuickClick is automatically activated. With questions of the question type **Ranking,** this option enables you to jump to the next question if the selection of the last answer corresponds to the number of the maximal matches.

- **Required answer**
  It is imperative that the question is answered. Only thereafter the next question can be asked.

> **!** With the question type **Single selection** an answer is **always** required. With such questions an additional answer like "Don't know" or "No answer" sometimes makes sense.

- **Required question (Superior "m out of n")**
  This option is only selectable if the concerning question is a sub-element of a chapter which has a certain **random** "**m out of n**" **selection**. It ensures that this question is always asked (→ See also Page 113).

- **Open-ended text allowed***
  In addition to the defined answers, the respondent may give his own answer in text form with the question types **Single selection** and **Multiple selection**.

> **!** If you have activated the function **open-ended text allowed** for the question type **Single selection**, it is imperative that you additionally create an answer, for example "**Other**". With **Single selection,** at least one answer must be selected, and the open text will not be evaluated as a given answer. If the respondent would like to answer with his own text, the user must still click this answer (e.g. "other") beforehand.

Format area:

- **Minimum value**
  Here you can specify how small the entered number, at a minimum, can be for answers to a question of the question type **Numeric input**.

  With the question type variant **Scale** this value's minimum is -1.000.000.

- **Maximum value**
  Here you can specify how large the entered number, at a maximum, can be for answers to a question of the question type **Numeric input.**

  With the question type variant **Scale** this value's maximum is 1.000.000.

> **!** With the question type variants **Date** and **Time** the minimum value and the maximum value must be specified in the following format: YYYYMMDD (Date) or HHMM (Time).

- **Total number of characters**
  Here you can specify how many characters can be used in an answer with the question types **Numeric input** and **Text input**. Spaces and commas within numbers are counted.

> **!** Notice that the settings, under certain circumstances, can mutually cancel each other out. For example, when you set the **total number of characters to** 2 and the **minimal value** to 100, an entry is not possible!

- **Total number of characters for editable result fields (Encoding)**
  Here you can specify the maximum number of digits or letters which are allowed to be entered in the editable result fields of the multimedia files, of the question type **Media input**. Spaces are also counted.

- **Decimal places**
  Here you can specify the maximum number of decimal places that can be used for answers to a question of the question type **Numeric input**.

- **Characters**
  Here you can specify what kind of character can be entered in answers to a question of question type **Text input**.

  - **Letters**
    Only letters can be used.

  - **Alphanumeric**
    Letters and numbers can be used.

3.3.9   Creating an ImageMap

For the question types **Single selection** and **Multiple selection**, you have the possibility to create an **ImageMap** (area-sensitive image) for the answer selection. In order to do this, you can specify a selectable area in the image for every possible answer.

CREATING AN IMAGEMAP*:

1. Load the image which you would like to use as an ImageMap in the questionnaire via **Questionnaire > Images** (→ See also Page 22).

2. In the **Element settings**, select the question type **Single selection** or **Multiple selection** from the **Question type** drop-down menu.

3. Select the image which you would like to use for the ImageMap from the drop-down menu **Image**.

4. In the Answer Area, click on **Add** to apply the desired number of answer possibilities.

5. Select the question type variant **ImageMap** in the tab **Details**.
    The following warning window will be displayed:
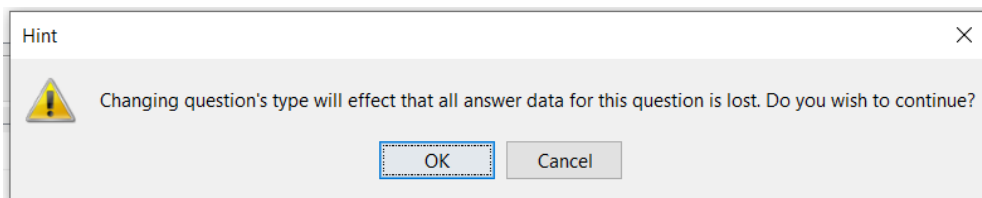
6. Confirm with **OK**.

7. Select the tab **Question** in the answer area and click on the answer for which you would like to set a selectable area in the image.
    The selected answer will be highlighted.
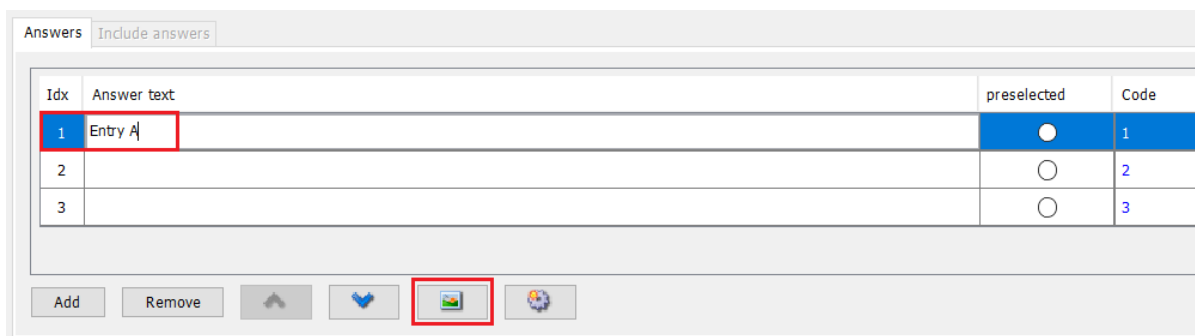
8. Enter the desired answer text.

9. Click on to open the image.
    The window with the selected image will be displayed.
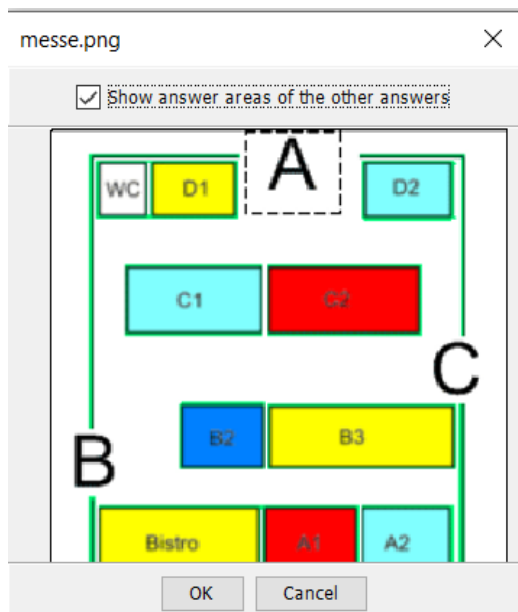
10. Hold down the mouse button and draw a rectangle around the area that should be marked as selectable area. Confirm with **OK**.

11. Repeat the steps 7 to 10 for the remaining answer possibilities.

3.3.10 Including answers

There are basically two possibilities to include answers. First you can, with the help of the **Text-variable $T,** integrate the answers from open-ended and closed questions into another text (→ See also Page 85). The second possibility is including answer possibilities of closed questions with the tab **Include answers**.

The feature **Include answers** allows you, with closed questions, to include the answers of a previous closed question. If you have, for example, several questions with the same answer possibilities, you only need to enter them once. Thereafter you can use the answers for all other questions.

Furthermore, with this function you can specifically use answers which were selected or not selected in the previous question.

Moreover, you can, in addition to the included answers, define other answer possibilities, which were perhaps not available for selection in the previous question.
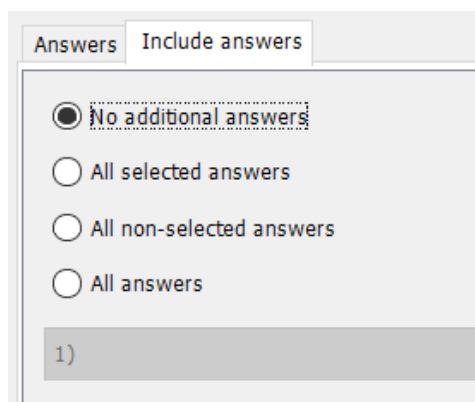
> **!** Open text answers and answers from the question types **Media input, Numeric input** and **Text input** cannot be included.
>
> If a question is not asked due to a Filter, then the answers to this question will not be included into a following question unless you have selected the option **All answers**.

> **!** You cannot include any answers into a question, if in a following question a **simple Filter** (→ See also Page 54) applies to these answers, because only directly entered answers are available for selection.
>
> In contrast to that it is also possible to reference included answers with **Filter Pro** (→ See Page 69 and 76).

3.3.11 Simple Filter

All questions in the mQuest Client are basically asked in successive order. It is the order in which they are defined in the questionnaire elements in the QuestEditor. The filter function is there to influence the order of questions in connection with previously given answers.

> **i** Besides the simple filter, there are still other possibilities which influence the order of the questions: **Branching** (→ See also Page 78) and **Filter Pro** (→ See also Page 76).

With the Filter you can determine the following:

- Which conditions must be fulfilled, so that a question can be asked?

- If the conditions are not fulfilled and the question is not asked, which question should the system jump to?

mQuest Client checks the filter as follows:

1. Before the question is asked, filters are checked.

2. If you have a filter setup, its conditions will be checked.

3. If the conditions are fulfilled, the question will be asked.

4. If the conditions are not fulfilled, the question will not be asked. Instead, mQuest Client will jump to the next question which you have selected as a jump target.

> **!** Filters are not able to reference included answers, instead they are only able to reference own answers of a question. On the contrary, Filter Pro can reference included answers (→ See also Page 69 and 76).
>
> With the question type **Ranking** the filters can reference those answers which were assigned the first position in the ranking order.

FILTER SETUP:

Because the tab **Filter** is very extensive, it will be described in more detail in the following. The filter shown in the following was set up as an example, so that all setup possibilities can be seen; it does not have any functions.
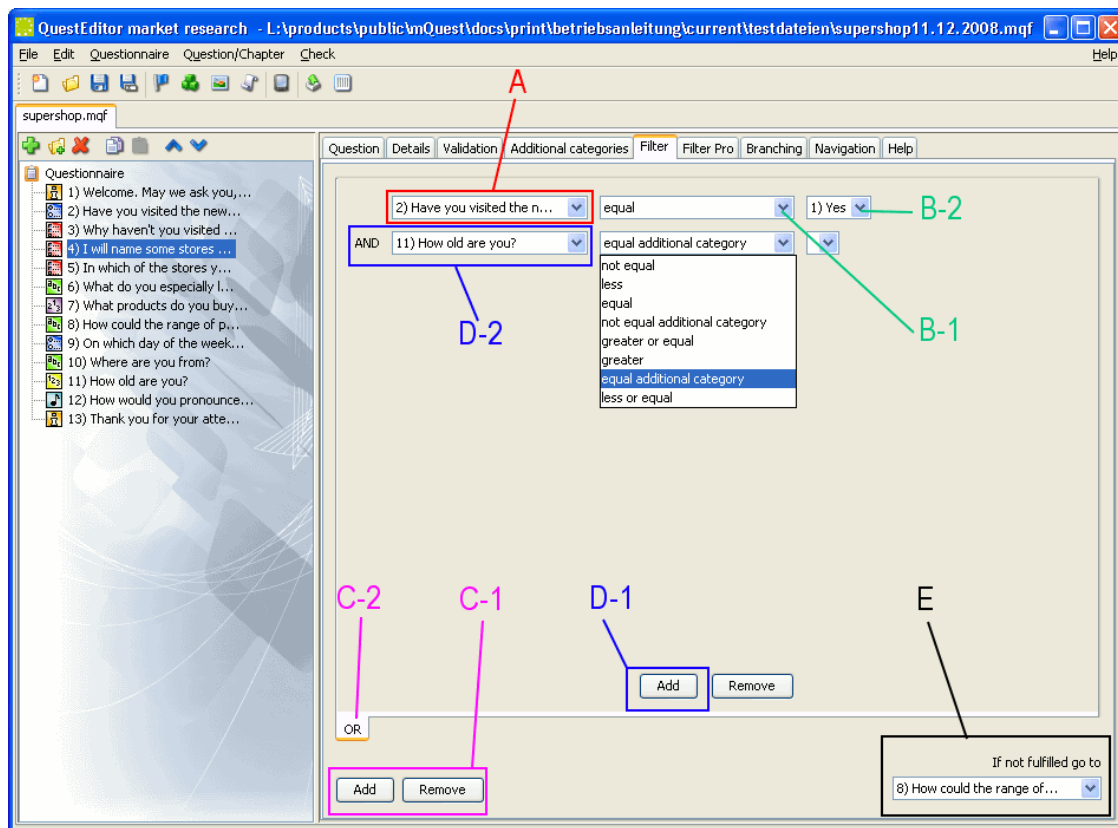
A: From the drop-down menu, select the question (here the question **2**) on whose answer depends whether the current question (here the question **4**) is asked.
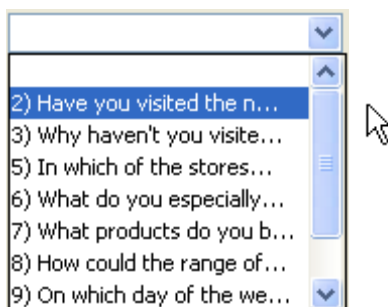
B-1: From this drop-down menu, select the type of condition, for example what answer must be given in example **A** for the filter to apply. For this, there are, depending on the question type, the following conditional operations:
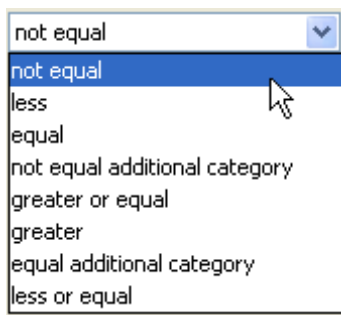
B-2: From this drop-down menu, select the answer to which the condition must apply. All answers under the question entered in example **A** are available for selection. If the question has the type **Numeric input** or **Text input**, a text field will be available for entering the answer.
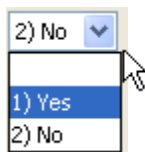
C-1: With a click on **Add / Remove** you either add or remove an OR relation. An OR relation appears in a new tab with the nomenclature OR **(C-2)**. You can set up further filters in this tab. The question is asked if the conditions are fulfilled by at least one of the defined filters. When removing, the OR relation of the currently selected tab is removed.
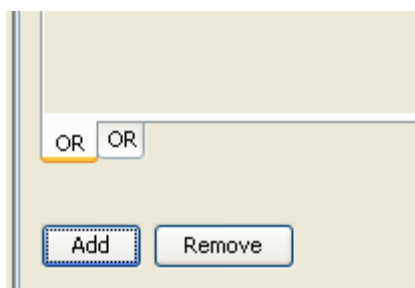
D-1: With a click on **Add / Remove** you either add or remove an AND relation. An AND relation appears in the **same** tab under the first condition **(D-2)**. Here you can set up the second condition that must be fulfilled, so that the question is asked. When removing, the lowest AND relation is removed.
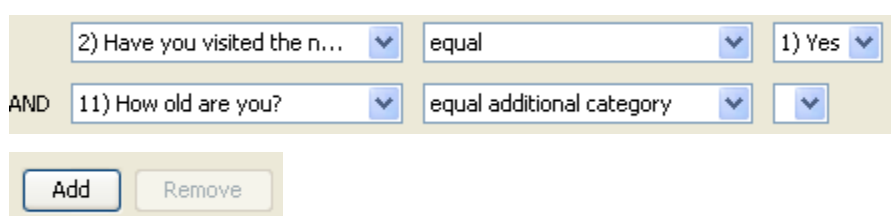
> **i**   The number of conditions and relations is unlimited.

E: With this drop-down menu you can select which question is asked, if the conditions previously set up have not been fulfilled.
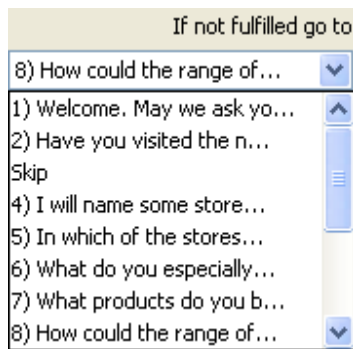
3.3.12 Jump targets

You must select a jump target to which the questionnaire will jump if the entered condition is fulfilled or not fulfilled with **Filter**, **Filter Pro**, **Branching** and **Validation**. You select the jump target via the drop-down menu **If not fulfilled go to**. Possibilities available to you are, for example, the next question, other questions and the end of the survey.

!	When the question for which you set up a jump target is **within a navigable chapter or navigable loop**, the selection possibilities for the jump target will automatically be limited. Only those questions that can be found within the same navigable chapter or navigable loop will be shown. Besides the remaining questions you can also select "Complete chapter and go to chapter overview" or "End of current chapter". In both cases the survey will jump to the chapter overview.
	When the question for which you set up a jump target is **outside a navigable chapter or navigable loop,** the selection possibilities for the jump target will automatically be limited. Only those questions that can be found outside of navigable chapters or loops will be shown.

!	When a preceding question has been set up as a jump target, a warning message will appear, because jumping back during the survey can be critical. By jumping back all answers are deleted from the questions which are beyond the jump target.
	With back jumps in the questionnaire, it must be taken into consideration that a back jump to a not previously asked (jumped over) question in the survey is not executable. Be certain when defining a jump target that a jump always leads to either the following questions or to a preceding question which cannot be jumped over.

3.3.13 Media Attachments

Herewith you can add images, audio files and videos to your question texts. For this purpose the accordant media file needs to be added to the questionnaire beforehand (→ See also Page 22 for managing files).

Images will always be displayed right in your question text. Videos and audio files will be replaced by text links which will start the audio or the video player. You can add the files by using HTML.

ADDING AN IMAGE:

1. Add the following HTML tag to your question text at the place where your image shall be displayed:

   - ****

2. Replace **image.png** by the file name (and the file ending) of the accordant image.

ADDING AN AUDIO FILE:

1. Add the following HTML tag to your question text at the place where the link to the audio file shall be displayed:

   - **<audio src="audio.wav"> Text link </audio>**

2. Replace **audio.wav** by the file name (and the file ending) of the accordant audio file and add the text link.

ADDING A VIDEO:

1. Add the following HTML tag to your question text at the place where the link to the video shall be displayed:

   - **<video src="video.mp4"> Text link </video>**

2. Replace **video.mp4** by the file name (and the file ending) of the accordant video and add the text link.

> **!** The file formats that can be played as well as the video and the audio player which will be used depend on your mobile device.

Example	A typical text may look like this:
	"Click here to play the video."
	In this case **here** is the text link that you have to add to your HTML tag.

3.3.14 Question- and Answer text formatting*

With the following HTML tags you can format your question- and answer texts according to your needs.

HTML-tag	Function/ description
TEXT	The text will be displayed bold
<big>TEXT</big>	The text will be displayed bigger
<blockquote>TEXT</blockquote>	The text will be displayed in a block and will be marked with a blue vertical at the beginning of the line
 	At this tag a line break will be performed
<cite>TEXT</cite>	The text will be displayed italic and as a quote
<dfn>TEXT</dfn>	The text will be displayed italic and as a definition
<FONT COLOR="RGB Color code">TEXT</FONT>	The text will be displayed in the corresponding color
<i>TEXT</i>	The text will be displayed italic
<p>	At this tag a paragraph will be performed
TEXT	The text will be displayed smaller
<u>TEXT</u>	The text will be displayed underlined
<hx>HEADING<hx>	Creates a heading; replace x with a number from 1 to 6 to determine the size of the heading
TEXT	The text will be emphasized

> **!** Here are some examples for possible color codes:
>
> **#FF0000 (red); #00FF00 (green); #0000FF (blue); #FFFF00 (yellow)**

3.3.15 Creating a grouped question (matrix, question group)

mQuest offers you the possibility to create grouped questions. This can either be as a matrix or as a question group. In a matrix several **similar questions** with the same answer will be displayed in a tabular view. In a question group several different questions will be displayed in one screen.

Example for a matrix question:

CREATING A MATRIX QUESTION:

For creating a matrix question you need to add a new chapter to your questionnaire. The chapter needs the following structure:

- At first a question of the type **Message**. You may enter the question text of the matrix question here.

- Afterwards any number of questions of the type **Single selection** or **Multiple selection** to define the individual criteria.

- For all questions the **same answers need** to be defined (Hint: Define the answers in the first question and include them in the following ones – **Include answers**).

- There are no other questions or sub-chapters allowed in this chapter.

- To define this chapter as a matrix question you have to enter the following in the **Properties** tab: **questioning_chapter_composite_matrix=true**

> **i**   For Multiple selection questions within a matrix you can define single answers, just as you can for any other Multiple selection questions.
>
> It is also possible to use filters within a matrix question.

> **i**   When you use matrix questions within loops you have the possibility to display answers from other iterations behind the matrix.
>
> Enter the following into the **Properties tab** of the chapter:
>
> **questioning_chapter_composite_matrix_option_compare=true**

> **i**   Within a matrix question you can define the width of the first column or visually separate columns at the end.
>
> In order to do this, enter the following into the Properties tab:
>
> Define column width: (define percentage of the display width for the first column):
>
> **questioning_chapter_composite_matrix_question_column_width_portrait=XX**
> **questioning_chapter_composite_matrix_question_column_width_landscape=XX**
>
> Visually separate the last n columns:
>
> **questioning_chapter_composite_matrix_separate_last_column=n**

CREATING A MATRIX QUESTION WITH POLARITY:

A matrix question with polarity allows comparing two values.

The general structure is equal to normal matrix questions.

- At first a question of the type **Message**. You may enter the question text of the matrix question here.

- Afterwards any number of questions of the type **Single selection** to define the individual criteria. Separate the single values within the answer text with "@@@" e.g. good@@@bad.

- For all questions, the same answers need to be defined.

- To define this chapter as a matrix question with polarity, you have to enter the following in the Properties tab:
  questioning_chapter_composite_matrix_with_polarity=true

CREATING A MATRIX QUESTION WITH AUDIO RECORDING

Additionally, you have the possibility to add audio recordings as a supplement. These can be hidden or shown with the help of filters (→ See also Page 76) depending on the given answers.

The general structure of such questions is similar to the structure of regular matrix questions.

1. Create a Matrix question as described above.

2. Add a question of the type audio recording after every question of the type single or multiple selection. You can apply filters to these questions.

3. Enter the following in the chapter's **Properties tab**:

   questioning_chapter_composite_matrix=true
   questioning_chapter_composite_matrix_with_audio=true

CREATING A QUESTION GROUP

1. Create a new chapter.

2. Create all desired questions for this question group.

3. Enter the following in the chapter's **Properties tab**:
   questioning_chapter_question_composite=true

> **!** Within a question group, you can define filter statements that are evaluated dynamically directly within the question group, i.e. on the same screen. This allows you to display questions within the question group, as long as the filter condition applies to a preliminary question from the same question group. To do this, you must set the following question property for the referenced question:
> questioning_question_composite_adhoc_evaluation = true

Restrictions for grouped questions:

- **For the chapter of the compound questions the following setting should not be modified:**
  - Random "m out of n" selection**: All**

- **If the matrix question shall be a jump target for a previous question, the jump target should be the Message at the beginning of the matrix chapter.**

3.3.16 Creating Drag&Drop questions

With Drag&Drop questions you can place pictures one-dimensionally along an X-axis or two-dimensionally in a coordinate system with X-axis and Y-axis. The axes represent a previously defined value range. When a picture is placed, the appropriate X-value and Y-value (if used) is saved within the results.

> **!** The question type **Drag&Drop** is supported on Android devices from version 4.0 onwards.

