

# *MyQuestLight* User's Guide

by

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*MyQuestLight* is distributed free of charge for private, non-commercial use. Commercial users can purchase a copy by E-mailing the author. As a courtesy to the author, in publications that use output generated with *MyQuestLight*, please include the following reference to the software:

Yossifov, Plamen K., 2002, *MyQuestLight – VBA Add-In for Microsoft Excel 2000-2003*.

**Disclaimer:** *MyQuestLight* is supplied on an as-is basis. The author offers no warranty of its fitness for any purpose whatsoever, and accepts no liability whatsoever for any loss or damage incurred by its use. *MyQuestLight* is not a supported product. The author accepts no commitment or liability to address any problems that may be encountered in using it. However, *MyQuestLight* is continually being developed and improved, so he is always interested to hear about any bugs or deficiencies.

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## I. OVERVIEW

1. *MyQuestLight* is an Excel add-in for processing questionnaire responses. It leverages on Excel's flexibility in organizing data, supplementing it with a set of powerful tools for automating the inputting of questionnaire responses, their tabulation, and generation of relational data tables.

### A. Downloading *MyQuestLight*

2. Free download: <http://ideas.repec.org/>. Search under Software Components.

### B. Installation

3. Save the file *MyQuest\_Light.xla* in the directory: **C:\WIN\Application Data\Microsoft\AddIns\** or **C:\WINDOWS\Application Data\Microsoft\AddIns\**, whichever exists on your hard drive.

4. Open Excel and from the main menu select **Tools → Add-Ins**. In the pop-up form, locate the entry *MyQuest\_Light* and check the checkbox next to it. If there is no such entry, click on the **Browse** button, locate the file, highlight it, and click **OK**. Click **OK** to complete the installation.

5. Note the new entry *MyQuestLight* on the main menu of Excel. Clicking on it starts the *MyQuestLight* add-in.

### C. Known Problems

6. Before using *MyQuestLight* make sure that the only file open in Excel is the one that you will be using with it (occasionally the program gets confused about which is the currently active file).

7. The program works best with relatively small questionnaires and number of respondents. Although there is no limit on the number of questions and respondents, large datasets may take a long time to process (from couple of minutes to several hours). This said the program has never crashed on me, so be patient!

### D. New Functionalities and Bug Fixes

8. Two new functionalities has been added: *Tabulate by Group* and *Create SPSS Database*. A problem in the older versions of *MyQuestLight* that causes the Tabulate procedure to fail, when the number of responses exceeds 320, has been fixed.

## II. USING *MYQUESTLIGHT*

9. A questionnaire is an organized collection of questions with associated answer sets administered on a targeted group of people. A respondent is a member of the targeted group

that agrees to provide part or all of the information sought from her via the questionnaire. A questionnaire response is the set of answers to all questions given by a respondent.

10. The processing of questionnaire responses with *MyQuestLight* in Excel is a four-stage operation that entails: (1) Creating the questionnaire structure; (2) Inputting of questionnaire responses; (3) Validation (i.e. ensuring the integrity) of the inputted information; and (4) Generation of the desired outputs from questionnaire responses.

### **A. Creating the Questionnaire Structure**

11. The questionnaire structure comprises of information fields that define the properties of individual questions and answers. In the Excel sheet, these information fields should always be placed in columns “A” to “L” in the exact order shown in Figure 1<sup>1</sup> with their column headers in row “1”. Instructions on how and what values to assign to individual info fields can be found in the next subsection. Before referring to it, however, users need to familiarize themselves with some common questionnaire concepts and how they are handled in *MyQuestLight*.

#### **Definitions of questionnaire concepts and how *MyQuestLight* handles them**

##### ***Closed-ended, open-ended, and mixed-type questions***

12. Closed-ended questions have pre-defined set of answers, from which respondents select the ones applicable to them. Open-ended questions do not have a pre-defined set of answers. Instead, they allow respondents to provide responses in free-text form. Mixed-type questions allow respondents to provide responses in free-text form in addition to selecting from a pre-defined set of answers.

13. In *MyQuestLight* each question must have a pre-defined answer set associated with it. In the case of closed-ended questions, this is simply the set of answers from which respondents select the ones applicable to them [see question Q1 in Figure 1]. Open-ended questions are treated as having one pre-defined answer labeled “User provided text” [see question Q4 in Figure 1]. In the case of mixed-typed questions, the pre-defined set of answers comprises of the answers available to respondents to select from plus an additional entry (e.g., “Other (please specify)”) that allows respondents to reply in free-text form [see question Q2 in Figure 1].

##### ***Text and checkmark responses***

14. There are important differences in how the responses to closed-ended, open-ended, and mixed-type questions are coded in *MyQuestLight* (see Section B). In *MyQuestLight* each

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<sup>1</sup> All examples in the User’s Guide are based on information contained in the file **Example\_MyQuestLight.xls**, which is part of the standard software distribution of *MyQuestLight*, and which can be used as a template for creating new questionnaire workbooks.

questionnaire response provided by a respondent is placed in a separate column, starting from column “M” of the Excel sheet (see Section B below). For a given respondent, her response to a closed-ended question is coded by placing checkmarks in the cells defined by the intersection of the column containing her questionnaire response and the rows that contain those entries in the pre-defined set of answers that she has selected. Her free-text response to an open-ended question, however, is coded by placing the text of the response in the cell defined by the intersection of the column containing her questionnaire response and the row containing the pre-defined answer labeled “User provided text”. Her response to a mixed-type question is coded by: (1) placing checkmarks in the cells defined by the intersection of the column containing her questionnaire response and the rows that contain those entries in the pre-defined set of answers that she has selected; and (2) placing her response in free-text form in the cell defined by the intersection of the column containing her questionnaire response and the row containing the answer entry that accepts replies in free-text form (e.g., “Other (please specify)”).

### ***Single-response and multiple-response questions***

15. As noted above, a response to a question can be given by selecting applicable entries from a pre-defined set of answers, in free-text form, or by a combination of the two. Multiple-response questions allow respondents to select more than one entry from a pre-defined set of answers, provide more than one response in free-text form, or combine a selection from a pre-defined answer set with a free-text response [see question Q6 in Figure 1]. Single-response questions, on the other hand, allow only one response, be it in the form of a selection from a pre-defined answer set or in free-text form. [see question Q3 in Figure 1].

### ***Regular and “non-response” answers***

16. The answer set to each question contains two types of answers: (1) regular answers which upon selection provide part or all of the information sought from the respondent by that particular question; and (2) “non-response” answers which upon selection indicate the reason why the respondent did not answer the question (e.g. Not Applicable, Refused to Answer, etc.). Normally the answer sets to all questions would contain the same number and types of “non-response” entries.

### ***Valid responses to questions and non-responses***

17. When the response to a question consists of one or more regular answers, it is called a valid response, whereas if it comprises of a “non-response” answer (note that “non-response” answers are mutually exclusive) it is considered a non-response.

### ***Independent and dependent questions***

18. Independent question is a question, for which the decision on the part of the respondent of whether to give a valid response or a “non-response”, does not depend on her response to a prior question [see all questions except Q6 in Figure 1].

### *Master question*

19. The choice between a valid response or a “non-response” to a dependent question, on the other hand, is fully determined by the response given to a prior question, called a master question.

### *Trigger answer*

20. The entry in the pre-defined answer set of the master question, which upon selection triggers a “non-response” to the dependent question is called a trigger answer [in Figure 1, question Q6 is a dependent question, Q5 is its master question, and the answer “No” to question Q5 is the trigger answer].

### *Questionnaire’s hierarchical structure*

21. As all documents, questionnaires have hierarchical structure - title, chapters, sub-chapters, sections, sub-sections, ...and finally questions. The elements of a questionnaire hierarchy can be categorized in two types: questions and higher-order hierarchical elements that organize these questions in groups. *MyQuestLight* treats all elements of the questionnaire hierarchy above the level of question as questions. In the questionnaire hardcopy, these hierarchical elements do not have explicitly specified answer sets associated with them. In *MyQuestLight*, however, each question must have a pre-defined answer set. Therefore, when creating the questionnaire structure, users should add “pseudo” answer sets to all hierarchical elements above the level of question. At the minimum, these answer sets should contain one valid and one “non-response” answers [e.g., see questions P1 and C1 in Figure 1]. Each questionnaire structure should have at least two hierarchical levels – title of questionnaire and questions. However, users are strongly encouraged to preserve the complete hierarchical structure of the questionnaires they process, as this will allow them to generate more sophisticated relational databases of the questionnaire responses.

### *Question’s level*

22. The hierarchical structure of the questionnaire is mapped on the Excel sheet by setting the “level” property of each question to show the hierarchical rank of the questionnaire element that the question represents (i.e. the question representing the hierarchical element with the highest rank—title of questionnaire—is said to be of level 1).