Example for a Drag&Drop question:
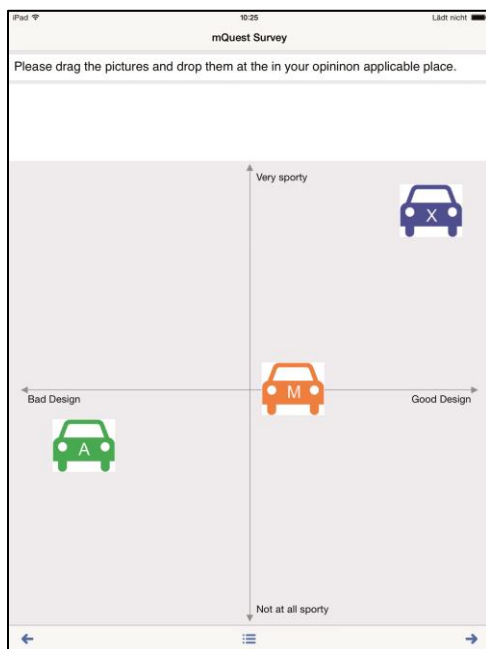
Creating a Drag&Drop question:

1. Select the question type **Drag&Drop** in the **element settings** and set **variable name**, **missing value**, **image question title** and **question** (→ See also Page 37).

2. Select the **question type variant 1**-**Dimensional** or **2-Dimensional** in the tab **Details**.

> **Example**   You create a Drag&Drop question in which the picture is supposed to be placed in a coordinate system. Select **question type variant 2-Dimensional**.

3. Enter the minimum and maximum value for the X-axis and the Y-axis (if used) in the **Drag&Drop configuration** area.

> ! For the values of the X-axis and the Y-axis only numerical values are permitted. The maximum value must always be greater than the minimum value.

> i When you have selected **question type variant 1-Dimensional** in the tab **Details**, the appropriate input boxes for the Y-axis are grayed out.

4. Enter the axis labels for the appropriate end points of the X-axis and the Y-axis.

Example:

5. Click on **Add** in the **Drag&Drop items** area to create a new picture file.

Example:

6. Click on in order to select the media file that is uploaded to the picture file.

Example:

> i With you can delete the selected media file. The created picture file is not deleted from the questionnaire if the file is used at another place. With you can display the selected media file in the picture display. With **Remove** you can delete a created picture file from the question and the questionnaire. With and you can move the created picture files upwards and downwards.

3.4   Creating a multi-language questionnaire

You can create your questionnaire with the QuestEditor in several languages. The desired language can be changed between and during the surveys on the mQuest Client.

> **!**   English (en) is set as the default language.

ADDING A LANGUAGE

1. Click on **Questionnaire > Languages**.

2. Activate the control box for the desired language. **Additional Languages** allows you to select **more languages.**

3. Click on **Close**.

After you have subsequently added the new language, tabs and columns will be automatically added to the questionnaire wherever you can perform language-dependent settings and entries. This concerns the following texts in the QuestEditor:

- **Description**

- **Additional categories**

- **Question and answer text**

- **Other texts, like help and hint texts, Navigation elements und Names of chapters, Loops und Loop cycles as well as Question titles and Default question titles.**

DELETING A LANGUAGE

1. Click on **Questionnaire > Languages**.

2. Deactivate the control box of the language which you would like to remove from the questionnaire.

3. Click on **Close**.

!   When you remove a language, all question and answer texts of the concerning language will be irretrievably deleted.

---

i   You also have the possibility to use the pre-defined Global variable **gvLang** to record in the results which survey was carried out in which language (→ See also Page 19 for the use of Global variables).

3.5   Using formulas in the questionnaire

With formulas you are able to define conditions for **Validations**, **Branching**, **Filter Pro** and **Quotas**. In addition to that, you can use them to carry out mathematical calculations within your questionnaire and allow for their results to be displayed during the survey.

You use formulas for calculations and for conditions:

- **Calculations:**
  With the help of formulas you can conduct mathematical calculations in your questionnaires. With the formula variable $F you can use the results of these calculations in the question or answer text or as a default value (→ See also Page 83). The results of the formulas are calculated during the survey and are shown.

- **Conditions:**
  In addition, you can also use formulas with Branching, Validation or Filter Pro to set the respective conditions (→ See also Page 76 ff.).

> **!** Formulas are case sensitive. Therefore, always pay attention to upper and lower case when using variables in formulas.
>
> For the use of value variables in formulas, the number of the question must be used, not the variable name.

3.5.1   Value variables

In most formulas you use in the questions, Validations, Branching or Filter Pro, you would like to access the values of other questionnaire elements.

You can use, for example, Global variables and values of given answers. You can access these via the so-called value variables.

3.5.1.1 Value variable A – Auto-completion list

Syntax: A<Question number>.<Auto-completion list name>

Here you receive a code for the answer to a question or the value of an entry from an auto-completion list (→ See also Page 23 for the use of auto-completion lists) and can verify, for example, if an answer to a question is contained in the auto-completion list. If the answer to the question **<Question number>** is contained in the auto-completion list **<Auto-completion list name>**, then the value or code will be returned, otherwise a blank text is returned ("").

Example:

The "Countries" auto-completion list has the following entries:
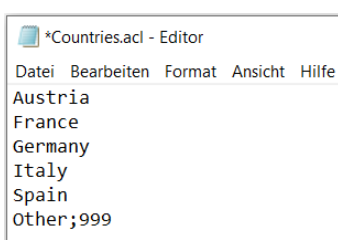
Listed in the following table is the value that is returned depending on the answer of question 7 and the used formula:

Formula condition	Returned value		
	Answer for Question 7 is "Germany"	Answer for Question 7 is "Other"	Answer for Question 7 is ""
A7.Countries == ""	0	0	1
A7.Countries == "Germany"	1	0	0
A7.Countries == "Other"	0	0	0
A7.Countries == "999"	0	1	0

3.5.1.2 Value Variable G – Global Variable

Syntax: G_<Variable name>

Here you receive the value of a Global variable (→ See also Page 19) and can verify, for example, if the Global variable has a certain value.

Example:

Listed in the following table is the value that is returned, depending on the value of the Global variable "MyVariable" and the formula used:

Formula condition	Returned value	
	Global Variable "MyVariable" has Value "MyValue"	Global Variable "MyVariable" has Value ""
G_MyVariable == ""	0	1
G_MyVariable == "MyValue"	1	0

3.5.1.3 Value Variable L – Loop cycle

Here you can check which loop cycle is being asked by using a formula (→ See also Page 115 for further information to the value variable L).

3.5.1.4 Value Variable Q – Answers

Syntax: Q<Question number> or **Q<Question number>.<Answer number>**

On the one side you can query which answer was specifically given or selected. For example, you receive the entered number with a numeric input or the answer number or the code of the selected answer with a single selection. You can access these values through the value variable **Q<question number>**, e.g., Q2 if you would like to use the value of the given answer of question 2 in a formula.

The second kind of value variable Q is only relevant for the question type **Single selection**, **Multiple selection** and **Ranking**. They verify whether or not a certain answer has been selected. You can access this value variable through **Q <question number>.<answer number>**, e.g., Q8.1, if you want to query whether the first answer of the question 8 was selected or not.

> **!** Please notice that the numbering of the answers will change if you include answers into a question for which also other additional answers are defined. The number of an included answer in a previous question will be added to the number of additional answers in the new question. If you integrate, for example, the three answer possibilities which had the numbers 1, 2 and 3 in the preceding question into a question for which another two own answer possibilities are given, the integrated answer possibilities will receive the numbers 3, 4 and 5.

> **!** If you want to refer to a question or an answer within a loop, you need to specify this loop (→ See also Page 115).

In the following you will see a table of the concrete values which you receive according to the question type and the type of the value variable Q.

Question type	Q<Question number>	Q<Question number>.<Answer number>
Numeric input	The input as a number.	Not possible.
Additional category	The code of the suitable additional category.	Not possible.
Text input	The input as a text.	Not possible.
Additional category	The code of the suitable additional category.	Not possible.
Single selection	The number of the given answer. If a code was assigned, this is preferred. The code is then either number or text. If the code is set as a number, you must separate the decimal place with a period instead of with a comma!	Selected = 1 Not selected = 0

Additional category	The code of the suitable additional category.	The code of the suitable additional category.
Multiple selection	Not possible.	Selected = 1 Not selected = 0
Additional category	Not possible.	The code of the suitable additional category.
Ranking	The answer number of the answer which was put on position 1.	Selected position of the answer number. If no position was awarded for it = 0.
Additional category	The code of the suitable additional category.	The code of the suitable additional category.

> **!** The question types **Message** and **Media input** cannot be referenced by any formula.

3.5.1.5 Extension C of the value variable Q

If a question, due to filters or jumps during survey, is not asked, you are still able to use it in a formula. You have the possibility to assign a defined value (positive integer) which is then automatically used with the formula calculation if the question was not asked.

- **C-Extension for a question**
  Syntax: Q<Question number>C<Value>

  If e.g., Q21C1 is in a formula, but question 21 is not asked and thus cannot be answered, this variable automatically returns the value as 1 during the formula calculation.

- **C-Extension for answers**
  Syntax: Q<Question number>.<Answer number>C<Value>

  If e.g., Q12.4C0 is in a formula, but question 12 is not asked and no answer can be evaluated, this variable automatically returns the value as 0 during the formula calculation.

3.5.1.6 Other Value Variables

- **RC** (Result count)
  Returns the number of the previous results

- **DSRS** (Duration since result started)
  Returns the time since the start of the survey (in seconds)

- **DSLR** (Duration since last result)
  Returns the time since the last result (in seconds)

- **DSLRM** (Duration since last result minute)
  Returns the time since the last result (in minutes)

- **DSLRH** (Duration since last result hour)
  Returns the time since the last result (in hours)

- **TODAY**
  Returns the current date in the following format: YYYYMMDD

- **TIME**
  Returns the current time in the following format: HHMMSS

- **BATTERY**
  Returns the current battery status of the mobile device in percent

- **LANGUAGE**
  Returns the current questionnaire language
  E.g. $F{LANGUAGE=="en"} → There will be a 1 if the language is English, 0 if not

- **CHANNEL**
  Returns the current platform of the client, e.g. OFFLINE_ANDROID for Android Client.

- **PROGRESS**

  Returns the progress of a survey expressed as a percentage.

- **TIMESTAMP**
  Millisekunden (Unix-Zeitstempel seit 01.01.1970). Can be used for calculations, for example: $ F {TIMESTAMP - Q1}

3.5.2   Operators

You can use the common operators listed below with all formulas. With those you can combine several conditions (Boolean expressions) with logical or with mathematical operators. Additionally, expressions can also be put in parentheses.

Mathematical Operators:

Math. Operator	Function
+	Addition
-	Subtraction
*	Multiplication
/	Division

! When using figures within the formulas you must separate the decimal positions with a period. If you use a comma instead of a period, the number will not be recognized and the calculation cannot be carried out.

With the value variables that return text, e.g., with text inputs or codes, you cannot apply mathematical operators.

To combine several Boolean expressions with mathematical operators it is absolutely necessary that each of the Boolean expressions is parenthesized individually. The mathematical value of an expression (e.g., Q1 == Q2) is either 1 for fulfilled or 0 for not fulfilled. Such a formula must be parenthesized as follows: **(Q1 == Q2) + (Q2 == Q3)**.

Comparative operators:

Comparative operators	Function
==	equal
!=	not equal
>=	equal to or greater than
<=	equal to or less than
>	greater than
<	less than

> **i** The comparative operators == and != not only work with numbers but also with text. For this purpose, the comparative text must be put in quotation marks. You can verify, e.g., whether the given text answer from question 1 is similar to that of a certain text. The comparison would then be as follows: **Q1 ==** "**Berlin**".
>
> A comparison of a given text answer can also be made, for example, with the value of the Global variable **City** of the questionnaire. The comparison would then be as follows: **Q1 == G_City.**

Logical operators:

You can also combine several conditions by using logical operators.

Logical Operator	Function
&&	and
||	or

Other Operators:

Operator	Function
%	Modulo
!	Negation

Text functions

Operator	Function	Example	Result
round	rounds a number	$F{round(2,5)}	3
ceil	rounds up	$F{ceil(2,1)}	3
floor	rounds down	$F{(2,9)}	2
str	converts a number to a string	$F{str(Q1)}	number as string
substr(str, start, [end])	extracts a part of a string	$F{substr(Q1, 4, 9)}	the substring
match("reg,{numberOfSigns}",input)	checks regular expression	$F{match("\[a-bA-Z0-9\],{3,10}",Q1)}	For Q1: > only letters and numbers allowed > min. 3 signs > max 10 signs
contains("keyword",“text”)	checks if “keyword” is contained in “text”	$F{contains("a",Q1)}	1 if <a> is contained in answer of Q1, 0 if not
if(cond, trueval, falseval)	if-condition	$F{if((Q1<7),1,0)}	if answer of question 1 is smaller than 7 result is 1, 0 if not
trim(str)	deletes leading and trailing spaces of a string	$F{trim(Q1)}	the string without leading and trailing spaces
len(str)	calculates the length of a string	$F{len(Q1)}	length of string as a number
parseNumeric	converts a string into a numeric value	(→ See Example)	
taskparam(x)	returns the	$F{taskparam(“param1	Value of the

Operator	Function	Example	Result
	value of a task parameter	Key")}	parameter "param1Key"
acl("col<column-index>;<acl-name>;<condition>")	Loads the column value of an acl line for the named ACL-list and the given index, where the given condition is true.	$F{acl("col1;location.acl;col2==Q42")}	Column value of an acl line and given index.

You can use all text functions also with answers of questions or Global variables.

Example	By default the values of Global variables are interpreted as text. If you define an integer as a value for a Global variable, this input can be interpreted as a numeric value.
	For example you can use the current rotation of a chapter in a calculation:
	$F{ parseNumeric(G_gvRotation) …}

3.5.3   Filter Pro

This function is an extension of the simple filter function, so that you can realize complex filters. In Filter Pro, you can set a condition with the help of the formulas, which is checked **before** a question is asked. If the condition of Filter Pro is fulfilled, then the question will be asked. Otherwise, the questionnaire will jump to the question which you have selected as a target.

i	The formula condition Q1/(Q2*Q2)<18 checks if the calculated body mass index is (BMI)<18. Therefore, the question with Filter Pro will only be asked if the result is smaller than 18. If the BMI is ≥18, the questionnaire will jump to question 7.
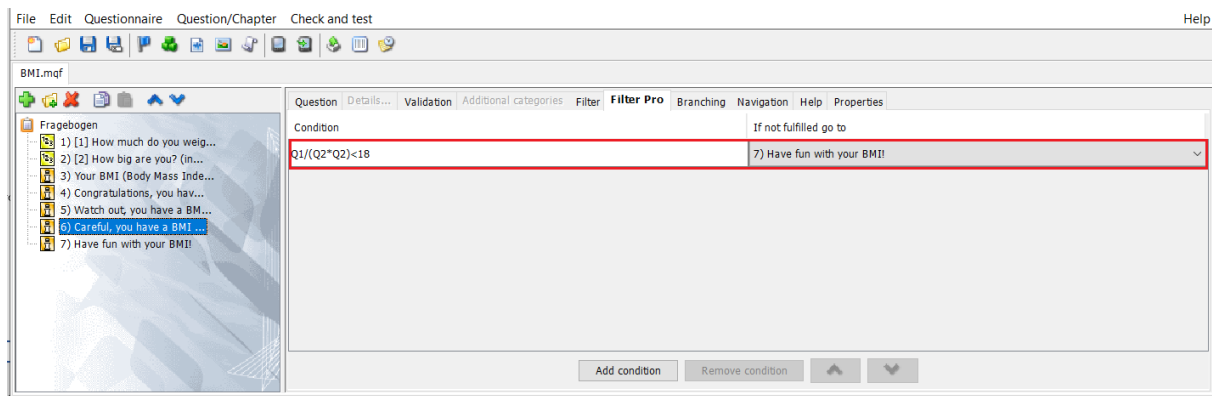
ADJUSTING FILTER PRO:

1. Click on the question to which you would like to add the **Filter Pro**.

2. Click on the tab **Filter Pro** in the **Element settings**.

3. Enter a formula condition in the table cell **Condition** ($\rightarrow$ See also Page 69 for the use of formula conditions).

4. In the table cell **If not fulfilled, go to** select the question, to which the survey shall jump if the condition is not fulfilled.

In the survey, the question for which the Filter Pro was set will only be asked if the formula condition is fulfilled. Otherwise, the questionnaire will jump to the question you defined as the jump target.

You can define several conditions which will all be checked. The evaluations of the conditions are carried out from top to bottom. If all conditions apply, then the question will be asked. As soon as one condition is not fulfilled, the questionnaire will jump to the question which you defined as the jump target.

3.5.4 Validation

With the Validation you can check for correctness of user inputs. In doing so you can avoid that the answers given by the respondent are contradictory. In contrast to the Filters, which are checked before a question is asked, the Validation comes into effect **after** the question has been answered.

With formulas you set a condition which must be fulfilled, so that the questionnaire can continue as planned. If the condition is not fulfilled, you can set an error message which will be displayed and the question that the questionnaire will be continued with in this case.

---

i   If for example, a survey is carried out for the body mass index (BMI = Q1/ (Q2*Q2)), you can prevent an unrealistic weight from being entered by defining that the weight has to be >= 20 kg using the condition Q1>= 20. . If this is not the case, a validation text is displayed and the questionnaire cannot be continued.
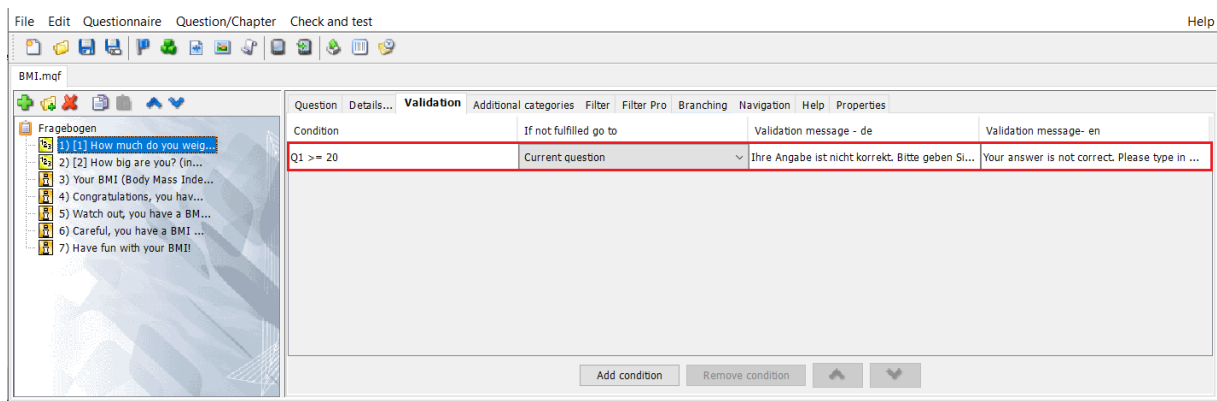
ADJUSTING VALIDATION:

1. Click on the question to which you would like to add a **Validation**.

2. Click on the tab **Validation** in the **Element settings**.

3. Enter a formula condition in the table cell **Condition** (→ See also Page 68 for the use of formula conditions).

4. In the table cell **If not fulfilled, go to** select the question to which the survey shall jump if the condition is not fulfilled.

> **i** The jump target can be the same question as the question for which the Validation applies. In this case the question will be repeated until the condition is fulfilled.

5. In the table column **Validation text – en,** enter the text that shall be displayed in the mQuest Client if the condition is not fulfilled.

6. Enter the text also in the column **Validation text – de** because the application language of the mQuest Client is available both in English and in German.

You can define several conditions which will all be checked. The evaluation of the conditions is carried out from top to bottom. As soon as one condition is not fulfilled, the instruction defined within it will be executed.

3.5.5   Branching

With the help of Branching you can define a condition with a formula and define a question to which the system should jump if this condition is fulfilled. Branching checks this condition **after** the question has been answered.

> **i** The formula condition Q1/(Q2*Q2)<18 checks, for example, whether the calculated body mass is (BMI) <18. If this applies, the survey will jump to question 6.
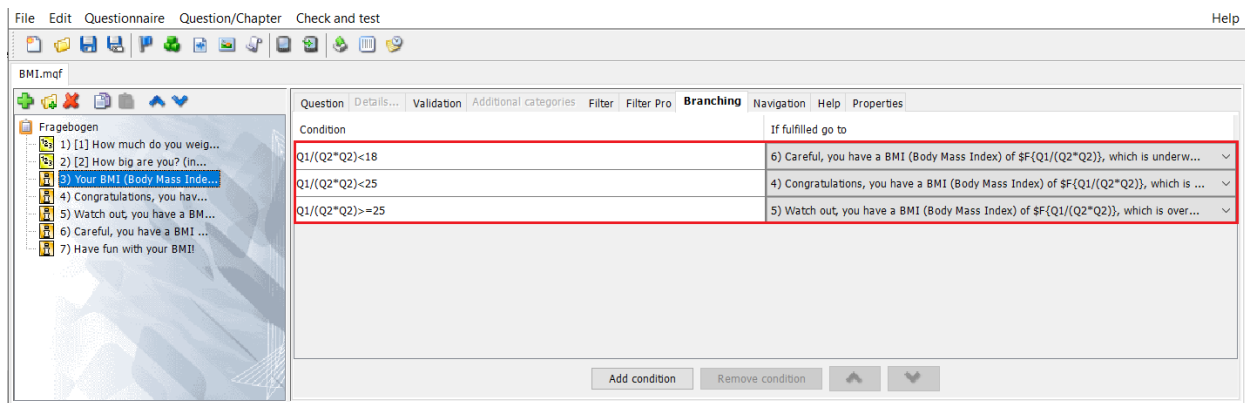
ADJUSTING BRANCHING:

1. Click on the question to which you would like to add the **Branching**.

2. Click on the tab **Branching** in the **Element settings**.

3. Enter a formula condition in the table cell **Condition** (→ See also Page 69 for the use of formula conditions).

4. In the table cell **If not fulfilled, go to**, select the question to which the survey shall jump if the condition is not fulfilled. You can define several conditions which will all be checked. The evaluation of the conditions is carried out from top to bottom. As soon as one is fulfilled, it will jump to the question defined within it.

3.5.6   Evaluation sequence of functions with conditions

With the functions **Filter**, **Filter Pro**, **Branching** and **Validation** you can control the order of the survey's questions in the mQuest Client. Depending on the defined conditions, a question is displayed or the questionnaire jumps to another question. The functions are evaluated in the following order:

- **1.   Filter Pro** (before the question is displayed)
- **2.   Filter** (before the question is displayed)
- **3.   Validation** (after the question is displayed)
- **4.   Branching** (after the question is displayed)

3.5.7   Quotas

> ## Important Notice:
>
> **!** **This feature is no longer available. Questionnaires with quotations can no longer be created as a project!**

For checking and controlling quotas you can use quota variables. A quota variable has a unique name, a condition and a value (counter). The quota variable can be used in any formula (→ See Example). The value of a quota variable is valid for the whole survey project and can be influenced by all surveys of a questionnaire.

At the end of the survey the conditions of the quota(s) are evaluated. If the condition of a quota applies, the quota value will be increased by 1. Until synchronization the quota value is increased only locally on the respective mQuest Client.

Once the mQuest Client transfers survey results, the quota values will be transferred as well. The current value of a quota is saved centrally on the QuestServer. During synchronization the quota values of all surveys are added to this central value. Afterwards the mQuest Client receives the updated quota value, which might have been influenced by the result data of other surveys since the last synchronization.

Example	In an exhibition questionnaire you define the two quotas "private" and "business". At the beginning of the survey you collect the information whether the respondent arrived for private or for business reasons. Depending on the answer, the corresponding quota will be increased with each survey. Via Filter Pro you defined that the project questionnaire shall jump to the survey's end as soon as one of the quota values reaches a certain value.
	With the help of quotas you can ensure that only a certain number of persons will be surveyed which arrived for business or private reasons.
	That way you can determine when the case number is reached and prevent unnecessary surveys.

With the SurveyManager you can display and adapt the value of a quota (→ See also Page 162).

ADDING / REMOVING QUOTAS

1. Click on in the toolbar or on **Questionnaire > Quotas**.

   The window Quotas will open.

2. Click on **Add** to define a new quota variable.

3. Enter any unique name for the quota variable in the field **Quotas variable name**.

4. In the field **Enhance quota counter, when** enter the formula condition that defines in which case the quota value shall be increased.

5. Click on **Add** if you want to define further quotas or select a quota and click on **Remove** to remove it.

Use quotas and formulas in texts

You can use quotas in formulas and texts, e.g. to control the questionnaire flow by using a quota within a Filter Pro formula.

Syntax: QV_{Quota variable name}

Examples:

Within the Filter Pro: **QV_business == 20**

Within a text variable: "**All in all, you have already surveyed $F{QV_business} persons which arrived for business reasons.**"

3.6   Text replacement functions / text variables / Properties

mQuest offers you the possibility to integrate values of text variables into question texts, answer texts and default values. That way you can display calculated values or given answers.

In the following table you can see which text variable you can use on which position in the questionnaire:

	$F	$G	$L	$P	$T	$V	$A	$U
Answer text								
Answer text / Default value					✓			
Default question title	✓	✓	✓	✗	✓	✓	✗	✓
Question title	✓	✓	✓	✗	✓	✓	✗	✓
Questionnaire description	✓	✓	✗	✗	✓	✓	✗	✗
Chapter name	✓	✓	✗	✗	✗	✗	✗	✓

> **!** The value of the variables **$F** and **$T** will only be displayed if the questions which the variables are referring to have already been asked. Otherwise the output is **???**.
>
> The variable **$L** will only be displayed if the current question is within a loop cycle.

3.6.1   Text variable $F – Display values from formula calculations

Syntax: $F{Formula calculation}

With the help of the formula calculation you can carry out any mathematical calculation. The results of the formulas are calculated and displayed during the survey.

For the formula calculations you can use the **value variable Q** (→ See also Page 71).

Example	With the question text "You have a BMI (Body Mass Index) of $F{Q1/ (Q2*Q2)}!" in question 3, the BMI is calculated and the calculated value is displayed. The calculation of the BMI consists of body weight/ (body height in meters)². The value variable Q1 uses the entered answer from question 1, which is the body weight. Q2 contains the value of the body height from question 2.

3.6.2   Text variable $G – Display Global variables

Syntax: $G{Name of the Global variable}

Here you can integrate the value of a Global variable into texts, e.g., "the current survey location is $G{City}".

3.6.3   Text variable $L – Display description of the current loop cycle

Syntax: $L

You will receive more detailed information to the text variable $L in the chapter Formulas and variables for loops (→ See also Page 114).

3.6.4   Text variable $P – Display text dependent on formula

Syntax: $P{(Formula condition)->Text}

Here you are able to display, depending on a formula condition, text into question texts and answer texts, as well as default text from questions of the type Text input, e.g., $P{(Q2== "female")-> Mrs.}$ P{(Q2=="male")-> Mr.}. Only when the shown condition is fulfilled, the suitable text will be displayed. Thereby, you are able to integrate another value variable into the display text (→ See also Page 68). Please note that you can only display one single value variable in the display text. However, it is possible with every variation to display any text before or after a value variable. The text must not contain any parentheses.

Examples:

- **$P{(Formula condition)->Text}**
- **$P{(Formula condition)->[Text](G_<Variable name>)[Text]}**
- **$P{(Formula condition)->[Text](Q<Question number>)[Text]}**

> **i**   In answer texts of questions of the question types **Single selection**, **Multiple selection** and **Ranking** you can dynamically show or not show the answer possibilities with the help of the text variable $P. If the formula condition is not fulfilled and no text is given as an answer, the answer option remains empty and is therefore not displayed in the mQuest Client.

3.6.5   Text variable $T – Display answer text

Syntax: $T{<Question number>}

Herewith you display a given answer of a certain question and then integrate this answer into another text, e.g., "How often do you attend $T{2}?" ties the answer of question 2 into the current question.

> **!** The displayed text differs depending on the question type of the referenced question:
>
> **Single selection:** The text of the given answer possibility is displayed, even if answer codes are used.
>
> **Multiple selection:** All texts of the selected answer options are displayed, separated by a comma.
>
> **Ranking:** Only the text of the answer possibility on position 1, the answer which was chosen first, will be displayed.
>
> **Text/Numeric input:** The entered text or the number will be displayed.

3.6.6   Text-variable $V – Display variable name

Syntax: $V

Herewith you display the variable name of the current question. Thus, you can include it into the question and into the answer text.

3.6.7   Text variable $A – Include entries of auto-completion list

Syntax:

$A{<question number>,ACLName}

$A{Q<Question number>,ACLName}

$A{<loopId>Q<Question number>,ACLName}

$A{G_<Varname>,ACLName}

Herewith you take the result out of question <question number> or the value of the global variable <Varname>, determine the matching entry in auto-completion list <ACLName> and deliver the code (value) as result or "" if there is no matching entry in the auto-completion list.

If there is a simple list without codes, the key itself will be delivered.

3.6.8   Text variable $ U - Outputting texts from autocomplete lists

Syntax:

$U{<Fragenummer>}

Print the text of a text input question with autocomplete list. For two-column or multi-column auto completion lists with response codes in the second column, you can use the $ U to directly output the text instead of the code.

3.6.9   Use text variables in the questionnaire description and in question headings

Text variables in the questionnaire description

You can also use text variables in the questionnaire data in the Description field. The current value of this variable is then displayed in the mQuest Client under **Menu> Project Data**. This gives you the opportunity to view the variable values at any time during the survey.

Example	You have defined a global variable "City" in the QuestEditor for your questionnaire and assigned it the value "Karlsruhe" in the mQuest client, for example (◊ See page 21 and the mQuest client manual). You can now use the expression $ G {City} in the questionnaire data in the Description field. For example, the entry "The current value of the global variable" City "is $ G {City}". During the survey, the questionnaire description can be viewed in the mQuest Client under menu button> Project Data. Here is now in "Description": "The current value of the global variable" City "is Karlsruhe". You can check at any time what value the global variable currently has.

Text variables in question headings

It is also possible to use text variables in the standard question headline as well as in the question headline. This allows you to directly display current variable values in the title bar of a question, for example, answers to previous questions, the current state of charge of the battery, etc.

i	If you use a text variable that refers to the answer of another question, then that question must already have been asked for the corresponding variable value to be displayed in the project data or as a question headline. Otherwise, instead of the value, the entry ???.

3.6.10 Questionnaire- / Chapter- and Question-Properties

With the following properties you can adjust several settings concerning the whole questionnaire, chapters and single questions.

The properties have to be set in the QuestEditor in the Properties tab right at the element you want to adjust.

> **i**   There are no validations whether the properties typed in are correct or not.

Questionnaire Properties:

Property	Possible values	Description
questioning_cancel_password=	secret	here you can set a password for canceling surveys
questioning_end_chapter_validation_ password_if_incomplete=	secret	password check before ending the questionnaire if a required chapter is incomplete
questioning_next_qnnaire=	questionnaire name	**(Android only)** here you can type in the name of the questionnaire that shall be started after the one with the property set* example is questioning_next_qnnaire=q uestionnaire2
questioning_user_start_enabled=	true/false	when set to "false", the questionnaire cannot be started manually. It only can be started from another questionnaire via questioning_next_qnnaire*
questioning_sync_before_starting_follo w _up_qnnaire_if_auto_sync_setting_is_e nabled=	true/false	Synchronizes the data for linked questionnaires. <Upload data after questioning> must be enabled in the QuestServer Settings.*
questioning_result_review_enabled=	true/false	If "true", the review function will be activated.

questioning_result_review_password=	secret	Sets the password for the review function
questioning_auto_cancel_after=	integer	Sets the time (in seconds) of inactivity before cancelling the current interview and returning to the start screen
questioning_use_default_value_if_numeric_empty=	true/false	If "true", the value of the C-Extension is used in case the numeric input is empty
questioning_acl_normalizing_rules=	Semicolon-separated list of replacement rules for the full-text search. List-specific and / or global for the questionnaire	Here you can specify substitution rules when searching within the ACL list. For example: ä> ae, ö> oe; u> ue, ß> ss The individual substitutions are separated semicolon. If you want to save the substitutions for a special list, this is done by adding the list name: questioning_acl_normalizing _rules_Strasse.acl =
questioning_marking_photo_colors=	RGB color codes in HEX format Example: DF0101; FF8000	The colors defined by the color codes can be selected for markable photo questions for the markers.
questioning_present_project_description_full_screen=	true/false	**(Android only)** If set to true, the project data will be displayed in full screen.
questioning_survey_notes_var=	Question (e.g. Q1)	**(Android only)** References a text-input question (e.g. Q42) which will be used to store the survey notes text.The survey notes are available and can be edited via the menu at any time during the survey. It is recommended to use a

		hidden text-input question at the beginning of the survey. The text will only be stored in the variable if the user passes this question during the survey.
Questioning_sync_before_starting_follow_up_qnnaire_if_auto_sync_setting_is_enabled=	true/false	**(Android only)** The data on android devices between linked questionnaires will be synchronized

Chapter Properties:

Property	Possible values	Description
export_asMatrix=	true/false	When "true", the chapter will be shown in the RTF-document as a matrix
questioning_chapter_composite_matrix=	true/false	When "true", the chapter will be displayed as a matrix
questioning_chapter_composite_matrix_option_compare=	true/false	When "true", results from previous loops will be displayed behind the matrix
questioning_chapter_composite_matrix_with_audio=	true/ false	When "true", additional audio questions can be used in a matrix question
questioning_chapter_composite_matrix_with_polarity=	true/ false	Allows to compare pairs of values in a matrix
export_showChapterAlways=	true/false	When "true", the chapter will always be displayed in the exported RTF-document
questioning_chapter_validation_password_if_incomplete=	secret	Password check when leaving the chapter-navigation-validation in case a required chapter is incomplete
questioning_chapter_simple_incomplete_confirmation=	true/false	If set on true, an information message will be displayed when not all navigable chapters are completed.
questioning_chapter_question_composi	true/false	Displays several questions on

te=		one screen
questioning_chapter_fast_navigation=	true/false	Defines if the first and all following sub-chapters in a chapter navigation are started automatically
questioning_chapter_overview_textsearch=	true/false	**(iOS only)** Enables to search chapters in the chapter overview with a text input field
questioning_chapter_overview_textsearch_option_fulltextsearch=	true/false	**(iOS only)** Enables to search chapters or loops in the chapter overview with a text input field using full-text search. Can only be used in combination with "questioning_chapter_overview_textsearch"
questioning_chapter_overview_textsearch_show_keyboard_always=	true/false	**(iOS only)** Used in combination with "questioning_chapter_overview_textsearch". Always shows the keyboard when entering or returning to the chapter overview
questioning_chapter_overview_textsearch_with_html_list_items=	true/false	On default, the html view is disabled in the chapter overview. With this property, you can force to show the html formatting.
questioning_chapter_question_composite_focus_first_user_input=	true/false	**(iOS only)** Finds the first Text input or Numeric input question and focuses on its input field in order for the keyboard to appear
questioning_chapter_question_composite_padding=	0–N	**(iOS only)** Determines the distance between the questions in a composite question e.g. "5" for a distance of 5 pixels

questioning_chapter_composite_matrix _question_column_width_portrait=	0–100	Determines the width of a question-column in a matrix question (in portrait format). The value is a percentage of the total display width. In a matrix question with polarity the value will be used for the first and the last column, e.g. if the value is set to "25", the first and the last column will be 25% and the remaining answer columns will be 50% of the total display width
questioning_chapter_composite_matrix _question_column_width_landscape=	0–100	Determines the width of a question-column in a matrix question (in landscape format). The value is a percentage of the total display width. In a matrix question with polarity the value will be used for the first and the last column, e.g. if the value is set to "25", the first and the last column will be 25% and the answer columns will be 50% of the total display width.
questioning_chapter_composite_matrix _separate_last_column=	1–N	Separates the N-th (from right) column in a matrix question with a bold line from the other columns
questioning_chapter_overview_no_re_e nter_confirmation=	true/false	Disables the warning message when a sub-element of a navigable chapter or a navigable loop has been already finished and is asked once again
title_font_color=	hex color code	The property defines the font color of the chapter titles in the chapter overview.
title_background_color=	hex color code	The property defines the background color of the chapter titles in the chapter overview.
questioning_chapter_open_icon=	File name of an questionnaire	When an attachment is defined, it will be displayed

	attachment	instead of the default icon of an open, navigable chapters.
questioning_chapter_incomplete_icon=	File name of an questionnaire attachment	When an attachment is defined, it will be displayed instead of the default icon of an incomplete, navigable chapters.
questioning_chapter_complete_icon=	File name of an questionnaire attachment	When an attachment is defined, it will be displayed instead of the default icon of a complete, navigable chapters.
questioning_chapter_validation_strict=	true/false	If set on true, all chapters and sub chapters of the navigation which are set to mandatory needs to be complete. Otherwise, you cannot go on in the questionnaire.
questioning_chapter_min_number_of_sub_chapters_to_complete	0-N	Can be used for a navigation overview chapter to indicate when the chapter counts as complete. By default, a chapter with N sub-chapters is complete as soon as all sub-chapters are completed. With this property, we can tell the chapter to be completed with M completed sub-chapters (where M >= 0 and M <= N). This works in combination with the "questioning_chapter_simple_incomplete_confirmation"-property, i.e. the simple-incomplete-check will consider the min-number-of-sub-chapters. Sub-chapters that have been marked as required are not influenced by this property, i.e. the chapter-validation for required sub-chapters will still work, even if M of N sub-chapters have been completed - assuming the required chapter is not part of the M

	sub-chapters.

Question Properties:

Property	Possible values	Description
questioning_question_document_scan=	true/false	Only available for multi-photo questions. Instead of the default camera app, a document scanner capture app will be used to capture the photos - this app is optimized for document detection.
questioning_questionHidden=	true/false	When "true", the question will not be shown during the survey. Usage e.g. for calculating variables by using the default value. Only for question types Text input and Numeric input.
questioning_question_refresh_default_value_on_next=	true/false	When "true", the default value (if set) of the question will be refreshed when you get to this question with the "Next" button.
questioning_question_acl_required=	true/false	For text input questions with auto-completion lists. When set to "true", only answers are allowed that are in the list.
questioning_question_acl_multi_select=	true/false	Available for questions with text input and stored ACL list. This enables the user to (search and) select multiple items from the list. The selected items will be stored as a semicolon-separated list with the acl-entry values (i.e. the values of the second column - if available - in the list).
questioning_question_acl_filter=	filter-formula	Here a pre-filter of the ACL-entries can be done. Example: **questioning_question_acl_filt**

		er=MCOL3==Q1
		If the column 3 of the MACL equals the answer of Question 1.
		Syntax: similiar to using formula expression in filter pro
		IDs will be replaced with intern IDs, there will be NO validation if the formula is correct.
questioning_question_acl_sql_filter=		With this property you can define a preselection according to a **.macl**-auto completion list. The value of the first column is "value_0".
questioning_acl_normalizing_rules=	Semicolon separated list with replacement rules for searching the whole text. Specific and/or global.	It is possible to replace umlauts and words. The rules are global. If the user applies multiple rules to a word or letter, only the first rule is used. Example umlauts: **questioning_acl_normalizing_ rules=ü>u;ä>a;ö>o;ß>ss** Example words: **questioning_acl_normalizing_ rules=main station>hbf;karlsruhe>ka**
questioning_question_location_edit_en abled=	true/false	**(Android only)** Enables an edit-option for location-capture questions, so the user can changed the captured location ('pin') using Google Maps
questioning_question_location_instant_ edit=	true/false	**(Android only)** Instantly opens Google Maps after a location has been captured, so the user can check the 'pin' on the map.

questioning_question_location_map_zoom=	1-21	**(Android only)** Initial zoom level the map will be opened with.
questioning_question_acl_hide_selected_entry=	true/false	**(iOS only)** If the property is not set or set to false, the entry selected from the list is displayed both in the text box and below. If the property is set to true, the list entry will be hidden after selection.
question_set_response_to_global_var=	VarName	Stores result of the current question in a global variable.
questioning_question_heatmap_polygon_color=	Hexadecimal color code	Defines the highlighting color in heat map questions e.g. #FF0000 for red.
questioning_question_acl_fulltextsearch=	true/false	Allows a full text search in auto completion lists which also searches for parts of the words.
questioning_question_acl_extended_fulltextsearch=	true/false	Full text search (Contains search) for questions with autocomplete lists (acl, macl). Full-text search passes over several terms, e.g. "sta so" -> "station south, south station"
questioning_question_accept_optical_code_types=	qr; ean13; ean8; aztec; code128; code39; code39mod43; code93; pdf417; upce;	**(iOS only)** Setup a custom list (semi-colon separated) of code-types for improved scanning performance.

	interleaved2of5; itf14; datamatrix	
questioning_question_single_line=	true/false	**(iOS only)** Shows a question of the question type Numeric input as a single line with the question text on the left and the input field on the right
questioning_question_single_line_text_ width=	0 – 100	**(iOS only)** Specifies the width of the question text as a percentage of the screen width. Only in conjunction with the property questioning_question_single_l ine = true
questioning_question_multiple_choice_ sections=	Semicolon separated numbers	**(iOS only)** Creates different answer sections for Single selection questions and Multiple selections questions that are visually separated. The given numbers represent indices of answers at which new sections will start e.g. "4;7" for a question with 10 answers creates 3 sections (1–3, 4–6, 7–10)
questioning_question_composite_adhoc _evaluation=	true/false	If you set this property to true for a question in a question set, existing references to that question are dynamically evaluated in the question set itself.
questioning_question_read_only=	true/false	Currently supported only by user-input question-types like Textinput and Numberinput (Single-Line as well). Indicates the input-field to be read-only, i.e the user cannot edit its content. Thus the input-field can only display its default-value.

questioning_question_help_resource_on_external_storage=	true/false	**(Android only)** When using the help text as a resource reference, this indicates that the resource is not a survey attachment but available through the external storage of the device. By default the app looks for the resource in the "Documents" folder. Using the property "questioning_external_resources_root" you can set a custom root folder.
questioning_question_user_input_number_of_lines=	0 - 50	Sets the height of the input field when entering text questions. The number indicates the height in lines.
questioning_question_image_sources=	**camera, picker** or **both**	Defines which sources for pictures are available. The values are camera module, gallery picker or both resources.
questioning_question_quick_photo=	true/false	If set on true, the camera module will start right away when a photo question is up to appear in the questionnaire.
questioning_question_quick_click_on_cancel=	true/false	If set on true, the next question after a photo question will come after the camera module was closed without a picture was taken. (Similar to QuickClick)
title_font_color=	Hexadecimal color code	Defines the font color in the question title.
title_background_color=	Hexadecimal color code	Defines the background color in the question title.
questioning_question_keyboard=	default phone email number	The property defines the layout of the keyboard. E.g. if set to email, the @ sign will be displayed right away.

	decimal numbers-and-punctuation url twitter websearch	
questioning_question_web_module_res ource=	URL	**(iOS only)** With that property you can set the URL for the Media-Choice-Type
questioning_question_web_module_qu ery=	Static text Text variables	With that property specific parameters can be given to the web module. The key parameters must be separated by a semicolon (;). Key and value are separated by colon (:). (e.g.: questioning_question_web_m odule_query= =input-param-1:$T{Q2};input-param-2:$G{gvLang};input-param-3:Static text with whitespaces)
questioning_question_web_module_res ponse=	result parameters	That property is used to define a mapping for the result query parameters, when returning to the app. You can specify key-value-pairs which must be separated by semicolons. Key and value are separated by colon (:). e.g.: questioning_question_web_m odule_response=output-param-1:gvFirstChoice;output-param-2:gvSecondChoice;
questioning_question_zoom_support=	true/false	Enable zoom capability on the question-text (web-view) component, i.e. text and images within the question-text can be zoomed (pinch with two fingers) and panned (move with one finger).

		It is recommended to use it only on questions of type "Message" (there is currently a layout problem with MC* questions)
questioning_question_zoom_max_scale =	1.5 - 10.0	Limits the maximum zoom scale for questions with zoom support (i.e. with questioning_question_zoom_support=true).
questioning_question_marking_photo_polygon_color	Hexadecimal color code	This property defines the color of the polygons for the marking-picture question type.
question_photo_marker_text=	Any text	Makes it possible to store a "watermark" as text on photos taken. Color and position can be configured using element properties on the photo question.
questioning_question_photo_marker_color=	Decimal rgb(a) seperated with semicolon	Can only be used in combination with the property question_photo_marker_text= Sets the color in which text is drawn to accompany the watermark. Example color (cluetec green): **questioning_question_photo_marker_color=188;194;54;255**
questioning_question_photo_marker_width=	0.0-1.0	Can only be used in combination with the property question_photo_marker_text= . The width factor (0.0-1.0) is adjusted to the width of the photo. Example: **questioning_question_photo_marker_width=0.75**
questioning_question_marking_photo_reference	Question reference, e.g. Q24	This property can be used for questions of the type (Media - Marking Photo). The referenced question must be a Photo or Multiphoto question. The user then does not need to capture a photo before

		marking on it, instead the photo of the referenced question will be used for drawing on it.
questioning_question_marking_multiphoto_index=	Index > 0	When using (questioning_question_marking_photo_reference) to reference a multiphoto question, by default the question will use the first photo of the referenced mulitphoto-question. Use this property to reference another photo of the multiphoto question by its index.
questioning_question_photo_orientation_validation=	portrait/landscape	**(Android only)** Optional configuration for single- and multi-photo questions to only allow captured photos in one orientation (portrait or landscape).
questioning_question_photo_blur_faces =	true/false	**(Android only)** Uses computer vision to detect faces on photos in order to blur them. Available for single- and multi-photo questions. After capturing a photo with the camera (or picking a photo from the gallery) the image is processed and detected faces will be blurred. The image is then presented to the user in a new full-screen preview, where the user can add additional blur-spots (in case the "program" missed one).
questioning_question_photo_user_blur_size=	1-N	**(Android only)** Used to control the blur-spot size for the face-detection feature. Value is multiplied with the density of the device's screen.