### *“Dummy” questions*

23. The mapped hierarchical structure of the questionnaire on the Excel sheet must conform with two principles that will ensure its integrity:

- The information content of questions of the same level must be consistent. For a questionnaire with a four-level hierarchical structure (title, chapters, sub-chapters, questions), this principle would require that in the mapped hierarchical structure of the questionnaire: (1) There is only one question of level 1 representing the questionnaire title; (2) All questions of level 2 represent questionnaire chapters; (3)

All questions of level 3 represent questionnaire subchapters; and (4) All questions of level 4 represent actual questions in the questionnaire hardcopy.

- The chain of top-to-bottom sequential subordinateness of questionnaire elements of different hierarchical ranks must not be breached. This principle requires that each hierarchical element of the questionnaire, with the exception of its title, is subordinated to an element belonging to a level immediately above it in the questionnaire hierarchy. For a questionnaire with a four-level hierarchical structure (title, chapters, sub-chapters, questions), this would require each question to belong to a sub-chapter, and each sub-chapter—to a chapter. In other words, a question can not be placed immediately after the title or a chapter of the questionnaire, instead it must belong to a sub-chapter, which in turn is part of a chapter.

24. Note that adherence to both of these principles would require that all actual questions from the questionnaire hardcopy are assigned the lowest level in the mapped hierarchical structure. If in the questionnaire hardcopy one or both of these principles are violated, when mapping the questionnaire structure in Excel users should add “dummy” hierarchical elements (i.e. questions) to ensure the integrity of the questionnaire hierarchy [see question D3 in Figure 1].

#### *Parent questions*

25. As noted above, in the mapped questionnaire structure each hierarchical element, with the exception of the questionnaire title, is subordinated to an element belonging to a level immediately above it in the questionnaire hierarchy. The question representing the latter element is the parent question of the questions representing its subordinate hierarchical elements.

Figure 1. Example of Questionnaire Structure in *MyQuestLight*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Reser ved	Reser ved	NonResp	Text	Master Quest	Master AnswTrigger	MultiResp	Dummy	Level	QuestVar Name	Codes	Q&A / Respondent	Respondent_1	Respondent_2
2									1	P1	1001	<b>SURVEY OF SMALL AND MEDIUM-SIZED ENTERPRISES</b>		
3											101	ANSWERED	+	+
4			1								197	REFUSED TO ANSWER		
5			2								198	NOT APPLICABLE		
6														
7									2	C1	1002	<b>GENERAL</b>		
8											101	ANSWERED	+	+
9			1								197	REFUSED TO ANSWER		
10			2								198	NOT APPLICABLE		
11														
12								1	3	D3	1003	<b>DUMMY QUESTION OF LEVEL 3 TO PRESERVE STRUCTURAL HIERARCHY</b>		
13											101	ANSWERED	+	+
14			1								197	REFUSED TO ANSWER		
15			2								198	NOT APPLICABLE		
16														
17									4	Q1	1004	<b>CITY WHERE LOCATED:</b>		
18											116	SAMARA	+	
19											117	SARATOV		
20											107	KAZAN		
21											118	ULYANOVSK		+
22			1								197	REFUSED TO ANSWER		
23			2								198	NOT APPLICABLE		
24														
25									4	Q2	1005	<b>POSITION OF THE PERSON INTERVIEWED:</b>		
26											103	DIRECTOR OF THE FIRM AND OWNER	+	
27											102	DIRECTOR OF THE FIRM AND NOT THE OWNER		
28											104	DIRECTOR OR DEPUTY DIRECTOR FOR FINANCE		
29				1							114	OTHER (PLEASE SPECIFY)		Chief Financial Officer
30			1								197	REFUSED TO ANSWER		
31			2								198	NOT APPLICABLE		
32														
33									2	C2	1006	<b>EFFECTIVENESS OF CITY INFRASTRUCTURE AND LOCAL GOVERNMENT SERVICES</b>		
34											101	ANSWERED	+	
35			1								197	REFUSED TO ANSWER		+
36			2								198	NOT APPLICABLE		
37														
38									3	C2S1	1007	<b>CITY INFRASTRUCTURE</b>		
39											101	ANSWERED	+	
40			1								197	REFUSED TO ANSWER		+
41			2								198	NOT APPLICABLE		
42														
43									4	Q3	1008	<b>HOW WOULD YOU RATE THE QUALITY OF PUBLIC TRANSPORT WITHIN THE CITY?</b>		
44											106	GOOD	+	
45											105	FAIR		
46											115	POOR		
47			1								197	REFUSED TO ANSWER		+
48			2								198	NOT APPLICABLE		
49														
50									4	Q4	1009	<b>WHAT YEAR DID YOU GET YOUR FIRM REGULAR TELEPHONE?</b>		
51				1							119	USER PROVIDED TEXT	1997	
52			1								197	REFUSED TO ANSWER		+
53			2								198	NOT APPLICABLE		

(continued on next page)



formed by the intersection of the info field’s column and the row where the particular question appears.