		I.e. 40 is a small fingertip
questioning_question_photo_face_detection_min_face_size=	1-100	**(Android only)** The mininum size of a face in a photo to be detected plays a major role in the performance of the detection. The value is a percentage of the photo's width (in pixel). The default is 5%, i.e. for a photo with 1000px width, the detection find faces with at least 50px. Depending on the use-case of the face-detection, it might be useful to change this.
questioning_question_deny_survey_timeout	true/false	This property denies the survey-timeout on the question, i.e. if the questionnaire has the property „questioning_auto_cancel_and_restart_after or questioning_auto_cancel_after", the survey will not be canceled/restarted if it is currently on this question.
questioning_question_keep_user_input_on_coded_answer_selection	true/false	This property is currently used only for text input questions with auto-completion lists to avoid resetting the user-input (selected auto-completion list entry) when selecting a coded answer.
questioning_question_horizontal_multiple_choice_wrap_texts_layout	true/false	This property is used for questions of the choice type Multiple selection with a horizontal list. If you use this property, every choice gets a width according to its text length. (By default, every choice would get the same width during layout.)
questioning_question_acl_display_all_entries_on_init	true/false	**(Android only)** When displaying an ACL question with existing user

		input (e.g. an entry has been selected before), the hits list will only display those hits that match the existing input. Use this property to display all entries. If an entry has been selected before, it will still be selected in the hits list. This makes it easier for the user to change the selection without typing.
questioning_question_mcms_show_toggle	true/false	When this property is enabled on a multi select question, a header with a toggle button will be displayed above the answers.
questioning_ref_property_number_input_reference_value	Question reference, e.g. Q24	**(iOS only)** Use this on a slider number-input question to reference another (slider) number-input-question. The value of the referenced question will be displayed as a marker (with a value-label) on the slider. Use „questioning_question_slider_marker_color" for an individual color.
questioning_question_slider_marker_color	RGB(A) colors	**(iOS only)** You can use it for an individual color of the slider reference-value marker. (See „questioning_ref_property_number_input_reference_value")
questioning_only_upload_results_on_sync_if_auto_sync_setting_is_enabled	true/false	Use this property to only upload results when syncing. Quotas etc. are not synced. This property only works if "Upload data after questioning" is enabled in the QuestServer settings.
questioning_auto_cancel_and_restart_after	Number in seconds	**(Android only)** Automatically restarts (cancels the current survey and starts a new one) a running survey

		after the configured time (in seconds). This can only be applied to a questionnaire that has been configured as "continuous".
questioning_no_text_input_paste	true/false	Prevent the user from using the system-context menu on text-input fields that allows to paste text from the clipboard.
questioning_use_text_input_suggestions	true/false	Use this property to control if the system keyboard should show auto-fill/text-suggestions. By default, this is enabled on Android and disabled on iOS.
questioning_android_force_no_text_suggestions	true/false	**(Android only)** Use this property on Android to prevent the keyboard from showing suggestions. This works on most devices by using „questioning_use_text_input_suggestions=false". There are some devices (especially Samsung) that ignore this flag, so we can use this flag to force having no suggestions. CAUTION: This will disable the swipe-keyboard. When using this property, a custom keyboard configuration („questioning_question_keyboard") will be ignored. Also, the comma-key is changed to an @ key on the keyboard.
category_id	Category ID	With this property, questionnaires can be sorted into categories on the mQuest pre-start screen. Each category has an ID, a name and an icon. For more information on titles and icons, see the info box below. When you click on the

		category, only the corresponding questionnaires are displayed.
		Note: If the ID is not defined, the following settings are ignored in the mQuest Client and the questionnaire is displayed in the category "Other". Do not use the default category "none"https://cxintra.cluetec.de/confluence/display/mQuest/mQuest+Client+-+PreStartScreen
questioning_question_nfc_reader=	true/false	**(Android only)** With this property, NFC tags can be activated for questions with text or number input.
questioning_question_nfc_display_content=	true/false	Optional addition for the general nfc-scanner to display the scanned content from the nfc-tag.
questioning_question_nfc_bytes_to_content=	0 – N	Optional configuration for the general nfc-scanner for the bytes to be skipped before the actual content of the nfc-tag begins. By default 3 bytes will/must be skipped.
questioning_question_eticket_code=	Semikolon, separated codes for eTicket information	**(Android only)** Create a string with the information from the eTicket. Possible informations are: cardid, orgnumber,datebegin, dateend, infotag, ticket-orgnumber, ticket-datebegin, ticket-dateend
questioning_question_dnd_included_presets_tint_color=	Rgb(a) colors	**(iOS only)** Changes the color of embedded answers from a previous Drag&Drop question (grey default).

		Drag&Drop responses can be referenced via the Include Response function.

i   The questionnaire text property "category_title" defines the title of the category, which is displayed under the icon. Only the app languages of the mQuest Client are considered (German, English, Spanish, French). If no text property is set, the default text "Other" is used.

The icon for the category is added via **Add file** in the QuestEditor. The file must be named "category_icon.png". An icon with the size 512x512 is recommended. Smaller images are not scaled larger, but larger images are scaled smaller. If no icon is added, the category will get the default icon.

3.7   Change history

The change history of the QuestEditor logs the changes to your questionnaire. You can delete the change history as well as export it as a file.

> ℹ   The change history logs both saved and unsaved changes. However, unsaved changes can be made "undone". For example, if you add a question to your questionnaire, this change will immediately be logged to the change history. If you remove this question again without saving previously, both entries (adding and removing the question) will be deleted from the change history. If you save the questionnaire between these two steps, both entries will be preserved in the change history.

OPENING THE CHANGE HISTORY:

→   Click on **Check and test > Show change history** or on 🖼 in the toolbar.

The change history will open in a new window.

Date	Change t...	Element t...	ID [Variable ...	Element sub ...	Old value	New value
Actual change	(+) Added	Question	# 6	Filter Pro goto	-	7
Actual change	(+) Added	Question	# 6	Filter Pro	-	Q1/(Q2*Q2)<18
Actual change	(+) Added	Question	# 3	Branching goto	-	5
Actual change	(+) Added	Question	# 3	Branching	-	Q1/(Q2*Q2)>=25
Actual change	(+) Added	Question	# 3	Branching goto	-	4
Actual change	(+) Added	Question	# 3	Branching	-	Q1/(Q2*Q2)<25
Actual change	(+) Added	Question	# 3	Branching goto	-	6
Actual change	(+) Added	Question	# 3	Branching	-	Q1/(Q2*Q2)<18
Actual change	(+) Added	Question	# 1 [1]	Validation goto	-	1
Actual change	(+) Added	Question	# 1 [1]	Validation engl...	-	Your answer is not correct. Please type...
Actual change	(+) Added	Question	# 1 [1]	Validation ger...	-	Ihre Angabe ist nicht korrekt. Bitte geb...
Actual change	(+) Added	Question	# 1 [1]	Validation	-	Q1 >= 20
Actual change	(-) Removed	Question	# 6	Condition	Q1/(Q2*Q2)<18	-
Actual change	(-) Removed	Question	# 3	Condition	Q1/(Q2*Q2)>=25	-
Actual change	(-) Removed	Question	# 1 [1]	Condition	Q1 >= 20	-
04/09/2009 04:19:...	(!) Changed	Question	# 7	Question text (...		Have fun with your BMI!
04/09/2009 04:19:...	(!) Changed	Question	# 6	Question text (...		Careful, you have a BMI (Body Mass In...
04/09/2009 04:19:...	(!) Changed	Question	# 5	Question text (...		Watch out, you have a BMI (Body Mass...
04/09/2009 04:19:...	(!) Changed	Question	# 4	Question text (...		Congratulations, you have a BMI (Body...
04/09/2009 04:19:...	(!) Changed	Question	# 3	Question text (...		Your BMI (Body Mass Index) is $F{Q1/...
04/09/2009 04:19:...	(!) Changed	Question	# 2 [2]	Question text (...		How big are you? (in meters)
04/09/2009 04:19:...	(!) Changed	Question	# 1 [1]	Question text (...		How much do you weight? (in kg)
04/09/2009 04:13:...	(+) Added	Question	# 7	Question text (...	-	Have fun with your BMI!
04/09/2009 04:13:...	(+) Added	Question	# 6	Question text (...	-	Careful, you have a BMI (Body Mass In...
04/09/2009 04:13:...	(+) Added	Question	# 5	Question text (...	-	Watch out, you have a BMI (Body Mass...

[Delete]   [Export]   [Close]

The change history contains the following columns:

- **Date**
  This entry contains the date and the time of the last saving, with which new changes were logged. For unsaved changes this entry is "Actual change".

- **Change type**
  This entry specifies which type of change has been made. There are three different change categories:

  - **(+) Added**
    Something has been added to the questionnaire.

  - **(-) Removed**
    Something has been removed from the questionnaire.

- **(!) Changed**
  Questions or chapters in the questionnaire have been changed.

- **Element type**
  This entry specifies which element type of the questionnaire has been changed, e.g. question, chapter, loop etc.

- **ID [Variable name]**
  This entry contains the question number or the chapter name of the element which has been changed, as well as the variable name of the specific questionnaire element.

- **Element sub type**
  This entry specifies what exactly has been changed in the questionnaire element. This entry is empty if a chapter or a question has been added to the questionnaire.

- **Old value**
  This entry contains the old value of the changed questionnaire element. This is for example the old position of a question, the old question type, the old variable name etc.

- **New value**
  This entry contains the new value of the changed questionnaire element. This is for example the new position of a question, the new question type, the new variable name etc.

Sorting the change history

By default, all entries in the change history are sorted by date. However, you can sort the changes by any of the other columns, e.g. to see at a glance which changes were made to a specific question.

→ Click on the column title by which you want to sort the change history.

DELETING THE CHANGE HISTORY:

1. Click on **Check and test > Show change history > Delete.**

2. Confirm with **Yes** to delete the whole change history.

EXPORTING THE CHANGE HISTORY:

1. Click on **Check and test > Show change history > Export.**
   A dialog box appears.

2. Follow the steps of the dialog.

4   Organize questions with chapters and loops: QuestEditor

You have the possibility to organize your questions in chapters and sub-chapters and to sort them thematically. This enables you to design your questionnaire more clearly. By setting individual preferences for every chapter you can flexibly adapt the content and the processing of the sub-elements to your needs, e.g., change the query order of the sub-elements.

> **!**   Questions and other chapters are so-called sub-elements of a chapter. It is possible to use a maximum of 15 levels.

Chapters can be converted to loops. This extension possibility is helpful if you want to ask the same questions about several objects (e.g., different vehicle models). The creation of the questionnaire is simplified, because you can create the questions for the options only once and apply them several times thereafter. With the loop cycle you define for which objects (for example, vehicle model A, B, C and D) these questions are asked.

> **!**   A chapter becomes a loop if you add **loop cycles**. These are the direct sub-elements of a loop, however, not visible in the questionnaire elements area in the QuestEditor. The next lower level is again composed of chapters and questions.

4.1   Hierarchy of the questionnaire elements

Hierarchy when using chapters:
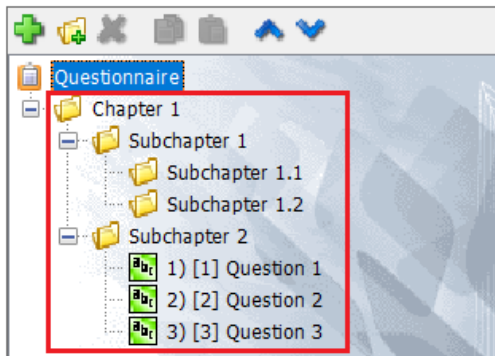
Chapter
├─Subchapter 1
│ ├─Subchapter 1.1
│ └─Subchapter 1.2
│
└─Subchapter 2
   ├─Question 1
   ├─Question 2
   └─Question 3

i   Hierarchy when using loops:


```
Loop
│
├─Loop 1
│     ├─Subchapter 1
│     │     ├─Question 11
│     │     └─Question 12
│     └─Subchapter 2
│           ├─Question 21
│           └─Question 22
│
└─Loop 2
      ├─Subchapter 1
      │     ├─Question 11
      │     └─Question 12
      └─Subchapter 2
            ├─Question 21
            └─Question 22
```

4.2   Chapters

4.2.1   Create

1. In the **Questionnaire elements,** click on the question or the chapter after which you would like to create a chapter.

2. Click on **Question > Add chapter** or click on in the toolbar.

   A new chapter will be added.
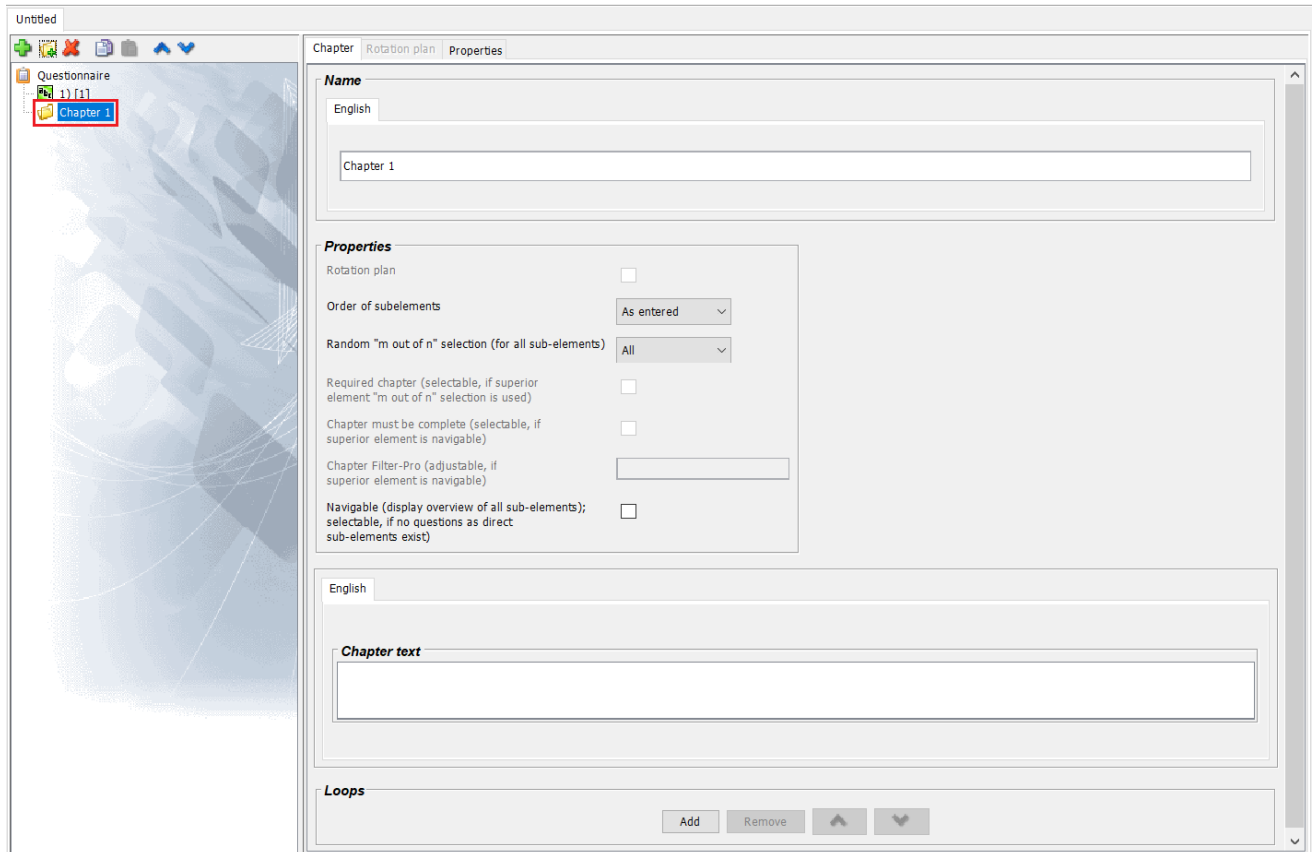
4.2.2   Define properties

In the element settings of the QuestEditor you can define individual properties for every chapter, e.g., with regard to the order in which the sub-elements (questions and chapters) are asked.

4.2.2.1   Name

The QuestEditor automatically issues a name for every created chapter. In order for you to identify your chapters better, you have the possibility to award an own unique name.

4.2.2.2   Rotation plan

Herewith you can create a rotation plan with which you can vary the order of the sub-elements of a chapter or a loop (→ See also Page 117 for creating a rotation plan).

4.2.2.3   Order of the sub-elements

Here you can select in which order the sub-elements of a chapter or a loop should be asked in a survey.

- **rotating**
  The sub-elements are asked one after the other. However, the selection of the start element depends on the number of surveys on the mQuest Client.

- **as entered**
  The sub-elements will be asked as you have entered them.

- **random**
  The sub-elements are asked in random order.

> **!**   With this setting the differentiation between chapter and loop is decisive. The sub-elements of a loop are always the loop cycles, while the sub-elements of a chapter can either be questions or sub-chapters.

> **!**   When creating Filters or Branching for questions within a chapter with **random** and **rotating** sub-elements, please note that the answers used in the conditions or jump targets should always refer to questions outside of the same chapter. Otherwise, it might happen that a question whose answers shall be included, will be asked after the question with the Filter or the Branching.

4.2.2.4 Random "m out of n"-selection (for all sub-elements)

- **all**
  All sub-elements are asked.

- **defined number of sub-elements**
  Only a certain number of randomly selected sub-elements are asked.

If, for example, during a survey about automobiles, 3 chapters with different main subject focus (entire exterior, exterior details, interior) should be asked, but the survey duration would be too long with all 3 chapters, you can define that in every survey only two chapters will randomly be selected.

> **!**   With this setting the differentiation between chapter and loop is decisive. The sub-elements of a loop are always the loop cycles, while the sub-elements of a chapter can either be questions or sub-chapters.

4.2.2.5 Required chapter (selectable if superior element "m out of n"-selection is used)

If you have defined **random "m out of n"-selection** a **certain number of sub-elements** for a chapter or a loop cycle, you can define the single sub-elements as a required chapter or required question. A required chapter or a required question is always asked in a survey. The selection of the other asked sub-elements will be random.

Example	In a survey about automobiles, only 2 of 3 randomly chosen chapters shall be executed. If one of these chapters is important, you can define it as a required chapter. Consequently, this chapter will be executed in every survey.

> **!**   A chapter or a question can only be defined as a required chapter/required question if for the superior chapter a random "m out of n" selection is activated.

DEFINING REQUIRED QUESTION:

To define a subordinate question as a required question, conduct the defining at another location in the QuestEditor.

1. Click on the desired question in the **Questionnaire elements**.

2. Click on the tab **Details** in the **Element settings**.

3. Activate the option **Required question (superior "m out of n")**.

4.2.2.6   Navigable* (Display overview of all sub-elements; selectable, if no questions exist as direct sub-elements)

If you would like to make a chapter or a loop navigable, a chapter overview will be displayed for you while you are surveying on the mQuest Client. That means that the direct sub-elements of the chapter (sub-chapters) or the loop (loop cycles) are displayed for selection and you can determine the order of sub-elements yourself. The sub-elements which have already been completely asked are marked with a **green checkmark**.
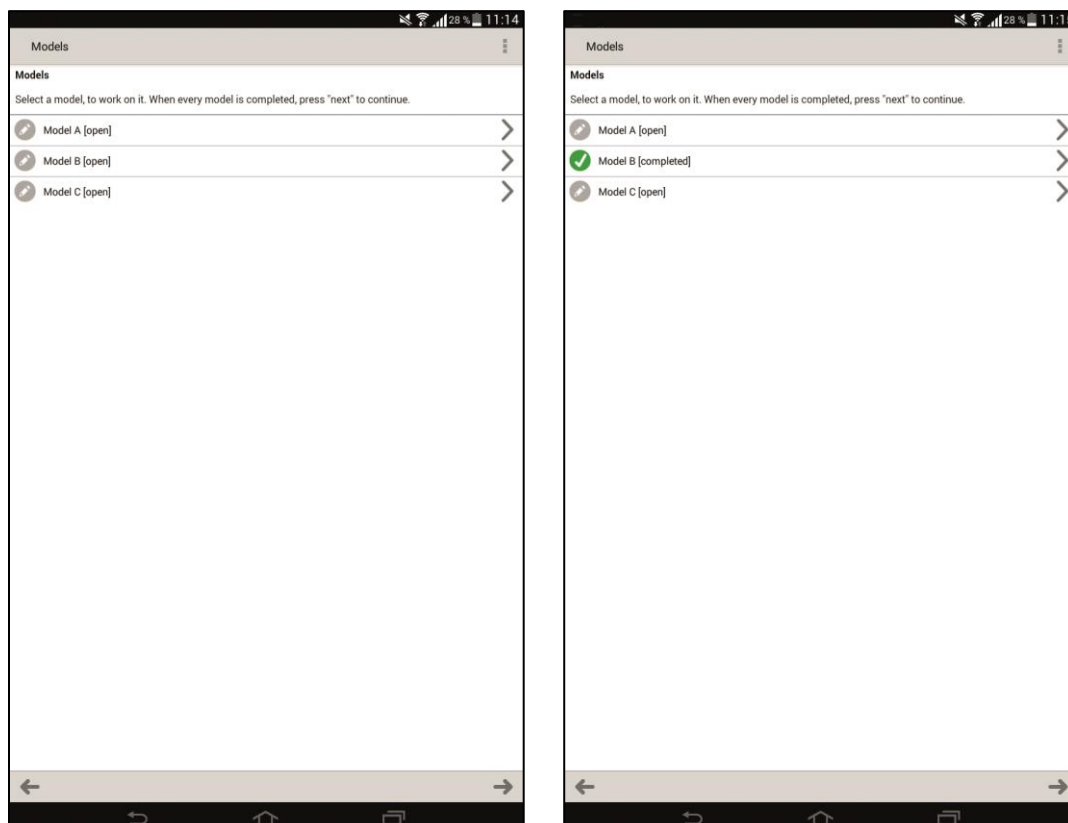
The option **Navigable** is an advantage if, for example, in several surveys conducted in parallel, three areas of the same automobile model should be evaluated. In order to avoid waiting periods in each area, the interviewers can select the area which is available themselves.

→ To change to the last question before the navigable chapter, click on **Back**-arrow in the chapter overview.

! A chapter or a loop can only be made navigable if the following conditions are fulfilled:

- no questions are on the direct subordinate level

- there are no jumps (Filter, Branching, Filter Pro or Validation) into the chapter or loop or out of the chapter or loop

- there are no references (e.g. formulas and conditions) from outside of the chapter or loop to a question inside the chapter or loop

---

! If a sub-element of a navigable chapter (sub-chapter) or a navigable loop (loop cycle) has been already finished and you ask it once again, you will receive a warning message. If it has to be edited again, the sub-element has to be completed to the end in order for it to be finished.

! **ABORT CHAPTER**

→ Click on the symbol 🔁 and confirm the warning message.

The answers given up to this point will be preserved. You can continue the aborted chapter later from the same point.

! With this setting the differentiation between chapter and loop is decisive. The sub-elements of a loop are always the loop cycles, while the sub-elements of a chapter can either be questions or sub-chapters.

4.2.2.7 Filtering chapters as sub-elements of a navigable chapter

If you have defined several chapters as sub-elements of a navigable chapter, then you can filter them out, if needed.
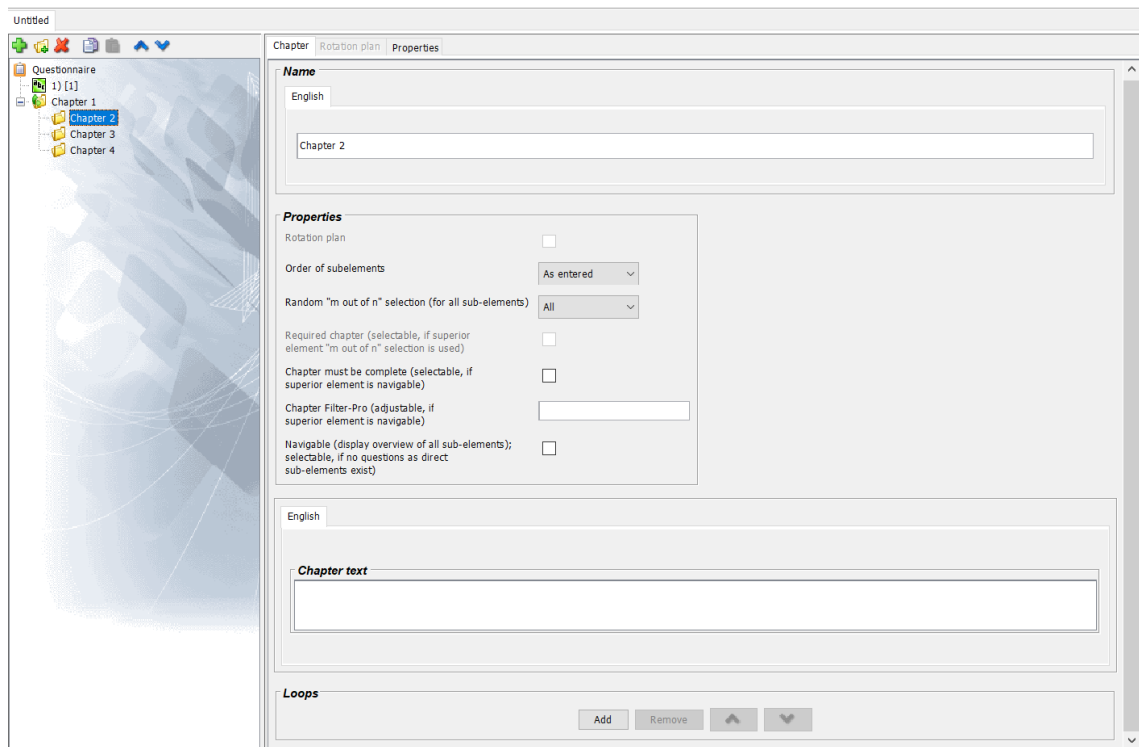
If the superior element is a chapter und this chapter is navigable, then the field **Chapter Filter-Pro (adjustable, if superior element is navigable)** is activated automatically.

> **!** The formulas and conditions for filtering the selected chapter work the same way as they do for the tab **Filter Pro** of a question (→ See also Page 77). A difference is, however, that no "go to"-target has to be defined when filtering a chapter. The filtered chapter is not available in the chapter overview on the mQuest Client when the entered condition is evaluated as false.

4.2.2.8 Chapter text

In the chapter text you can determine the title that is displayed on the mQuest Client during the chapter overview. If you leave this field empty, the default text of the chapter overview is displayed.

> **i** You can enter the chapter text in all languages that are available in the questionnaire.

4.2.2.9 Chapter must be complete (selectable, if superior element is navigable)

When you have defined **Navigable** for a superior element (chapter or loop cycle), the order of the subordinate chapters on the mQuest Client can be determined and selected. As a result, subordinate chapters can be skipped and the chapter overview can be quitted without having asked all sub-elements. In this case, if you have activated **Chapter must be complete** for a subordinate chapter, then the chapter will be checked for completeness upon quitting the chapter overview. If the chapter has not been completely asked, the subordinate chapter will be marked as incomplete in the chapter overview. It can be decided whether the incomplete chapters should be ignored or should still be worked on.
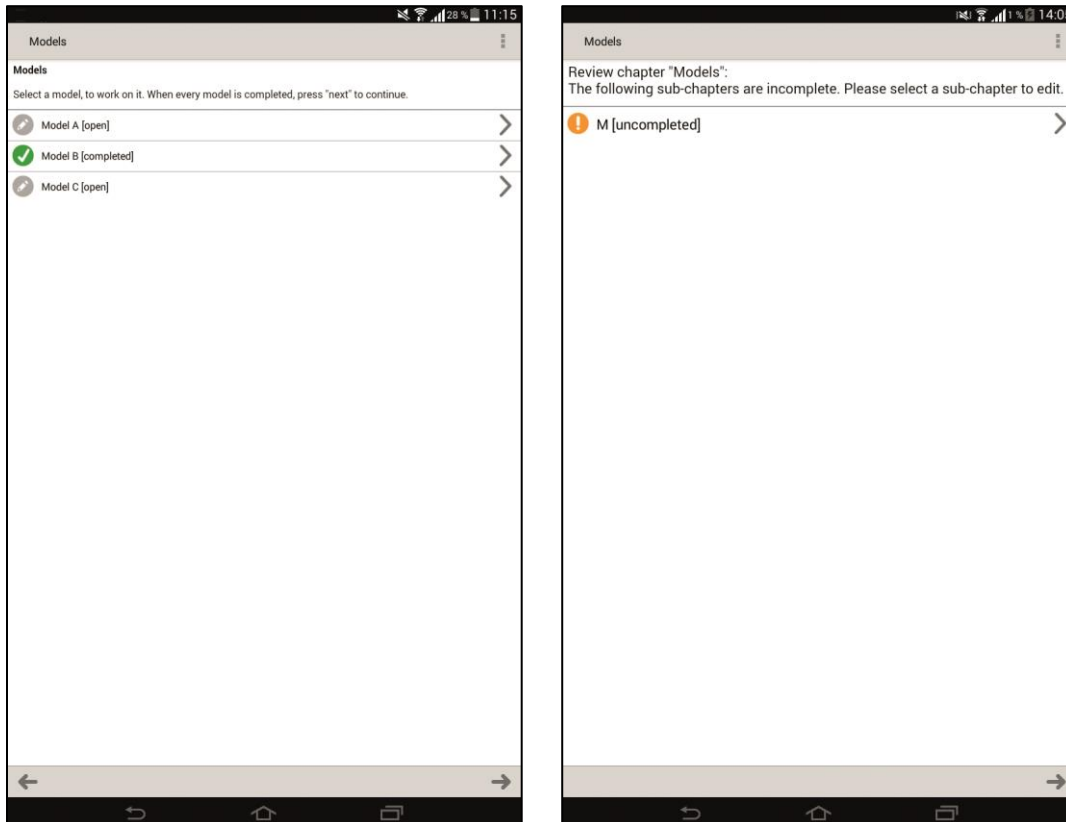
> **!** A chapter can only be defined as **must be complete,** when the superior chapter or the superior loop flow is navigable.

4.2.3 Move

1. Click on the desired chapter in the **Questionnaire elements**.

2. Click on **Question > Move Question/Chapter up** or on **Question > Move Question / Chapter down** or in the toolbar on the suitable symbols ⌃ or ⌄ .

4.2.4   Copy and paste

> **i**   When copying and pasting the chapters are copied and pasted with all their sub-elements.

COPY CHAPTER:

1. Click on the desired chapter in the **Questionnaire elements**.

2. Click on **Question > Copy Question/Chapter** or in the toolbar on .

   The chapter will be copied and can be pasted in another questionnaire.

PASTE CHAPTER:

1. In the **Questionnaire elements, click** on the desired position where you would like to paste a chapter.

2. Click on **Question > Paste Question /Chapter** or in the toolbar on .

   The copied chapter will be pasted.

> **!**   When a chapter is pasted it will be checked whether everything was pasted successfully. If restrictions exist, a suitable tip will follow.

> **!**   Principally, all references of a chapter are copied. When pasting, a check will follow to verify if the referenced target is still valid. If this is not the case, invalid references will be deleted.
>
> If there are references within a chapter that you would like to paste, these will be kept.
>
> If references exist to the **outside** of the chapter, it is checked during pasting whether the original reference targets are still valid. If this is not the case, the invalid references will be deleted.
>
> This concerns the following references:
>
> - Questions
> - Auto-completion lists
> - Images
> - Global variables
> - Loop cycles
> - Languages
> - Included answers
> - Additional categories.

! If the chapter you would like to paste contains languages which are not defined in the target questionnaire, these will be discarded when pasted.

In the opposite situation, the languages of the target questionnaire will be added. Texts will be blank for the added language.

! If there is a question with the option **Include answers** in the chapter to be pasted, but the source question does not exist in the target questionnaire, an empty answer is pasted instead.

! If there are loop cycles in the chapter to be pasted, you cannot add it beneath another loop.

Loops may not include subordinate loops.

4.2.5   Delete

1. In the **Questionnaire elements, click** on the chapter you would like to delete.

2. Click on **Question > Delete Question/Chapter** or in the toolbar on ![delete icon].

! The deletion of a chapter is **not** possible if there are existing references from outside the chapter to questions inside the chapter.

The deletion of a chapter is also **not** possible if no further questions would remain in the questionnaire after deleting the chapter.

4.3   Loops

Loops are an extended form of a chapter. A chapter becomes a loop when you add loop cycles. The use of loops makes sense if you would like to use the same questions for several objects. You are then able to create the questions for the objects only once and apply those several times in order to avoid redundant questionnaire sections. Through loop cycles you can define for which objects the questions should be asked.

Example	For example, 4 vehicles from different manufacturers should be evaluated (Model A, B, C and D). The questions are the same for all vehicles and are defined only once and then asked by means of a loop with one loop cycle for every vehicle. In addition, you can define that during every survey, for example, only 3 of the 4 vehicles are randomly asked, Model D is always asked, and certain questions which only apply to Model D are asked.

4.3.1   Create

1. In the **Questionnaire elements, click** on the chapter which you would like to convert into a loop.

2. Click in the **Element settings** on **Add / Remove**.

   A loop cycle will be added and the chapter will be converted into a loop. The options for loop cycles will be displayed.
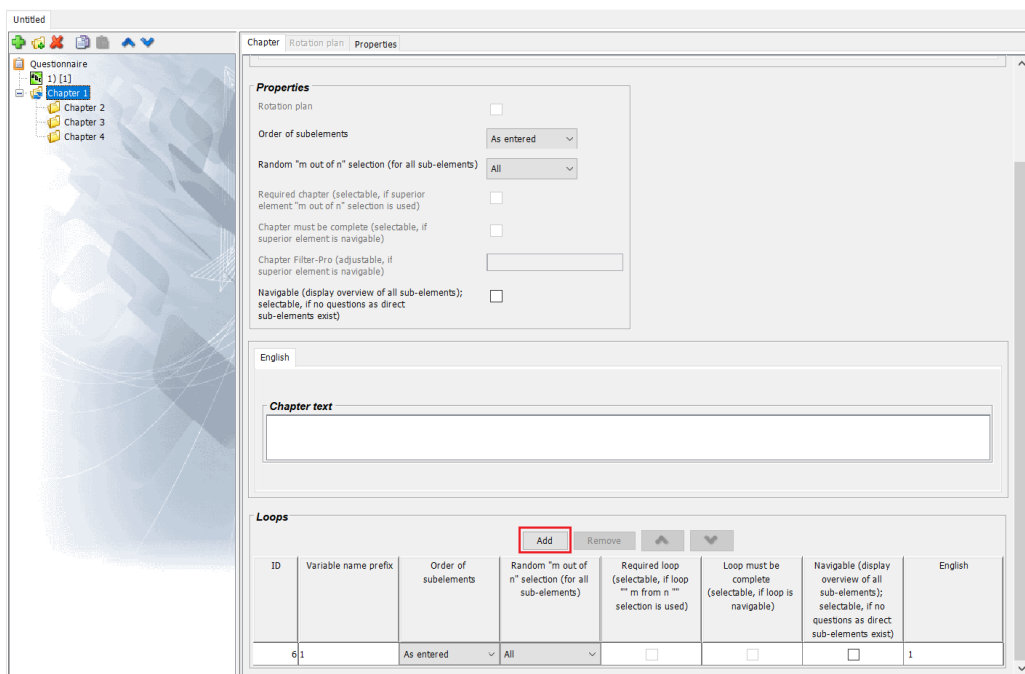
4.3.2   Defining properties

For the properties of loops it must be differentiated between the loops and their loop cycles. You have the possibility to carry out changes to the preferences for the loop itself (→ See also Page 100) or for its loop cycles.

In the **Element settings** in the area **Loop cycles** you can define the options for every loop cycle individually.

4.3.2.1 ID

The ID will automatically be issued by the QuestEditor and cannot be changed. It is used for referencing when using formulas (→ See also Page 114).

4.3.2.2 Variable name prefix

The variable name prefix is used for the later identification of the loop cycle in the results. Together with the variable name of the subordinate question a unique variable name is composed (→ See also Page 116).

4.3.2.3 Order of sub-elements

Here you can select in which order the sub-elements of a loop cycle should be asked in a survey.

- **rotating**
  The sub-elements will be asked one after the other. However, the selection of the start element depends on the number of surveys on the mQuest Client.

- **as entered**
  The sub-elements will be asked as you have entered them.

- **random**
  The sub-elements will be asked in random order.

> **!** These setting possibilities refer to the sub-elements of a loop cycle. That means that you determine the order of the subordinate questions or chapters.

4.3.2.4 Random "m out of n"-selection (for all sub-elements)

If this option is defined for a loop cycle, then a random selection of the sub-elements of the loop cycle will be asked in a survey.

- **all**
  All sub-elements will be asked.

- **definite number of sub-elements**
  Only a definite number of selected sub-elements will be asked.

> **!** These setting possibilities refer to the sub-elements of a loop cycle. That means that you determine the order of the subordinate questions or chapters.

4.3.2.5   Required loop cycle (selectable, if loop "m out of n"-selection is used)

If you have defined for **random "m out of n" -selection** a **definite number of sub-elements** for a loop, you can set up a loop cycle as a required loop cycle. A required loop cycle is always asked in a survey. The selection of the other asked loop cycles is random.

Example	If 4 different vehicle models should be evaluated, but the survey duration would be too long with all 4 models (4 loop cycles), you can define that in every survey, e.g., only 3 models (3 loop cycles) are randomly selected. If the evaluation of a particular model is especially important, you can set it up as a required loop cycle.

> **!** With this setting the differentiation between chapter and loop is decisive. The sub-elements of a loop are always the loop cycles, whereas the sub-elements of a chapter can either be questions or sub-chapters.

4.3.2.6   Navigable (Display overview of all sub-elements; selectable, if no questions as direct sub-elements exist)

If you make a loop cycle navigable, a chapter overview will be displayed for you during a survey on the mQuest Client. That means that the direct sub-elements of the loop cycle (chapters) are displayed for selection and you can determine the order yourself. The sub-elements which were already asked are marked with a green checkmark and the affix **[completed]**.
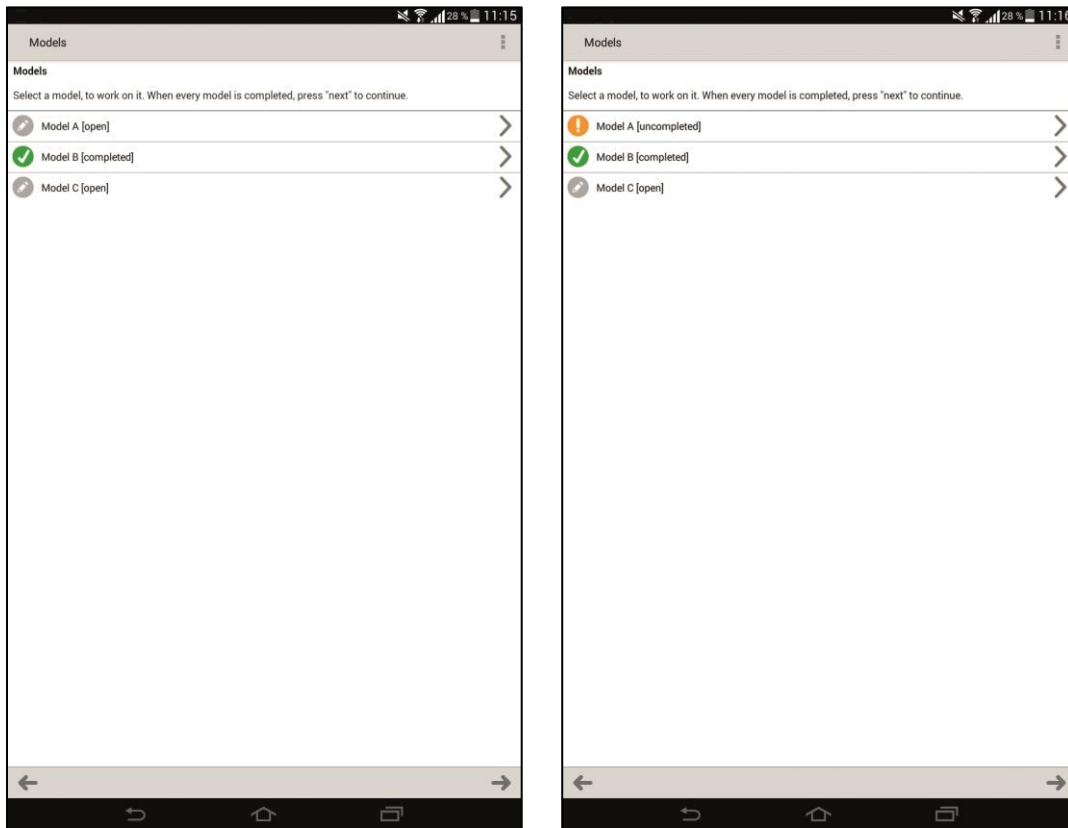
> **!** In order to make a loop cycle navigable, questions are not allowed as direct sub-
> elements.

4.3.2.7 Loop cycle must be complete (selectable, if loop is navigable)

If you have defined **Navigable** for a loop, the order of the subordinate loop cycles on the
mQuest Client can be determined. Due to that, a subordinate loop cycle can be quitted and
the chapter overview can be left without having to ask all sub-elements. If in this case you
have activated **Loop cycle must be complete** for a subordinate loop cycle, the loop cycles are
checked for completeness upon leaving the chapter overview. If there are incomplete
chapters, these are marked as incomplete. You can decide whether you will ignore the
incomplete loop cycle or still work on it in order to complete it.

> **!** A chapter or a loop cycle can only be defined as **must be complete**, if the superior
> chapter or the superior loop cycle is navigable.

4.3.2.8 Description

In this column, enter the description of the loop cycle. This description can be displayed in the
question or answer texts by the text variable $L. For every language of your questionnaire a
column is displayed. The variable $L and its usage are further specified in the following
chapter.

Loops

ID	Variable name prefix	Order of subelements	Random "m out of n" selection (for all sub-elements)	Required loop (selectable, if loop "" m from n "" selection is used)	Loop must be complete (selectable, if loop is navigable)	Navigable (display overview of all sub-elements); selectable, if no questions as direct sub-elements exist)	German	English
6	1	As entered	All	☐	☐	☐	Modell A	Model A
7	2	As entered	All	☐	☐	☐	Modell B	Model B
10	3	As entered	All	☐	☐	☐	Modell C	Model C
11	4	As entered	All	☐	☐	☐	Modell D	Model D

4.3.3   Formulas and variables for loops

4.3.3.1   Text variable $L – Display description of the current loop cycle

Syntax: $L

Here you display the description of the current loop cycle and integrate it into a text.

In the following example $L displays the description of the current loop cycle in a question text:

Loops

ID	Variable name prefix	Order of subelements	Random "m out of n" selection (for all sub-elements)	Required loop (selectable, if loop "" m from n "" selection is used)	Loop must be complete (selectable, if loop is navigable)	Navigable (display overview of all sub-elements); selectable, if no questions as direct sub-elements exist)	German	English
6	1	As entered	All	☐	☐	☐	Modell A	Model A
7	2	As entered	All	☐	☐	☐	Modell B	Model B
10	3	As entered	All	☐	☐	☐	Modell C	Model C
11	4	As entered	All	☐	☐	☐	Modell D	Model D

German | **English**

Question title

☑ Activate $L

Question

How do you like the external appearance of "$L" in general?
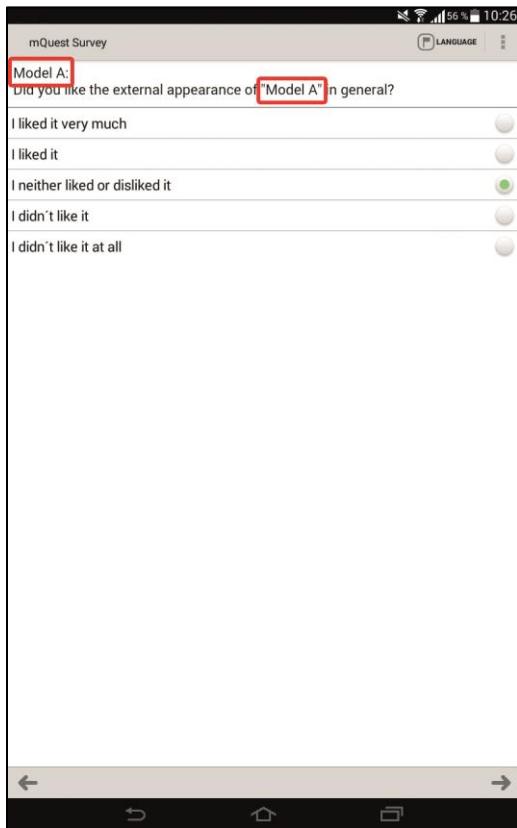
4.3.3.2   Value variable L

Syntax: L<Loop cycle ID>

Here you are able to check, with the use of a formula, which loop cycle is currently asked. **<Loop cycle ID>** stands for the unique ID of a loop cycle. The formula variable L returns the value 1 if the loop cycle with the suitable ID is currently asked. Otherwise the value is 0.

In the following example a question is asked only for model A, by defining a formula with the suitable ID of the loop cycle as a condition in the Filter Pro of the question:

4.3.3.3   Value variable Q

Syntax: L<Loop cycle ID>Q<Question number> or L<Loop cycle ID>Q<Question Number>.<Answer number>

Herewith you are able to refer to a question or an answer which is within a loop. L<Loop cycle ID> stands for the unique ID of a loop cycle.

4.3.4   Delete

1. In the **Element settings** for loop cycles, click on the loop cycle which you would like to delete.

2. Click on **Remove**.

3. To convert a loop back into a chapter again, repeat steps 1 and 2 until all loop cycles are removed.

   The loop will be converted into a chapter. The options for loop cycles will be hidden.

4.3.5   Results of loops

The sub-elements of the loop will be run through once per loop cycle. Even though the questions exist only once in the questionnaire, they are used several times and their results are stored separately.

The answers to the questions of a loop are saved together with the other answers of a survey in **one** row in the results. The loop cycles of a loop are filed one after the other. To clearly identify a question within a loop, the variable name is comprised of the variable name prefix of the loop cycle and the variable name of the question, e.g. A_Exterieur and B_Exterieur in the illustration.

A_Exterieur	A_ExterieurDislikes	A_ExterieurDislikes_E1	A_ExterieurLikes	A_ExterieurLikes_E1	A_Headlights	A_Cooler	A_Fog	A_Steerin...	A_Navigat...	B_Exterieur	B_Ex
1						3	4	2	3	2	
4						2	3	3	4	1	
2						1	3	4	2	4	

4.4   Rotation plan

Rotation plans are another possibility to vary the order of the survey. They can be configured for chapters, questions and loops.

> **!** With this setting the differentiation between chapter and loop is decisive. The sub-elements of a loop are always the loop cycles, while the sub-elements of a chapter can either be questions or sub-chapters.

- **Rotation plan for questions**
  Refers to the directly subordinate questions of a chapter

> **!** A rotation plan for questions of a chapter is only possible if the chapter is solely made up of questions.
>
> With loops it is not possible to create a rotation plan for subordinate questions.

- **Rotation plan for chapter**
  Refers to the directly subordinate chapters of a chapter

- **Rotation plan for loops**
  Refers to the directly subordinate loop cycles

4.4.1   Create

1. In the **Questionnaire elements, click** on the chapter or the loop for whose sub-elements you would like to create a rotation plan.

2. Activate the option field **Rotation plan** in the **Element settings**.

   The second tab Rotation plan will be activated and a standard rotation plan will be generated.

3. Open the tab **Rotation plan** and undertake the individual settings for the rotation plan.

> **i** If you create a rotation plan, a standard rotation plan will automatically be generated. That means that the number of the generated rotations corresponds to the number of the existing sub-elements.

> **!** When you create a rotation plan, the characteristics of the setting possibilities **Order of the sub-elements** and **random "m out of n"-selection (for all sub-elements)** will be deactivated.

4.4.2   Defining the order of the rotation plan

With the help of the drop-down menu you can define the order of the rotation plan (→ See selection **a** in Ill. on Page 118).

- **Interview counter**
  The rotations of a rotation plan are rotated depending on the number of surveys on the mQuest Client.

- **global manual**
  For all rotation plans of a questionnaire which have the type **global manual**, the rotation is selected only once at the beginning of the survey and is then used for all.
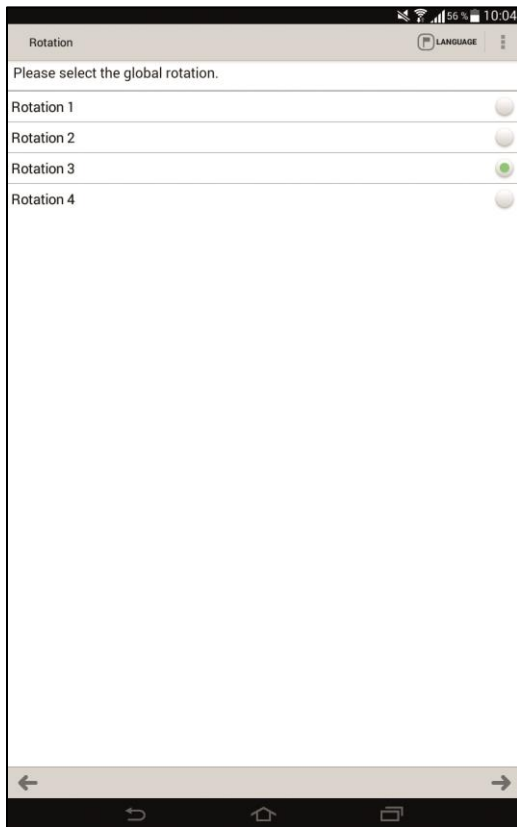
> **i**   You also have the possibility to use the pre-defined global variable **gvRotation** to record in the results which survey was carried out with which global manual rotation (→ See also Page 19).