Table 1. Description of Info Fields in Questionnaire Structure in *MyQuestLight*<sup>1/</sup>

Column position in Excel	Column header	Applies to	Description	Allowed values
<b>A</b>	<b>Reserved</b>	n.a.	Reserved for future software development needs. Can be used by users to store additional information related to the questionnaire.	<b>Any</b>
<b>B</b>	<b>Reserved</b>	n.a.	Reserved for future software development needs. Can be used by users to store additional information related to the questionnaire.	<b>Any</b>
<b>C</b>	<b>NonResp</b>	Answers	Identifies “non-response” answers in the pre-defined set of answers to <b>all questions</b> .	<b>Integer</b> [different sequential integers for each type of “non-response” entry]
<b>D</b>	<b>Text</b>	Answers	Identifies the entry “User provided text” in the pre-defined set of answers to <b>open-ended and mixed-type questions</b> .	<b>1</b>
<b>E</b>	<b>MasterQuest</b>	Questions	Info field of <b>dependent questions</b> that identifies their respective master questions.	<b>QuestVarName</b> of master question [value of info field of master question in column J]
<b>F</b>	<b>MasterAnswTrigger</b>	Questions	Info field of <b>dependent questions</b> that identifies the trigger answer in the answer sets of their respective master questions.	<b>Code</b> of trigger answer [value of info field of trigger answer in column K]
<b>G</b>	<b>MultiResp</b>	Questions	Identifies <b>multiple-response questions</b> .	<b>1</b>
<b>H</b>	<b>Dummy</b>	Questions	Identifies “ <b>dummy</b> ” questions.	<b>1</b>
<b>I</b>	<b>Level</b>	Questions	Identifies the <b>question’s level</b> in the questionnaire hierarchy.	<b>Integer</b> [different sequential integers for each level in the hierarchical structure]
<b>J</b>	<b>QuestVarName</b>	Questions	Variable name associated with the question.	<b>Alphanumerical</b> [no spaces or special characters like (‘), (“), (,) allowed]
<b>K</b>	<b>Codes</b>	Questions Answers	Unique identifiers of questions and of the unique entries in their pre-defined answer sets. The code assigned to each question should be unique. Identical entries in the pre-defined answer sets of any two questions should have the same unique identifier.	<b>Whole numbers</b> [each code should have the same number of digits (instead of codes 1, 2, ..., 10 use 101, 102, ..., 110)]
<b>L</b>	<b>Q&amp;A</b>	Questions Answers	Contains the text of all questions and associated answers.	<b>Any text</b>

<sup>1/</sup> For definitions of terms used in the table, please refer to the preceding subsection.

### *Creating unique identifiers of questions and unique answers*

#### *Unique identifiers of questions*

30. In questionnaire structures processed with *MyQuestLight*, each question must be assigned an unique numeric code. All codes should be whole numbers with the same number of digits. The codes of consecutive questions in the questionnaire structure, irrespective of their level, should be adjacent whole numbers, ascending from the top to the bottom of the Excel sheet. The unique numeric code of each question is placed in the cell formed by the intersection of the column of info field “Codes” and the row where the particular question appears.

#### *Unique identifiers of unique answers*

31. In questionnaire structures processed with *MyQuestLight*, each unique answer from the pool of all entries in the pre-defined answer sets to all questions must be assigned an unique numeric code. All codes should be whole numbers with the same number of digits.

32. In practice, this can be accomplished by pasting all entries in the pre-defined answer sets to all questions in a new sheet of the workbook and then filtering all unique records from this list (from the main menu of Excel select **Data** → **Filter** → **Advanced Filter** and check the checkbox labeled “Unique records only”). The list of unique answers should be broken down in two — regular and “non-response” answers. The regular answers should be sorted alphabetically and assigned consecutive whole numbers as unique identifiers. The “non-response” answers should then be appended to the list of sorted regular answers and assigned codes that are easily distinguishable from the codes given to regular answers (Figure 2). **In order for the validation procedures of *MyQuestLight* to work properly the code of the “non-response” answer “Not applicable” must be “198”.** Finally, the code of each unique answer should be placed in the cells formed by the intersection of the column of info field “Codes” and the rows in the Excel sheet containing the questionnaire structure, in which the particular answer appears (Figure 1).