> **!**   If the rotation type **global manual** is defined for several rotation plans and they have a different number of rotations, then the maximum number of rotations will be available for selection. If for a rotation plan which has only 3 rotations, the 4th was selected, then it will be wrapped and the first one will be used.

- **manual**
  At the beginning of a survey the rotation for every rotation plan of the type **manual** will individually be selected.
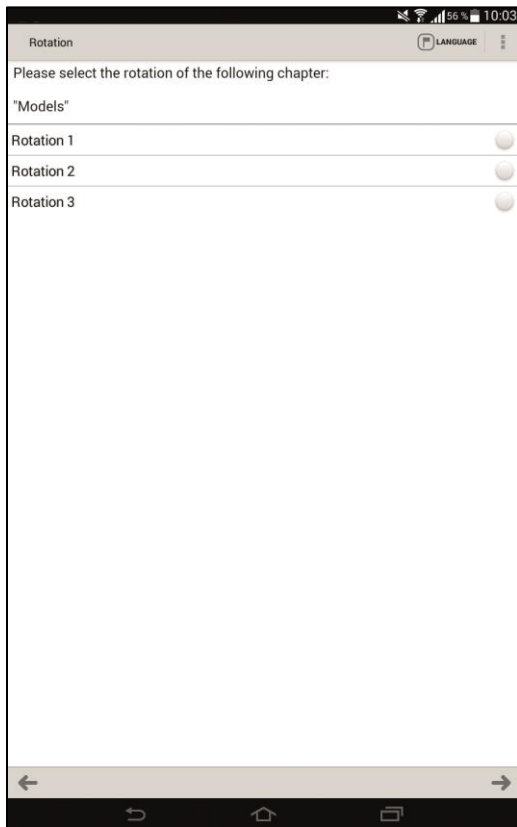
- **random**
  In every survey a rotation will be randomly selected.

4.4.3   Editing

With the help of a drop-down menu (→See selection **b** in Ill. on Page 118) you are able to edit a rotation.

4.4.4   Add a rotation

→ Click on **Add** (→See selection **c** in Ill. on Page 118) to add an additional rotation.

4.4.5   Remove a rotation

→ Click on **Remove** (→See selection **d** in Ill. on Page 118) to remove a selected rotation.

4.4.6   Delete

→ A rotation plan is deleted by deactivating the option field **Rotation plan** in the element settings of the chapter or the loop.

4.5   Dynamic Chapters

You can use dynamic chapters to ask the same questions over and over again, similar to a loop. Unlike a loop, where the maximum number of passes must be specified, a dynamic chapter can be run any number of times.

4.5.1   Create

1. In the **questionnaire element**s, click on the question or the chapter after which you would like to create a dynamic chapter.

2. Click on **Question > Add chapter** or click on in the toolbar.
    A new chapter will be added.

3. Under **Properties,** place a checkmark next to **Dynamic Chapter.**
    The chapter becomes a dynamic chapter. You can distinguish it from normal chapters by this symbol *.*

4.5.2   Special features of dynamic chapters

Evaluation of dynamic chapters

It is only possible to evaluate dynamic chapters by exporting them as an Excel table (see 14.5). For each dynamic chapter of the questionnaire, a separate spreadsheet with the results is created in the Excel table.

References to dynamic chapters

The results of dynamic chapters cannot be accessed externally via formula variables.

4.5.3   Defining properties

In the Element settings of the QuestEditor, you can define individual settings for each dynamic chapter, just as you can for normal chapters. These settings are described under 4.2.2.

4.5.4   Prefix for dynamic chapters

The prefix is the text that is shown on the mobile device for each iteration. By default, the index of the iteration is attached to the prefix (1-N).

The prefix can be used to access questions within the dynamic chapter via text variables or formula variables.

4.5.5   Move, copy, paste or delete a chapter

Dynamic chapters can be moved, copied/pasted, and deleted like normal chapters (see 4.2.3 to 4.2.5).

4.5.6　Chapter Properties for dynamic chapters

The following chapter properties are available:

Property	Possible values	Description
questioning_chapter_skip_first_dyn_chapter_view_and_start_iteration	True / false	Defines that the first iteration of a dynamic chapter is started without displaying the dynamic chapter overview with the Add button.
questioning_chapter_max_dynamic_iterations	0-N	Sets the maximum number of iterations of a dynamic chapter. The property is validated when another iteration is added.
questioning_chapter_min_dynamic_iterations	0-N	Sets the minimum number of iterations of a dynamic chapter. The property is validated when the overview is left.
questioning_chapter_append_index_to_dynamic_iteration_label	True / false	By default, the index of the iteration is attached to the prefix of a dynamic chapter. So, this property is true by default. If you set it to false, the index is not attached.
questioning_online_available	true/false	When this property is set on "true" in the questionnaire, the questionnaire is available for the online/ thin client survey.
questioning_end_chapter_validation_password_if_incorrect	secret	The password will be asked when leaving the final validation if the chapter is not finished.

custom_qning_modules	classname	**(Android only)**
		An individual **mQuest Traffic module** will be launched after the survey is finished.
		Example:
		...=de.cluetec.mQuestSurvey. traffic.CountModule
custom_pre_qning_action	classname	**(Android only)**
		An individual **mQuest Traffic module** is started before the survey is finished.
		Example:
		…=de.cluetec.mQuestSurvey.t raffic.RidenumberPreQningM odule
questioning_chapter_overview_append_state	True / false	By default, this property is true and causes the status of the dynamic iteration to be shown.
		If you set the property to false, the status will no longer be shown.

5   mQuest traffic*

mQuest traffic is used for traffic surveys. It is an extended version of mQuest with some additional features. The general functions, operation and navigation are identical to the standard version of the QuestEditor. Therefore the information from this user manual also applies to mQuest traffic. The differences and additional features of mQuest traffic will be described in this chapter.

The new version of mQuest traffic can be opened with the property traffic_count_screen_2=true

5.1   Additional features in mQuest traffic

The following functions are additional features of mQuest traffic:

- Menu item "Traffic" for adding and removing stopover sequences

- Question type variant entered and exit at stopover for the question type text input

- Additional questionnaire properties

- Predefined Global Variables "nextStop" and "Ridenumber"

- Count module in the mQuest Client (adjustable by project properties)

  - Texts (on buttons and labels) for ON and OFF are configurable

- Display of the totals for new entrants and exits

- Comment function for individual stops

- Color highlighting of the counting category context

- Skipped stops are not filled with 0 (optional)

- The stop focus can be moved forward automatically or only manually.

- Optimized stop sequence in question type "Exit stop", if not counted

- In the trip data, which counting categories were selected is stored for each trip

- The number of copies can be configured in the dialog for copying the last data record

- On the count screen, a comment for the current stop can be added via the menu. The comment is saved with the count data and synchronized with the QuestServer

5.2   Create mQuest traffic questionnaire

Creating questionnaires with mQuest traffic basically works the same as with the standard version of mQuest. ($\rightarrow$ See chapter 3 and 4). Therefore, only those steps which are only available in mQuest traffic will be explained at this point.

On creation of a new questionnaire, all required default values for Global Variables, project properties, and the question title are set automatically. The questionnaire type "Continuous" should not be changed; otherwise, the ride would be finished after the first survey.

The questionnaire itself can be created as usual and without any further restrictions.

5.2.1   Create stopover sequence

With the help of the count module, you can count the entering and exiting passengers at the stopovers of a route. The stopover sequences of a route are saved in the questionnaire. The following 3 .csv-files are the base of this:

- RideID-RouteID: Ride numbers (unique numeric values) and, if applicable, ride names are assigned to the corresponding routes.

- RouteID-StopIndex-StopID: The single routes are defined. The order and completeness of the stop indices will be verified during the import.

- StopID-StopName: This list serves for assigning the IDs from the list RouteID-StopIndex-StopID to the corresponding stop names.

Create RideID-RouteID

1. Open a **spreadsheet application** like **Excel.**

2. Enter the ride number and the routes in the spreadsheet. Enter the ride number in the first column and the route in the second column. Use a new row for every route.

For example:

	A	B
1		IC 2216
2		ICE 219
3		EC 177
4		IC 2218

3. Save the file with the extension **.csv**.

> **i**   If required, a ride name can be specified in addition to the ride number. This will then be entered in the second column while the route will be entered in the third column. Since Version 9.0 you can select a route also by its ride name in the ride start module.

Create RouteID-StopIndex-StopID

1. Open a **spreadsheet application** like **Excel.**

2. Enter the route, the order of the stops (stop index) and the stop ID in the spreadsheet. Use the first column for the route, the second column for the stop index and the third column for the stop ID. Use a new row for every route.

For example:

	A	B	C
1	EC 117	1	004
2	EC 117	2	005
3	EC 117	3	006
4	EC 117	4	007
5	EC 117	5	016
6	EC 117	6	017
7	EC 117	7	110
8	IC 2216	1	003
9	IC 2216	2	014
10	IC 2216	3	004
11	IC 2216	4	005
12	IC 2216	5	015

3. Save the file with the extension **.csv**.

> ! Save the order of the stops for all routes in one file because only one file will be imported.

Create StopID-StopName

1. Open a **spreadsheet application** like **Excel.**

2. Enter the stop ID and the stop name in the spreadsheet. Use the first column for the stop ID and the second column for the stop name. Use a new row for every stop.

For example:

	A	B
1	001	Frankfurt HBf
2	002	Mannheim HBf
3	003	Karlsruhe HBf
4	004	Stuttgart HBf
5	005	Ulm HBf
6	006	Augsburg HBf
7	007	München HBf
8	008	Heidelberg HBf
9	011	Darmstadt

3. Save the file with the extension .csv.

> i You can also create these lists with a text editor. Separate the columns with semicolons and use a new line for every entry.
>
> **For example:**
>
> ```
> 001;Frankfurt HBf
> 002;Mannheim HBf
> 003;Karlsruhe HBf
> 004;Stuttgart HBf
> 005;Ulm HBf
> 006;Augsburg HBf
> 007;München HBf
> 008;Heidelberg HBf
> ```

5.2.2   Manage stopover sequences

You need to import a stopover sequence before you can use it in a questionnaire. If you do not need an imported stopover sequence anymore, you can also delete it.

Add stopover sequence

1. Click **Traffic > Add stopover sequence**.

2. Select the list **RideID-RouteID** and click **Next**.

3. Select the list **RouteID-StopIndex-StopID** and click **Next**.

4. Select the list **StopID-StopName** and click **Finish**.
    A notification informs you about the successful import of the stopover sequence.

Delete stopover sequence

1. Click **Traffic > Remove stopover sequence**.

   A security notification appears.

2. Confirm the security notification.

---

i	If you want to import changed stopover sequences to the questionnaire, you can overwrite the previous stopover sequences. You do not have to delete these beforehand.

5.2.3   Define count categories

Count categories determine what categories of passengers will be counted. Default categories are 1st class, 2nd class, Bikes etc. and miscellaneous. If required, you can customize the count categories so only the required or desired categories are available. Additionally, you can determine what information will be collected for which category.

1. Select the questionnaire element **Questionnaire** in the left area in order to access the questionnaire data.

2. In the area **Textproperties, change** the values of the property **categories**, separate single values by a semicolon.

Configure count categories

You can determine what information will be collected for which category. This is configured by the project properties.

Such an entry could look like this:

Traffic_count_category_configuration_1=o;i;m

It consists of the following parts:

- traffic_count_category_configuration_**1**= : determines for which count category the configuration applies.

- o : determines that exiting passengers can be counted

- i : determines that entering passengers can be counted

- m : determines that the entire manning can be counted

If certain information shall not be collected an x will be set instead of the corresponding letter.

!	The order of the letters is important: First the exiting passengers (o or x), then the entering passengers (i or x) and at last the entire manning (m or x).

Furthermore, the colums and buttons can be configured with the following properties:

traffic_category_<Zählkategorie-Index>_column_<Spalten-Index>_title

traffic_category_<Zählkategorie-Index>_column_<Spalten-Index>_button

This may look like this:

Textproperties	
Key	German
categories	Gesamt;2. Klasse;1. Klasse;dritte Klasse;Fahrräder
traffic_category_1_column_1_title	Kinder < 16
traffic_category_1_column_2_title	Studierende
traffic_category_1_column_3_title	Fahrräder
traffic_category_1_column_1_button	Kinder nicht älter als 16 (Außnahmen ok)

5.2.4 Floor focus (count focus) advance automatically (optional)

Standard behavior is that the counting focus automatically moves one stop forward when changing between the survey module and the counting module.

Now this can be configured individually by the surveyor via an option in the menu of the survey module.

5.2.5 Texts (on buttons and labels) for ON and OFF are configurable

With the help of the questionnaire text properties, the texts on the labels and buttons for ON and OFF can be adapted.

5.2.6 Survey data can be duplicated

Duplicate data set

On the first page of a new survey, tap on to open the following dialogue:
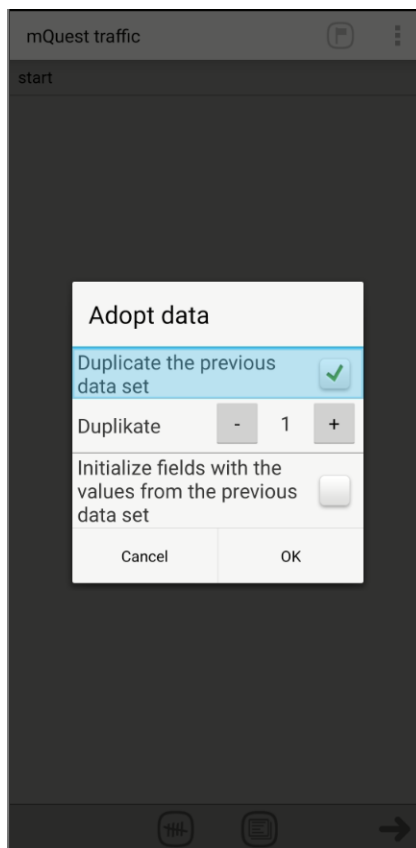
The dialogue allows to duplicate the last data set or to preset the current data set with the values of the last data set. In addition, the number of duplicates can be specified. For this, however, the property **questioning_adopt_results_enabled=true** must be stored. (See Chapter 5.5)

Use preset data as formula variable

If the globale variable "gvPresetCtx" (preset context) was created in the questionnaire, it is filled via the "apply data"-dialogue when presetting the data set. The following values are possible:

- "preset": the fields of the data set were preset with the values of the last data set
- "none": standard data set, no preset

The global variable (gvPresetCtx) can be used via $G or $P in Filter Pro, and can also be used and referenced in the whole questionnaire.

5.3   Create final survey

Final surveys are executed at the end of a ride.

Basically, you create a final survey just like a normal questionnaire. The final survey does not need any stopover sequences.

For the correct presentation and execution of the questionnaire follow these steps:

1. Create a new questionnaire.

2. Set the questionnaire type to **Standard**, so the questionnaire is executed only once.

3. Create or change the questionnaire property **traffic_mode=** and set the value to **qnning_standalone**, so only the questioning module is started.

4. Create or change the questionnaire property **questioning_user_start_enabled=** and set the value to **false**.

   You have configured all required settings for a final survey. As the stopover will not change anymore you can also delete the default question title in the project settings.

5. Create the final survey as described in chapter 3 and 4 of the manual.

6. In the questionnaire the final survey belongs to, assign the name of the final survey to the questionnaire property **questioning_next_qnnaire=**.

   The final survey will now be executed after ending the questionnaire.

5.4   Exporting and interpreting count data

With the help of SurveyManager you can export the count data as a .csv file in order to process it in other programs and to interpret the data.

The export option can be found in the project area via the Export button. Select counting data and follow the next steps.

You can process this file now in other applications or view it directly. The export file can be opened with a standard spreadsheet application like Excel.

You will find the following information in the export file:

- RideID: The ride number all other information in this row refers to

- SSID: Server-sided ID which helps preventing duplicates

- UniqueID: Unique ID of the project

- Questionnaire Name: Name of the project

- State: The current state of the project

- Questionnaire Version: Version number of the project

- Device ID: Unique device number

- Interviewer: Name of the user (if specified)

- Hst Idx: Position of the stopover in the route (stop index)

- Hst ID: Unique ID of the stopover

- Hst Name: the name of the stopover

- Hst Start: Begin of the counting for this stopover

- Hst End: End of the counting for this stopover

- In 1-5: Number of entering passengers in the different count categories

- Out 1-5: Number of exiting passengers in the different count categories

- Manning 1-5: Entire manning of the vehicle in the different count categories

Interpret count category selection

In the table with the ride data, it is saved for each ride which count categories were selected when the ride was finished.

The data can be interpreted as follows:

- 1: Count category was selected

- 0: Count category was not selected

- -1: Count category was not available for selection (questionnaire configuration)

- -2: Count category selection data were not available (for old ride data)

Example:

```
|uniquerideid                        |handover           |cat1|cat2|cat3|cat4|cat5|
|------------------------------------|-------------------|----|----|----|----|----|
|c6ac322b-12b5-4a6b-baff-b50579226c78|2019-01-11 12:52:27|  -2|  -2|  -2|  -2|  -2|
|bd2528de-48f7-491b-9d85-5f107b03d7d9|2019-01-21 11:14:35|   1|   0|   1|   0|  -1|
```

Interpret count data-handover and stop timestamp

Per ride, a handover timestamp is saved. For a "zeroed" stop, a timestamp is also saved. For stops that have been skipped (i.e. for which no count exists), no timestamp is saved.

Example:

```
|stopname                |begintimestamp     |endtimestamp       |cat1in|cat1out|
|------------------------|-------------------|-------------------|------|-------|
|Mendelssohnpl./Röser Haus|2019-01-11 12:51:07|2019-01-11 12:51:08|    1|      0|
|Mühlburg West           |2019-01-11 12:51:20|2019-01-11 12:51:20|    0|      0|
|Mühlburger Feld         |                   |                   |      |       |
|Mühlburger Tor          |                   |                   |      |       |
|Neckarplatz             |2019-01-11 12:51:24|2019-01-11 12:51:34|    0|      1|
```

5.5   Overview of additional questionnaire properties

These questionnaire properties are additional properties which are not available for the standard version. Fo an overview of all available questionnaire properties, go to chapter 3.6.10.

Property	Possible values	Description
traffic_mode=	default, countmodule_standalone, qnning_standalone	Defines if it shall be possible to count, to interview or both with a questionnaire. The value for both is "default".
questioning_adopt_results_enabled=	true, false	Defines if result datasets may be duplicated or not.
traffic_search_ride_by_name_enabled=	true, false	Enables the entry of a ride name instead of a ride number when choosing the ride.
traffic_count_category_selected_colors=	hexadezimal codes (colours)	You can use this property to configure colors for the count categories. (When a category is selected)
traffic_count_category_default_color=	hexadezimal codes (colours)	You can use this property to configure colors for the count categories. (When a category is not selected)
traffic_stop_stock_up_with_zero_if_skipped=	true, false	This property (questionnaire) is used to set whether the skipped stops of the counters are filled with 0.
traffic_stop_stock_up_with_zero_if_skipped=	true, false	This property is used to set whether an initialization with 0 should take place when selecting the stop immediately after the stop that currently has the counting focus.
traffic_count_category_selected_text_colors	semi-colon separated Hex-(A)RGB	This property is used to highlight the selected count-category. The color will be used as a

	colors	background for the count-category-tab and the label above the count-buttons.
traffic_count_category_default_text_color	Hex-(A)RGB color	The color is used for categories that are not selected. (See property: traffic_count_category_s elected_colors)
traffic_count_list_add_empty_last_stop	true, false	This property is used to add an empty stop at the end of the stop list by default (for additional counting). Use this property (set to false) to remove this empty last stop.
traffic_count_category_remember_selectio n	true, false	Use this property to preset the count-category selection screen with the selection of the last ride.
traffic_count_validation_at_first_and_last_ stop	true, false	Use this property to enable validation when counting (out and in) for the first and last stop.

6   Test a questionnaire: mQuest Client Emulator

With the mQuest Client Emulator you can test your project questionnaire fast and comfortably on the PC, without the use of a mobile device.

6.1   Questionnaire-Test

STARTING THE MQUEST CLIENT EMULATOR:

The current questionnaire can be launched directly from the QuestEditor in the mQuest Client Emulator.

→   Click on ▨ in the toolbar or on **Check and test > Questionnaire-Test.**

The mQuest Client Emulator will be started in a new window.

Alternatively, you can also launch the mQuest Client Emulator in the Windows start menu and carry out the entire process for the realization of a survey on the PC (file questionnaire with SurveyManager on the QuestServer, load questionnaire with mQuest Client Emulator from the QuestServer, conduct the survey etc.).

Instead of the virtual keyboard on the mobile device, you use your normal keyboard on the PC.

!	In the mQuest Client Emulator, answers cannot be recorded for **Media input** questions with the question types Audio, Video and Photo.

!	Before the start of the survey the questionnaire should be completely tested with the mQuest Client on the mobile device.

i	You can receive more detailed information on mQuest Client in the document **mQuest Client Manual**.

6.2   Questionnaire-Quick-Test

With the Questionnaire-Quick-Test you are able to directly "access" a question within your questionnaire in order to test the questionnaire from this question onwards.

If the question from which you want to test the questionnaire has references on previous questions, these reference questions will be asked before the accessed question. References can exist due to Filters, Filters Pro, Branching, Validations or Text variables.

After the question where you started to test the questionnaire, the other questions will be asked in the standard order. Should these questions have references **before** the question you started the Quick-Test, those reference questions will be asked as well. This happens only once, so questions that are referenced and are before the question where the test started will be asked only once.

STARTING QUESTIONNAIRE-QUICK-TEST:

1. Click in the **questionnaire elements** on the question you want to access.
    The selected question will be marked in blue.

2. Click on in the toolbar or on **Check and test > Questionnaire-Quick-Test.**
    The mQuest Client Emulator will automatically start the Quick-Test.

7   Exporting questionnaire: QuestEditor

You are able to export your questionnaires from the QuestEditor to a file at any time. Depending on the purpose of the export there are several file formats and export types.

7.1   Questionnaire export: Standard (RTF)

This export type exports the questionnaire as a Rich Text Format (RTF) file (e.g. for Microsoft Word).

7.1.1   Export Questionnaire (RTF)

1. Click on **File > Export**.

2. Click on **Questionnaire in Rich Text Format for Word (RTF)**.

3. Confirm with **Next**.

4. Select your preferred options in the following window by activating the corresponding check boxes. As an alternative you can choose one of the ready-made export schemes.

- **Layout**
  Here you can adjust the layout of the export file, e.g. you are able to add footers or a table of contents.

- **Chapters and loops**
  Here you choose which chapter and question details of the questionnaire will be displayed in the export file.

  The function **Expand loops** displays every loop cycle including its name.

- **Question details**
  Here you choose which question details of the questionnaire will be displayed in the export file.

- **Survey export optimization**

  - **Convert text variables and formulas into readable text**
    Text variables and formulas which were used in Filters, Filters Pro, Validations and Branching will be converted into readable text.

Example	In the 2nd question of your questionnaire you include the answer of the 1st question by using the text variable $T{1}. When exporting the questionnaire with the function **Convert text variables and formulas into readable text** activated, the text variable $T{1} will be replaced by the text "Answer of question 1" in the 2nd question.

  - **Convert text variables and formulas into readable text (short type)**
    Unlike the function "Convert text variables and formulas into readable text" the text is shortened again.

Example	In a question (Q3) you use a Filter Pro with the formula **Q1+Q2>=4**. If the function **Convert text variables and formulas into readable text** is activated, the text "Ask question when question 1[a] + previous question greater or equal 4" will be displayed in the export file. With the function **Convert text variables and formulas into readable text (short type)** the text "Question 1[a] + previous question >= 4" will be displayed.

  - **Simplify text variables and formulas**
    Text variables and formulas which were used in Filters, Filters Pro, Validations and Branching will be simplified.

Example	For a question within a loop, you used the Filter Pro to define the formula **L5 && Q3.1**, so that this question will only be asked if the interview is in the 5th loop cycle **and** a previous question 3 has been answered with answer 1. This means that the condition **L5** is already sufficient for the remaining loop cycles to not ask the question. The second condition **Q3.1** is only relevant for the 5th loop cycle. When exporting the questionnaire with the function **Simplify text variables and formulas**, the second condition will only be displayed if it is necessary to ask the question, thus in the 5th loop cycle. With the remaining loop cycles the text "Ask question, if 0" will be displayed. That means it will not be asked in these loop cycles.

> (Hint: export with the function **Expand loops** activated.)

- **Remove and optimize questions**
  Questions which are never asked (e.g. because of a Filter) will not be displayed in the export file.

Example	Your questionnaire contains a chapter for which you defined multiple loop cycles. With the Filter Pro you defined for the first question A of this chapter that it will only be asked in the loop cycle 2. If you now export the questionnaire with the function **Remove and optimize questions** activated, the question A will be displayed only in the loop cycle 2.
	(Hint: export with the function **Expand loops** activated.)

- **Do not repeat included answers**
  Answers which are included from one question into another will not be repeated in the new question with the export.

Example	Your questionnaire contains a question B. All answer possibilities of this question are included from the previous question A. When exporting the questionnaire with the function **Do not repeat included answers** activated, the text "All answers from question A" will be displayed instead of the answer possibilities at question B in the exported file. The included answers themselves will not be displayed and can only be found under question A.

1. Click on **Next**.

2. Select the desired language the questionnaire has been created for and confirm with **Next**.

3. Follow the further steps.

7.2   Questionnaire export: Overview (XLS)

This export type simply creates an overview of the questionnaire in the Excel file format (XLS).

1. Click on **File > Export**

2. Select **Questionnaire overview in Excel format (XLS)** in the following window and confirm with **Next**.
   The window for the export settings will appear.

Similar as with the Standard export there are several options:

- **Chapter start and end**
  Two additional lines will be displayed in the Excel table to illustrate the start and the end of a chapter.

- **Loop start and end**
  Two additional lines will be displayed in the Excel table to illustrate the start and the end of a loop.

- **Expand loops**
  Every single loop cycle including its name will be displayed.

1. Select your preferred export options and click on **Next**.

2. Select the desired language the questionnaire has been created for and confirm with **Next.**

3. Follow the further steps.

7.3   Questionnaire export: Translation (XLS)

This export can be used for the translation of the questionnaire into another language.

1. Click on **File > Export**

2. Select **Excel language text export (XLS)** in the following window and confirm with **Next**.

3. Follow the further steps

7.3.1   Layout of the XLS-file

> **!**   All gray highlighted cells of the XLS file must not be changed.

In the upper area of the Excel table the questionnaire data is shown. This contains the **unique version number** (cell B2) as well as the **File name** (cell C1) and the description of the **Language** (in the example cell C2 and D2). In the lower area of the Excel table, you will find all texts that were entered into the questionnaire.

	B	C	D
1	Questionnaire	supershop.mqf	
2		9 German (de)	English (en)
3	Name of questionnaire	Supershop	supershop
4	Description		

Beneath the general data of the questionnaire the added additional categories of the questionnaire are displayed (if existent).

	B	C	D
6	Navigation		
7			
8	Additional categories	Keine Angabe	Don't know
9	Additional categories	Weiß nicht	Refused

In **Column B** you see to which type of questionnaire element the texts of the line belong to.

Furthermore, in the field **Question** of the **Column B** you can see the question number and the variable name of the question.

	B	C	D
15	2. Question [5]		Have you visited the new Supershop before?
16	Answer text		Yes
17	Answer text		No
18	Help		
19	Hint		

In the **Columns C** and the following, there are the language-dependent texts for the translation.

80	12. Question [20]		How would you pronounce the following brand name? QHealth
81	Help		
82	Hint		QHealth is an international successful pharmaceutical company. Some of their partners are...
83	Next Navigation		Done

All questions are displayed with the same pattern. Firstly, the question is shown and beneath it the respective answer possibilities. The rows for help and hint texts always exist, but are only filled out if you have used them and have entered a suitable text. If you have renamed navigation elements when creating the questionnaire, these will also be displayed here. After every single question with answers and other texts a blank space follows in the Excel table.

7.3.2   Editing Text in an XLS-file

When editing the text in the XLS file you should take note of the following points:

- Columns or rows are not allowed to be added or deleted.

- Only the intended translation cells may be edited (Column C and following).

- Cell formatting or text formatting is not allowed to be used.

- Line breaks in a cell must be realized with a correct line break: **Key combination ALT-Return**.

- If applicable, the text variables contained in the text have to be inserted unchanged to the suitable position in the translated text. e.g. $L or $T{..} or $P{..}. With $P{(Formula condition)->Text} the text contained within must be translated.

- Pay attention that references to the navigation elements in question texts are translated the same way as the navigation element itself (Line 7 and 8).

7.3.3   Importing questionnaire texts from an XLS-file

1. Click on **File > Import**.

2. Click on **Select import format** and select the format **Import Excel language texts (XLS)**. Confirm the selection with **Next** and follow the further steps.

> **!** During the export, the **unique version number** of the questionnaire, which gets increased every time the questionnaire is saved, is written into the XLS file. When you re-import the XLS file into the questionnaire, the version number contained in the XLS file must correspond with that of the questionnaire. If this is not the case, a warning message follows and you can decide whether the import should be continued or not. If you continue the import, it is possible that the entire language column or single questionnaire elements cannot be assigned because of different Export-IDs from the XLS file, or it may come to unintentional text replacements, for example, the overwriting of in the meantime altered text in the questionnaire. If after the export of the XLS file questions/answer options were still added to the questionnaire, these are consequently not included in the XLS file.

> **!** If during the import for an Export-ID from an XLS file no suitable element is found in the questionnaire, mQuest will skip the concerning line in the XLS file. This can happen if changes were still carried out in the questionnaire after the export of the XLS file, e.g., questions/answer options were deleted or question types were changed.

8 QuestServer

In order to access the QuestServer with the SurveyManager, the QuestServer must be started.

If you test mQuest on your PC or if the QuestServer is running on your PC during a project, you need to start the QuestServer on your PC. If the QuestServer is running on another PC in your company, it must be started on that PC.

Which QuestServer you communicate with depends on the registered URL you use to access the SurveyManager. For example, if the QuestServer is local to you, the URL is https: // localhost / SurveyManager

> **i** To test mQuest without obligation, you can request a free demo under the following link:
>
> **https://www.cluetec.de/solutions/mquest/test-mquest/**

9   SurveyManager overview

9.1   User interface

In the upper section of the user interface, you will find the main areas of the **SurveyManager.** The areas are **Projects, Users, Exports, Editor, Report, License** as well as **Help.**

Projects:

In this area, you find all projects that are stored in your mandator, including first information. When you click on a project, you will be lead to the detail overview of this project, where you can update the project for example.

Users

In this section, you see all users that were created for your mandator. With only one click, you can add new users and you can set or adapt the users' information.

Exports

Here all exports, of all projects are listed. After you started an export in the project area, you can see its process and later on the download link in the exports area.

Editor:
Here you find the download possibility for the QuestEditor.

Report:
When you click on this area, the QuestReport will open in a new tab of your internet browser. You are directly logged on the QuestReport, due to our single sign on technique.

License:
In the license area, you can check your current license information. In addition, you can set your license key there initially or update it with a new key.

Help:
Here you find our first-steps as well as further information and help on how to startup with mQuest® and the SurveyManager.

9.2   User management (User Manager)

You can determine which users are entitled to access the QuestServer with the SurveyManager (**Administrator**) and to access the QuestServer with the mQuest Client (**Surveyor**) (→ See also Page 7). Additionally you can create users with read-only permissions (**QuestReport**). These users may read reports created in QuestReport but may not create or modify these reports.

In the delivery state of mQuest an administrator is pre-installed (→ See also Page 7 for the access data).

> **!** If you want to use mQuest productively on your local syste, you should first create your own administrator and interviewer and afterwards delete the pre-installed user.

Because only administrators are entitled to access the QuestServer with the SurveyManager, you have to login as an administrator.

Therefore, open SurveyManager with URL that was sent to you. After you typed in the mandator number, the user name (your e-mail address where the URS was sent to) and your password, you have full access to the projects the administration.

> **i** When your mandator is on a QuestServer from cluetec GmbH, you will receive an initial e-mail including a link over which you can verify your adress and where you can set your personal password.

To add a new user you only need to click **New user** in the Users area and select the role that you need the user to have. In addition to that, you only need to fill out a few mandatory fields.

> **i** Should the QuestServer be hosted by cluetec GmbH, the username of an administrator user needs to be a valid e-mail-address. After you created the user, they will be invited via e-mail and the user can verify its e-mail-address and set its password.

To delete a user, just click on the trashcan symbol at the right side and apply the process. The administrator user that currently is used for the login cannot be deleted.

To log off the SurveyManager you can click on your username in the upper right corner of the screen at any time and then just choose **Logout**.

There you also find the option to change the password of your administrator user.

9.3   License

Your currently activated license including all information can be checked in the **License** area.

Without an active license, you can synchronize 5 data sets at a maximum for every project respectively each project questionnaire.

In order to transfer more data sets from the mQuest Client to the QuestServer, you need an active license on the QuestServer. With the license, the number of synchronized surveys is counted. The license serves for the creation of an invoice later.

In the **Test-Mode** you can synchronize 30 data sets at a maximum for each questionnaire. If you shift the questionnaire to the **Live-Mode** at a later time, you can decide whether you want to accept the synchronized data sets from the **Test-Mode** or whether you want to delete them.

---

i   You can receive more detailed information regarding licenses in the document
mQuest Quickstart.

9.4   Manage Tasks/ Sample Management

In SurveyManager you have the possibility to assign certain tasks to certain users. Those tasks can be limited by time and/or by the number of conducted questionings. Diary studies can be executed in a safe and controlled environment. The time-triggered alarm function enables you to locally notify participants of the diary study as soon as a task's start date is reached. Additionally, you can determine whether questionnaires of a diary study are always visible and startable, or only within a defined timeframe. You can also notify participants via push notification when new tasks are added, existing tasks are edited, or questionnaires belonging to a task are updated. The settings for the diary functions are made in the task management. The tasks are managed directly in SurveyManager or with the help of Excel files. Alternatively, tasks can also be created via an API interface.

9.4.1   Prepare/ edit tasks in SurveyManager

In SurveyManager, you can create new tasks using the "Create New Task" form. You can also edit existing tasks in SurveyManager. In addition, you can export the tasks as an Excel file, edit them and then import them again. This gives you more options (e.g. you can define more than three task parameters) than when managing tasks in SurveyManager directly. For more information on task management with Excel, see 9.4.2 onwards.

CREATE A TASK

1. In SurveyManager, click on **Projects**.

2. Click on the project for which you want to create a task.

3. Click on **Tasks**.

4. Click on the button **New Task**.
   The form „Create new task" is opened.

5. Enter a name and an ID for the task.

6. Enter the short description in English and German.

> **i**   The fields **Name**, **ID**, **Short description (de)** and **Short description (en)** are mandatory. If they are not filled in, the task cannot be saved.

7. Click on **Save**.

EDIT A TASK

1. In SurveyManager, click on **Projects**.

2. Click on the project for which you want to edit a task.

3. Click on **Tasks**.

4. Click on the task you want to edit.

5. Click on the button **Edit**.
   The edit mode is activated.

6. Change the desired details.

7. Click on **Save**.

Use task parameters

In addition to the existing fields, parameters can also be defined for each task. These can be defined in the SurveyManager when creating or editing a task under Task Parameter 1, Task Parameter 2 and Task Parameter 3. The name of the parameter is freely selectable and is attached to "task_param_" as a suffix, so for example, you enter "task_param_customer".

> **i**   For example, you can use a parameter to specify a customer yourself (in advance) if you do not want to select it during the survey. How to use parameters in the questionnaire can be found in 3.5.2 **Operators → Text functions**.

9.4.2   Prepare / edit tasks as Excel file

In order to import the Excel file, it needs to have a certain format.

> **i**   You can get a preformatted Excel file by exporting tasks for a questionnaire for which no tasks have been created yet (→ See chapter 9.4.4).

Header

The header must contain at least the columns listed in the table beneath. The columns require certain formats and content types.

Tasks

Every table row equals one task defined by the values in the respective columns. The following table lists the functions and allowed values for the entries.

Column	Function	Allowed values	Format
Task ID	Identification number for the task, if there is no number specified the system will assign one and handle the task as a new task	Numeric values, characters At least 3 characters	Number
Task name	Name of the task	Any text with at least 3 characters	Standard
Current status	Effective status of the task, will be assigned automatically by the system for new tasks	OPEN, CANCELED	Standard
New status	New status of the task, only needs to be filled in order to manually change the status	OPEN, LOADED, IN_PROGRESS, REJECTED, ABORTED, FINISHED, CANCELED	Standard
User name	Username of the user assigned to the task	Any username created via SurveyManager with the role "Surveyor" and thus known to the system	Standard
Due date	Due date / time	Date and time	Date
Notify at task start (1 or 0)	Sends a notification to the user when the start of the task is due	0,1 (0 for no, 1 for yes)	Standard
Start date	Start date / time from which on the task should be started. The specification can be empty (i. e. not set = -1)	Date and time	Date
End date	Last possible date / time for the	Date and time	Date

Column	Function	Allowed values	Format
	task to be started. The specification can be empty (i. e. not set = -1)		
Finishtype: -1 or the number of data sets to conduct	Number of conducted questionings for the task to be completed	-1 (infinite number of questionings) or integer greater than 0	Number
Task can be rejected/canceled by the user (1 or 0)	Determines if a task may be rejected by users	0, 1	Standard
Push notifications (1 or 0)	Sends a notification to the user when a task is set up, edited or deleted or the questionnaire belonging to an existing task is updated	0, 1	Standard
Task availability	Description of the visibility and startability of a task	* (see information text)	Standard

> **i** *** Allowed values for** Task availability **are:**
>
> - **ALWAYS_VISIBLE_ALWAYS_STARTABLE**
>   Always visible and startable (default)
>
> - **ALWAYS_VISIBLE_STARTABLE_IN_TIMEFRAME**
>   Always visible, but startable only in timeframe between Start date and End date
>
> - **VISIBLE_IN_TIMEFRAME_STARTABLE_IN_TIMEFRAME**
>   Visible and startable only in timeframe between Start date and End date

Column	Function	Allowed values	Format
Training-mode	With the training-mode you can determine whether the results conducted via this task will be deleted on the device right away (Value: 1) or whether the conducted result will be stored locally and transferred as usual. (Value: 0)	0, 1	Standard
Short_description_	Short description in several	Any text	Standard

xy	languages. For each language a new column has to be created where in the header the language token must be added to "short_description_", e.g. "short_description_en" for English.		
Detail_description _xy	Detailed description in several languages. For each language a new column has to be created where in the header the language token must be added to "detail_description_", e.g. "detail_description_en" for English.	Any text	Standard

> **!** The following language tokens are available:
>
> **de** for German, **en** for English, **fr** for French and **es** for Spanish

> **!** Push notifications are only available if your QuestServer is hosted by cluetec GmbH.

Additionally, it is possible to assign several parameters to a task. Every parameter is defined in a new column with the header "task_param_xyz". The name of the parameter is freely selectable and is attached to "task_param_" as a suffix, so for example, you enter "task_param_customer".

> **i** For example, you can use a parameter to specify a customer yourself (in advance) if you do not want to select it during the survey. How to use parameters in the questionnaire can be found in 3.5.2 **Operators → Text functions**.

Task statuses

The currently effective status of a task is shown in the column "**currentStatus**". This status will be managed by mQuest. Manual changes to this column will have no effect once the tasks are imported.

The different statuses have the following meaning:

- **OPEN**
  The task is available on the QuestServer.

- **LOADED**
  The task has been transmitted to the mQuest Client of the assigned user.

- **IN_PROGRESS**
  The task is in progress.

- **REJECTED**
  The task has been rejected by the assigned user.

- **ABORTED**
  The task has been aborted by the assigned user.

- **FINISHED**
  The task has been completed; data has been recorded.

- **CANCELED**
  The task has been canceled by the responsible dispatcher.

Set task status

In order to set a task's status, proceed as follows:

→ Enter the new status in the column "**newStatus**".
   After importing the tasks, the changed task has the status which you defined.

9.4.3   Import tasks from Excel file

To import tasks you need to first choose the project for which you would like to import them. Click on **Projects** area and choose the project. After that, click on **Tasks** and then click on **Import tasks.** Now you can import the prepared Excel file.

> **i**   The following columns must be filled in the Excel file for the task to be imported correctly:
>
> - Task ID
> - Task name
> - Finishtype: -1 or the number of data sets to conduct
> - Task can be rejected/canceled by the user (1 or 0)
> - Short_description_de
> - Short_description_en

9.4.4   Export tasks to Excel file

Tasks can also be exported to Excel files. These files can then be viewed, edited with standard software ($\rightarrow$ See chapter 9.4.2) and afterwards imported again.

Click on **Projects**, choose a project and then click on **Tasks**. Click on **Export tasks** and then choose the directory where you want to save the Excel file

9.5   Import and Export of Projects

With SurveyManager, you can export projects including their results from one mandator/QuestServer and import them to another mandator/QuestServer. This is done by creating a backup of a questionnaire and restoring it at another place.

9.5.1   Create backup/Export project

> **!**
>
> # Important Notice:
>
> **Project archive is discontinued and will soon no longer be available.**

The export options can be found in the **Projects** area. After you clicked on the project, you see the **Export** button where you can choose **Project archive**. The archive then will be created and can be found in the **Expots** area.

> **i**   While creating the archive all available media files will be archived as well and can also be imported again.

9.5.2   Restore backup/Import project

To import a project archive go to the **Projects** area. There please click on **New project** and choose **Select form.** Now you can select the archive file that you created beforehand.

> **i**   When importing an backup a project name needs to be typed in.

10 Filing questionnaire on the QuestServer

> **!** In order to access the QuestServer with the SurveyManager, the QuestServer must be started.
>
> In most cases the QuestServer will be hosted by cluetec GmbH and therefore will already be started.

After you have created a questionnaire with the QuestEditor, you can file it on the QuestServer. You can do this with the SurveyManager.

10.1 Filing new questionnaires

To file a new project, you need tob e logged on to the **SurveyManager**. Please go there to the **Projects** area and click the button **New project.** Now you can choose the created questionnaire file and you can define a project name if needed. When you do not define a project name here, the name will be used that you set in QuestEditor. With the button **Create project** you will confirm your choice and settins and the questionnaire will be filed.

Now you are in the detail overview of the new project and you can adjust more settings of it.

10.2 Update existing questionnaires

Questionnaires of the **same name** and with the **same UUID** are compatible with each other, even if they have different version numbers. That way you are able to file new questionnaire versions on the QuestServer although older versions of this questionnaire already exist there. In this case the questionnaire will be updated.

For example you are able to add, delete or move questionnaire elements afterwards in your questionnaire and then file the questionnaire again on the QuestServer. In the SurveyManager the results of the new questionnaire version will then be displayed together with the results of older versions. The data sets are distinguishable from one another by the column **Version** (→ See also Page 180 for the result view in the SurveyManager).

Go in the **Projects** area of the SurveyManager and select the project you would like to update. Now click **Update form** to choose the questionnaire file you would like to update the current version with.

! The following questionnaire changes are **not** compatible to old questionnaire versions and will lead to an error message:

- **Changing the question type while the variable name remains unchanged.**
  If you change the question type you need to change the variable name too.

- **Changing the answer code of a Single selection from numeric to alpha-numeric or the other way around.**
  A numeric answer code of a Single selection has to stay numeric; an alpha-numeric code has to stay alpha-numeric.

---

11   Generate test data: SurveyManager

With the function **Generate random results** you are able to generate any number of random results of a questionnaire. To use this function, the questionnaire project needs to be filed in **Test mode.** This is helpful to test the questionnaire, e.g. if you have used Loops or Branching.

11.1 Generate test data

To generate random results, choose the **Projects** area and there the project you would like to generate the results for. Now choose **Create test data sets** and type in your needed parameters.

*The results will be generated automatically, the process can be seen in the **Exports** area.*

> **!** Important: The generated random results will be stored directly in the data base.
>
> Should random test results and productive results be mixed up, you can tell the different results about the variable **Interviewer**, where the name **Monkey** is stored for the generated results.

> **i** If there are conditions in the questionnaire which make the survey jump back to a previous question (e.g. by using Filters, Validations, etc.), these conditions will be removed. In this case a message with detailed information about the removed conditions would appear.

11.2 Interpret the results of the routing-statistic

The routing-statistic file gives you an overview of the results of the simulated surveys and can be found in the **Exports** area of SurveyManager.

The result table of the routing-statistic file will be divided into questions outside of loops and questions within loops.

- **Questions outside of loops:**
  There will be a separate line with the following columns for every question:

  - **Question number**

  - **Variable name**

  - **Deleted jump back condition**
    Indicates which conditions were removed because of a jump back

  - **Percentaged**
    Indicates in how many surveys the question has been asked in percent

  - **Absolut**
    Indicates how often the question has been asked

- **Questions within loops**
  Questions within loops will have the following columns:

  - **Question number**

  - **Variable name**

  - **Deleted jump back condition**
    Indicates which conditions were removed because of a jump back

  - **Percentaged [average]**
    Indicates in how many surveys the question has been asked in percent (in average)

  - **Absolut [average]**
    Indicates how often the question has been asked in average

  - **Loop**
    Shows the loop name

  - **Number of loop cycles (the question has been asked in)**
    Indicates in how many loop cycles the question has been asked

  - **Average value of the number of loop cycles (the question has been asked in)**
    Indicates the percentage of loop cycles in which the question has been asked

  - **One column per loop cycle**
    The column names equal the names of the loop cycles. A number for every cycle indicates how often the question has been asked.

Question number	Variable name	Question type	Question text	Delete jump back condition.	Percentaged	Total	Loop
1	TAKEPART	Single selection	Hello. My name		100.00 %	100	
2	REASON	Single selection	Are you visiting		50.00 %	50	
3		Message	INT: Quota		27.00 %	27	
4		Message	INT: Quota		19.00 %	19	
5	FIELD	Single selection	In which field of		4.00 %	4	
6	EMPL	Single selection	How many		4.00 %	4	
7	LIKES1	Media input	How do you like		4.00 %	4	
8	LIKES2	Numeric input	How do you like		4.00 %	4	
9	SERVICE	Single selection	SERVICE		3.00 %	3	
10	ORGA	Single selection	ORGANISATION		3.00 %	3	
11	MARK	Single selection	ADVERTISING		2.00 %	2	
12	TRANSPORT	Single selection	With which mode		4.00 %	4	
13	ORIGIN	Text input	You have chosen		1.00 %	1	
14	PRODUCTS	Text input	For which		4.00 %	4	
15	TARGET	Ranking	What is the main		4.00 %	4	
16	SUCCESS	Single selection	You have chosen		4.00 %	4	
17	LOGO	Single selection	Have you noticed		4.00 %	4	
18	PLACELOGO	Multiple selection	Where have you		0.00 %	0	

12   Conduct a survey: mQuest Client

In order for you to conduct a survey with mQuest Client, you must load the necessary questionnaire from the QuestServer onto the mQuest Client. Thereafter, you can conduct any number of surveys with the mQuest Client and afterwards transfer the results onto the QuestServer.