Figure 2. Example of Assigning Unique Codes to Unique Answers

<b>Answer</b>	<b>Code</b>
ANSWERED	101
DIRECTOR OF THE FIRM AND NOT THE OWNER	102
DIRECTOR OF THE FIRM AND OWNER	103
DIRECTOR OR DEPUTY DIRECTOR FOR FINANCE	104
FAIR	105
GOOD	106
KAZAN	107
LICENES ON TRADE OF ACISE GOODS	108
LICENSE ON OUTDOOR TRADE	109
LICENSE ON RETAIL TRADE	110
LICENSE ON TRADE	111
LICENSE ON TRADE OF LEATHER GOODS	112
NO	113
OTHER (PLEASE SPECIFY)	114
POOR	115
SAMARA	116
SARATOV	117
ULYANOVSK	118
USER PROVIDED TEXT	119
YES	120
REFUSED TO ANSWER	197
NOT APPLICABLE	198

Source: Sheet "Answers" of file Example\_MyQuestLight.xls.

## B. Inputting of Questionnaire Responses

33. In *MyQuestLight* each questionnaire response provided by a respondent is placed in a separate column, starting from column “M” of the Excel sheet (Figure 1). In case there are more questionnaire responses than columns in the Excel sheet (i.e. 243), users should copy the questionnaire structure in a new Excel sheet and input the remaining responses there. There are no limitations on the number of responses that *MyQuestLight* can handle.

### Unique identifiers of questionnaire responses

34. Each questionnaire response must be uniquely identified by a self-explanatory respondent key, which is placed in row “1” of the column containing the questionnaire response. Reference information on each respondent should be placed in a separate sheet of the workbook, so that the respondent key appears in the first (i.e. leftmost) column of the reference info range (Figure 3). Care should be taken to ensure that the respondent keys in the sheet containing the questionnaire structure and in the sheet containing the respondents’ reference info fields match exactly. The first row of the range should contain the column headers of the reference info fields. At the minimum the reference info fields should comprise of the respondent key and a unique numeric identifier of each respondent. Often, the reference info fields will contain categorical variables that identify common characteristics of respondents. The unique numeric codes assigned to respondents must be whole numbers with the same number of digits (field “RespondentIdentifier” in Figure 3).

Figure 3. Example of Questionnaire Respondents Reference Information Sheet

<b>RespondentKey</b>	<b>City</b>	<b>RespondentIdentifier</b>
Respondent_1	SAMARA	101
Respondent_2	ULYANOVSK	102

Source: Sheet “RespondentsToProcess” of the file Example\_MyQuestLight.xls.

### Inputting responses to questions

35. There are important differences in how the responses to closed-ended, open-ended, and mixed-type questions are coded in *MyQuestLight* (Figure 1). For a given respondent, her response to a closed-ended question is entered by placing checkmarks (i.e. pre-specified character such as “+”, “X”, etc.) in the cells defined by the intersection of the column containing her questionnaire response and the rows that contain those entries in the pre-defined set of answers that she has selected. Her free-text response to an open-ended question, however, is entered by placing the text of the response in the cell defined by the intersection of the column containing her questionnaire response and the row containing the pre-defined answer labeled “User provided text”. Her response to a mixed-type question is coded by: (1) placing checkmarks in the cells defined by the intersection of the column containing her questionnaire response and the rows that contain those entries in the pre-

defined set of answers that she has selected; and (2) placing her response in free-text form in the cell defined by the intersection of the column containing her questionnaire response and the row containing the answer entry that accepts replies in free-text form (e.g., “Other (please specify)”).

36. For each question, at least one of the entries in its pre-defined answer set, be it regular or “non-response” answer, must be selected by each respondent. In the case of single-response questions, only one entry from the pre-defined answer set should be selected. In the case of multiple-response questions, regular and “non-response” answers, or more than one “non-response” answers can not be simultaneously selected. The response given to a dependent question must be in agreement with the response given to its master question. In particular, if the trigger answer is selected as a reply to the master question, the answer to the dependent question must be a “non-response”.

### **Automation of the inputting of questionnaire responses**

37. *MyQuestLight* enables users to automatically input electronically filled questionnaire responses. The following steps describe how users can take advantage of this functionality.