> **i**   You can receive more detailed information regarding mQuest Client in the document **mQuest Client Manual**.

12.1   Configure mQuest Client via QR codes*

You have the possibility to apply settings with the help of a QR code. QR codes are graphics which contain information displayed as black and white dots. This information can be interpreted by mQuest Client.

A QR code allows settings to be applied in mQuest Client quickly and easily. It also avoids problems caused by input errors. Additionally, QR codes offer the possibility to apply settings which are not accessible by the user interface.

CREATE A QR CODE

> **!**   Only use configuration inputs if you know what effect the settings have.

1. Create a new **text file**.

2. Configure all desired settings in the text file using the **configuration inputs**.
   You can find an overview of configuration inputs in the table below. Use a new line for every setting. A setting consists of the configuration input which is directly followed by one or more values. If you use several values, e.g. for password protected functions, separate them by a semicolon (;).

3. Copy the content of the file.

4. Create a QR code from the copied file content with the help of any QR code generator. Mind the instructions for the respective generator.

5. Save or print the created QR code.
   You can now use the generated QR code.

> **!**   Create the QR code as free text so it can be processed correctly.
>
> The less text a QR code contains the easier it can be read.

> **!**   Your input will not be checked for validity. Before you create the QR code, make sure that your input is valid and complete.

> **i** A wide range of tools is available to create QR codes. There are also some tools that work online. Please ensure that the tool allows the usage in your context of use.

> **i** You can provide the QR code in a digital or printed version. It is possible to scan QR codes from screens as well as from paper.

Example The configuration inputs on the left lead to the QR code displayed on the right.

default_app_language=en

default_service_gateway_host=surveymanager.mquest.de

default_qning_language=en

default_service_gateway_port=443

default_service_gateway_protocol=https

mandatorId=

questserver_settings_profile= manual

APPLY SETTINGS VIA QR CODE

1. Tap on **Menu > Settings > Settings via QR code**.
   The QR code scanner starts.

2. Place the QR code within the rectangle.

3. Position your device as close as possible to the code. The code must fit completely into the rectangle.
   The dots in the corners of the rectangle turn green. The settings from the QR code will be applied.

> **i** Depending on the lighting conditions and the size of the QR code it may take several seconds until the QR code is registered. You can scan the code either from your screen or from a printout.

12.2 Configure mQuest Client via link

As an alternative to the configuration via QR code, you can also configure the mQuest Client via a link. For example, you can send the link in an e-Mail. The configuration via link allows settings to be applied in mQuest Client quickly and easily.

CREATE A LINK

> **!**   Only use configuration inputs if you know what effect the settings have.

1. Create a new text file or open another application where you want to write the link.

2. Create the link. For the mQuest Survey App, the link starts the following way: **decluetecmquestsurvey://configuration?**
    If you want to set up the mQuest Audit App, the link starts the following way: **decluetecmquestaudit://**

3. Behind this, enter the configuration inputs. The different configuration inputs must be separated with an &. You can find an overview of configuration inputs in the table below.

> **!**   Make sure that your input is valid and complete. If the link contains spelling mistakes, the configuration inputs cannot be read by the mQuest Client.

4. Save the created link in a text file or send it via e-Mail.

    By clicking on the link, the mQuest app is opened and the settings defined in the link are applied.

Example

decluetecmquestsurvey://configuration?default_service_gateway_port=443&default_app_language=en

This link contains the following configuration inputs:

default_app_language=en

default_service_gateway_port=443

12.3 Overview of configuration inputs

Input	Possible values	Description
admin_cmds=	Commands (see table below) Multiple values allowed, separated by **;**	Sets which commands can only be executed when the administrator password has been entered
admin_password=	secret	Sets the administrator password
regular_cmds=	Commands (see table	Sets which commands users

Input	Possible values	Description
	below) Multiple values allowed, separated by ;	can execute without entering a password
android_font_size=	Integer (for iPhone: 11, 13, 15, 17, 19; for iPad 12, 16, 20, 24, 28)	Sets the font size for the mQuest Client
automatic_questserver_lookup=	true, false	Sets, if USB tethering is enabled
automatic_qs_timesync=	true, false	Sets, if the time shall be synchronized with QuestServer
default_app_language=	en, de, any language token (if language available)	Sets the application language
supported_app_languages=	en, de, any language token (if language available)	Sets the supported application languages
default_qning_language=	language token (if language available)	Sets the default questionnaire language
supported_qning_language=	language token (if language available)	Sets the supported questionnaire languages
default_service_gateway_host=	localhost, any IP	Sets the address of QuestServer
default_service_gateway_port=	80 (without SSL), 443 (with SSL)	Sets the port used for QuestServer
default_service_gateway_protocol=	http (without SSL), https (with SSL)	Sets the network protocol for the communication with QuestServer
default_user=	interviewer username	Sets the username for the interviewer
default_password=	secret	Sets the user password
mandatorId=	default, any mandator ID	Sets which mandator will be accessed
mediaStorageCard=	true, false	Sets, if media files may be saved on memory cards

Input	Possible values	Description
uploadResultsAfterQning=	true, false	Sets, if results will be uploaded directly after finishing a questionnaire
questserver_settings_profile=	manual , demoPortal, localServer, showcase	Sets the profile used
width_of_stored_picture=	Positive integer, -1	Sets the width for taken photos; if the width is lower than the given number the photo will not be scaled, if the value is -1 the photo will not be scaled at all
use_extern_scanner_app=	true, false	Sets if the external application ZXING will be used for scanning barcodes and QR codes
sync_media_responses_only_on_wifi	true, false	Sets whether or not multimedia files are only transmitted during synchronization if a WLAN connection is available
access_code=	Format: Base64 encoding (see info box below)	Can be used for login to QuestServer as an alternative to password and username. An advantage over using default_user= and default_password= is that no username/password is visible in plain text in the link/QR code used to configure mQuest Client.
access_code_delim=	One or more characters that are not part of the password (see info box below)	Defines the delimiter for the encoding of the access code Is needed if the password to be encoded contains the default delimiter (3 underscores in a row)

Overview of Commands

Command	Function

gv	Access to the menu for Global variables
interviewer	Change interviewer name
movedata	Move results to SD card*
configuration	QuestServer preferences
deleteresults	Delete questionnaire results
start	Start survey
sync	Execute Sync
download	Download questionnaire
resultupload	Upload results
contpaused	Continue paused survey*
localcounterreset	Reset temp counter*
language	Language preferences
deleteqning	Delete questionnaire
deleteresults	Delete results
exit	Exit mQuest Client
about	About information
system_overview*	System Overview

Encoding of the access code

> **!** The access code for the configuration input **access_code=** is composed of the user name, the password and a delimiter. The default delimiter are 3 underscores in a row (___). This information must be encoded in Base64 encoding. Zur Kodierung in Base64 stehen eine Vielzahl von Tools bereit. Es besteht auch die Möglichkeit, online kodieren zu lassen. Bitte prüfen Sie, ob das ausgewählte Tool die Nutzung in Ihrem Kontext erlaubt. A wide range of tools is available to encode in Base64. There are also some tools that work online. Please ensure that the tool allows the usage in your context of use.
>
> **Example:**
>
> Enter **username___password** in an encoding tool. You get a string of characters, e.g..: dXNlcm5hbWVfX19wYXNzd29yZA==
>
> Attach the string of characters to the configuration input: **access_code=dXNlcm5hbWVfX19wYXNzd29yZA==**

Defining the delimiter of the access code

> **!** If your password contains the default delimiter (three or more underscores in a row), you must define another delimiter. To do so, use the configuration input **access_code_delim=**. For example, if you want to define a star as a delimiter, enter the following for the configuration input: **access_code_delim=***
>
> Then, the example from above would look like this: **username*password**

12.4 Review data sets

mQuest client offers you the possibility to review data sets directly on the mobile device. This can happen either by the user or a supervisor. The access to the review function can be restricted by a password.

The review function is available via **Review recorded data sets** from the project menu.

> **!** The review function must be enabled in the questionnaire before you can use it on the mobile device.

ENABLE REVIEW FUNCTION FOR A QUESTIONNAIRE

→ Paste the following code to the questionnaire properties: **questioning_result_review_enabled=true**

After saving and uploading the questionnaire the review function is available.

PROTECT REVIEW FUNCTION BY PASSWORD

→ Paste the following code to the questionnaire properties: **questioning_result_review_password=yourPassword**

After saving and uploading the questionnaire the review function is protected by the password.

13   mQuest online

In mQuest online you can fill out existing questionaires online. For this feature you will need a consistent internet connection and separate licensing, which you can request from cluetec.
Existing sheets and tasks will need an update in order to be used online. Additionally an user must be assigned to the project.

The following functions are available in the browser version of mQuest:

- Various Question Types:
  - text input
  - single selection
  - multi selection
  - photo upload from files
  - photo highlighting
  - data input
  - numeric input
  - note function
  - signature field
  - question groups
- Chapters
- Navigation
- Pause and Resume Function
- View Images and PDFs
- Include Answers
- Multiple Questions – One Screen
- Input Validation
- Hint and Help Texts for Questions
- Filter and Filter Pro
- Formula Calculations
- Multilingual Questionnaires
- Rotation Plan
- Loops
- Text Variables
- Text Links
- Dynamic Workflow
- Intuitive User Interface
- Navigation
- Optimized Input
- Language Change
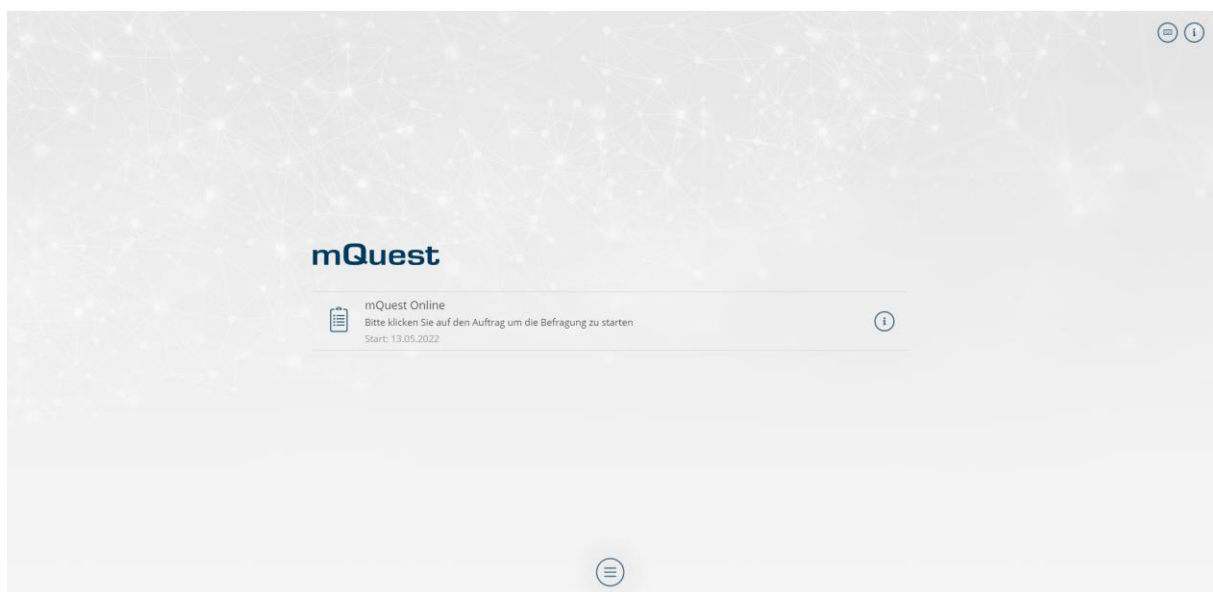
Here you can see an overview of mQuest online and all existing projects.

Here you can see an example-questionnaire in mQuest online.

You can pause or cancel the questionnaire using this icon. Additionally you can change chapters and the set of languages.

If the survey can be carried out several times, it can be paused with mQuest Online and a new data set started at the same time. If the survey can only be carried out once, the paused data set, if any, is automatically continued.

14   Manage results: SurveyManager

> **!** In order to access the QuestServer with the SurveyManager, QuestServer must be running.

With the SurveyManager you can display results which were transferred to the QuestServer on a PC in order to export and to evaluate them afterwards.

14.1 Display results of the QuestServer

To see the results of your projects go to the **Projects** area and choose the project of which you would like to see the results. In the **Data** area of the project you see the results of a few predefined variables. To add more variables to this view click on **Add variables**. You can find your variables over the search function and you can add up to 30 variables to this view of the results.

14.2 Result interpretation

The results are displayed in a table in the SurveyManager. For every survey there is a row in the result table.

The columns are, as follows:

- **Delete**
  To delete single results, please click on the trashcan icon in the first column and apply the process by clicking **Delete data set.** The results deleted with this function will not be saved or similar and cannot be restored again.

- **Ignore (⊘)**
  Here you can mark those surveys you would like to ignore when exporting the results or viewing the results with QuestReport.

- **id**
  Contains a unique, sequential number for every survey, which is independent of the questionnaire. The id will automatically be issued from the QuestServer and is unique for a QuestServer.

- **Version**
  Indicates the questionnaire version with which the surveys are conducted.

- **Canceled**
  This column is only displayed if the function **Canceled questionings** is set to **Keep** (→ See also Page 15). Cancelled surveys will be marked with **1**, completed ones with **0**.

After these, the **Global variables** follow, in case they have been defined. Per Global variable one column is displayed; the name of the Global variable is assigned as the column header.

After the Global variables, the questions are displayed which have been defined in the questionnaire. Depending on the question type and the question preferences (for example, editable result fields with question type Media input) there exist one or several columns per question.

- **Single selection**
  Column title: **<variable name>**

  A Single selection generates one column. The given answer is entered directly into the suitable cell; the figure 1 is assigned to the first answer possibility, 2 to the second, 3 to the third etc.

  Included answers always come **after** the entered answers in the countable order.

  If answer codes have been used, the codes will be displayed instead of the answers in the cells.

- **Multiple selection**
  Column title: **<variable name>_<number of the answer>**

  Every answer possibility generates one column. Thus a Multiple selection always generates as many columns as there are answer possibilities. The **<number of the answer>** is consecutively numbered, beginning with 1.

  The contents of a cell with the question type **Multiple selection** is either **1** or **0**. That means that with 1 the answer possibility was selected and with 0 that it was not selected.

  If answer codes have been used, the codes will be displayed instead of the answer number in the column title.

  If included answers have been used, the column heading will consist of the variable name of the question, the variable name of the included question and the number for the included answer:

  <Variable name>_<variable name of the included question>_<number of the included answer>

---

i   If in the case of a **Single selection** or **Multiple selection** the option **open-ended text allowed** in the questionnaire is activated, an additional column appears with the heading **<Variable name>_MISC**, in which the entered free text is displayed, for example: **3_MISC**.

- **Numeric input**
  Column title: **<variable name>**

  Every question generates one column. The given answer is entered directly into the suitable cell.

- **Text input**
  Column title: **<variable name>**

  Every question generates one column. The given answer is entered directly into the suitable cell. The given answers can be edited, e.g. for correcting typos.

→ In order to activate or deactivate the edit functionality click **Preferences > Text input answers editable**. If the functionality is activated, the results of all questions asked are editable in this data set.

If an auto-completion list with answer codes was used, the corresponding codes will be displayed in the cells.

- **Media input**
  Column title: **<variable name>**

  (→ See also Page 183)

- **Ranking**
  Column title: **<variable name>_<rank number>**

  Every rank generates one column. The **<rank number>** is consecutively numbered, beginning with 1 up to the maximal number of ranks that you have defined. The result cells of these columns will contain which answer was chosen for which rank.

  If answer codes were used, the codes will be displayed instead of the answer in these cells.

- **Drag&Drop**
  Column title: <variable name>_<number of the answer>_<number of the axis>

  For a Drag&Drop question, one or two columns are generated depending on whether question type variant **1-dimensional** or **2-dimensional** has been selected. The cells contain the numerical values for the placing of the appropriate picture, i.e. the coordinates of the X-axis or the coordinate system. The X-axis has the axis number **1**, the Y-axis (if used) has the axis number **2**.

If **Additional categories** have been selected, their IDs will be placed in the suitable cells.

The entry for **Missing value** will be placed in a cell if a question, for example due to a filter, was not asked. A question that has not been asked is thus easier to distinguish from a question that has not been answered. If you have activated the option **Include answer**, the missing value is likewise placed into the cells for the answers which were not taken over.

- **Message**
  Questions with the type Message will **not** be displayed in the result table of the SurveyManager.

After the columns for the questions the column **Interviewer** is displayed. It contains the user name which was set up on the mQuest Client.

The last four columns **Begin**, **End**, **Duration** and **Handover** are automatically generated and contain more exact information about the beginning and end of the survey (time stamp on the mQuest Client), the resulting duration and the time of the handover to the QuestServer (time stamp from the QuestServer).

14.3 Display/ play /code multimedia files

The question type **Media input** contains, in the cell, the file name of the recorded multimedia file as download link to directly download the single file. When clicking on the link, the file will be downloaded to the via internet browser defined folder. With the question type variant **Location (GPS)** a button will be displayed in the corresponding cell which will open a new tab of the browser in order to display the saved coordinates via Google Maps.

With the question type, **Media input** additional editable result fields can be used. The number of these fields and their maximum character number are defined in the questionnaire. In the fields, you can enter any text, e.g., a transcription of the audio recording or an encoding.

14.4 Display / Edit quota values

You can see and edit the current quota values in the SurveyManager.

To see or edit the quota values select the respective project in the **Projects** area. There go to the **Quotas** area und edit the values if needed.

14.5 Exporting results

You can export your results in different formats to edit and evaluate them with the corresponding software.

When you have results in the database that you do not want to export, you can ignore them by marking them in the **ignore** (⊘) column. These results then will not be exported.

The option to export the results can be found in the **project context** in every area, you only need to click on the **Export** button in the top-right corner of the screen.

After clicking on the **Export** button, you can choose between the following formats.

All your exports can be found in the **Exports** area of the SurveyManager. Here you can see when they were exported and when the exports will be deleted. The exports are available for download for 24h. In the column **File** you will find the download link. Depending of the internet explorer used, the export starts automatically in the defined folder or you can choose where to safe the files.

14.5.1 Comma separated value files (CSV

For the comma separated file you can set several preferences. The delimiter, the quote character as well as some more configurations.

> **!** Should there be blanks, delimiter, quote characters or line breaks in an answer, that answer must always be set in Quote characters (double quotes) for the export.

The **export configuration** needs to be chosen due to the further usage of the file.

14.5.2 Microsoft® Excel (XLSX)

When you choose **MS Excel** the export starts right away, since there are no further configurations needed.

14.5.3 SPSS® Data format (SAV)

If you would like to export your questionnaires in SPSS®, you must follow the following points when creating the questionnaire:

- **Text input**
  Missing values and value labels can only be generated in SPSS® for answers which have no more than 8 characters. If with a Text input only short answers are to be expected, then enter in QuestEditor under **Details** at the suitable question in the input field **Total number of characters** the value 8.

- **Single selection**
  If the code of an answer has more than 8 characters, value labels and missing values cannot be generated in SPSS® for this answer.

- **Additional categories**
  The encoding of the additional categories must be coherent to guarantee that all missing values in SPSS® are marked as such. Correct would be a coding from -1 to -10 if there are 10 additional categories. This would then be handed over as **one** area specification to SPSS®. Nevertheless, with a non-coherent coding, out of 10 single values, 7 assignments would get lost because SPSS® allows only three single values or one area specification plus a single value as a missing value.

When you choose the *.sav-format, you can choose the language for the labels when exporting it and when the questionnaire was scripted in multiple languages.

14.5.4 Multimedia files

EXPORTING ALL MULTIMEDIA FILES CONTAINED IN THE RESULTS IN A SPECIFIED DIRECTORY:

When you choose **Media files** in the export context you can decide whether you would like to export all media files of the project or whether you would like to only export the media files of a time period you can define. When the export is finished, the media files will be available in an zip-archive for download.

> **i**   The file names of the exported multimedia files always have the same pattern and can be assigned unambiguously to the questionnaire, the question and the survey:
>
> **<Questionnaire name>_<Question variable name>_<id>.<File ending>**

---

15   Evaluating the results: QuestReport

> **!**
>
> ## Important Notice:
>
> **This feature is discontinued and will soon no longer be available.**

QuestReport gives you the opportunity to evaluate your survey results in a quick and graphical way. For this purpose, a common internet browser like "Microsoft Internet Explorer" or "Google Chrome" has to be installed on your PC.

> **!**   In order to access the results, the QuestServer must be running (→ See also Page 155 for starting the QuestServer).

STARTING QUESTREPORT:

If QuestServer is running on your local PC:

   1.A Click on **Start > Program files > mQuest > QuestReport**.

Your internet browser will open and the login page of QuestReport will appear.

If QuestServer is running on a remote computer:

   1.B Start your web browser and type in the **address of the QuestServer** followed by "**/QuestReport**".

   The login page of QuestReport will appear.

   2.   Enter the required login data in the formula fields. Preset are:

   •   Client/Project id: **default**

   •   User: **startadmin**

   •   Password: **startadmin**

   3.   Click on **Login**.

   Now you see all questionnaires that are on the server.

> **i**   Depending on your user role you can create and view reports or only view already created and unlocked reports.
>
> If you are logged in as Administrator you can use all functions of QuestReport. If you are logged in as QuestReport User you have a read-only access to the reports.
>
> You will find more information on user roles in chapter 9.2 User management on page 156.

CREATING A NEW REPORT:

1. To see the indicators (Number of Surveys; Number of canceled Surveys; etc.) of the questionnaire or if you want to create a report of it, please click on "Project details".

2. To create a new report, click on the upper tab with the plus symbol.

3. In the settings you can give the report a name and you can adjust other settings.

---

i   For the "Name of the Report", only **letters (no German umlauts)**, **numbers** and **hyphens (-)** or **underscores (_)** are allowed. It also has to be at least three characters long.

---

4. After you applied the settings you reach the "Question selection". Here you can either choose all questions or you can select specific questions of your questionnaire. Even after you applied, you can go back to this tab and change your settings.

5. After you applied your question selection you get to the report itself.
   Your created report will be saved, even if you log out.

Filtering:

You can filter the displayed results in the report.

To filter your data you have to go to the tab "Filter" and activate "Filtering is active". With the plus button on the right side you can add conditions. If you want to use more conditions you can link them either with AND or OR.

---

i   An "AND"-linkage is stronger than an "OR"-linkage.

---

i   Within one condition you can use following operators ($\rightarrow$ See also Page 72):

= != >= > <= <

---

i   To filter data of a certain period of time you can use the "Meta-Data"-Variables (**Begin**, **End** or **Handover**).

Please fill in the date in following format: DD.MM.YYYY hh:mm

---

Grant read only access for reports

You have the possibility to grant a read-only access for certain reports for QuestReports Users. Without that clearance no reports can be viewed by users in the role QuestReport User ($\rightarrow$ See also Page 156 for the different user roles).

Do the following in order to grant access to reports:

1. Log in to QuestReport as Administrator.

2. Select or create the report you want to share and make changes if necessary.

3. Click on the button **User Permission** in the upper area.

   A new window with the settings for user permissions will be shown.

4. Activate the checkbox for all users that shall be able to view the report.

5. Click **Apply**.

   You successfully granted access to a report.

> **!** You can only grant access right to users which are already known to the system, i.e. you must create users before you can grant them access rights.

16   mQuest with different mobile operating systems

Functions of mQuest on mobile devices with different operating systems differ in some cases.

Please note that devices with Apple iOS use port 80 as default to communicate with the QuestServer.

16.1 Range of functions

The following functions are currently not available for devices with Apple iOS:

- **Create data backup**
- **Change user name**
- **System overview**
- **Certain questionnaire properties**
- **mQuest traffic functions**
- **Freely defined help and hint texts**
- **Use of an external barcode scanner**
- **Question type variant Media input – File selection**