38. First, the user must create the questionnaire as a **Word form** and distribute it electronically. Users can use the sample file **Quest.doc**<sup>2</sup> as a template for creating new questionnaires. When creating the Word form, users should use the specially formatted styles “MainQuestion”, “SubQuestion” and “Answer” contained in the sample file. The style “Answer” should only be applied to paragraphs that contain answers to questions (one answer per paragraph). In the case of pre-defined answers that are selected by checking a checkbox, the latter should be placed in the same paragraph where the answer label appears. In the case of answers that require response in free-text form, the textbox that holds the latter should be placed in the paragraph just below the one containing the answer label. Note that before distributing the questionnaire, the Word form needs to be locked—from the main menu of Word select **View → Toolbars → Forms** and click on the last icon in the pop-up menu).

39. Second, the structure of the questionnaire must be created in an Excel workbook. Please refer to the instructions in preceding section with one important exception—only answers that appear in the Word form should be included in the answer sets to questions, even if this means leaving some questions without associated answer set. Pseudo” answer sets for hierarchical elements above the level of question and missing “non-response” entries in the pre-defined answer sets, as well as all other required elements of the questionnaire structure, should be added only after all questionnaire responses are processed automatically. **At the minimum, users must fill the information fields “QuestVarName” and “Q&A / Respondent” of the questionnaire structure, for the automatic inputting of questionnaire responses to work properly.** As an example, the sheet

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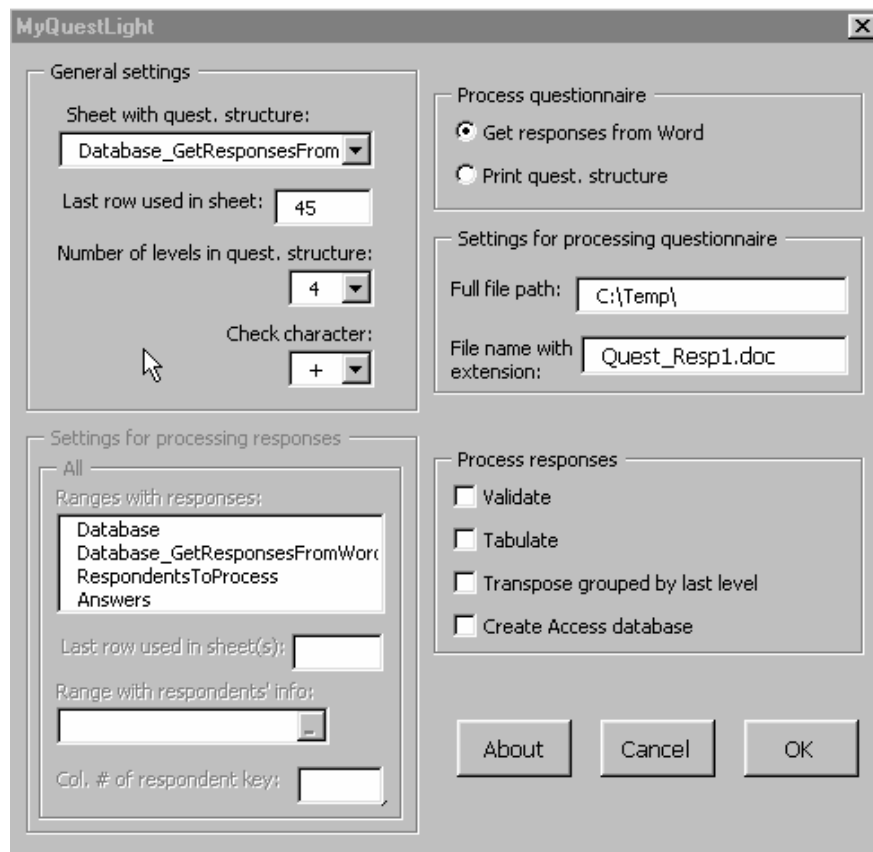
<sup>2</sup> Part of the standard software distribution of *MyQuestLight*.

“Database\_GetResponsesFromWord” of the file “Example\_MyQuestLight.xls” contains the questionnaire structure, in which users can automatically input responses to the questionnaire contained in the Word file “Quest.doc.”

40. Third, the files with the questionnaire responses should be unlocked and saved that way—from the main menu of Word select **View** → **Toolbars** → **Forms** and click on the last icon in the pop-up menu). Note that once a Word form is unlocked, it can not be printed.

41. Lastly, with the workbook containing the questionnaire structure on the screen, *MyQuestLight* should be started, configured as shown in Figure 4, and run. Note that in the example **Quest\_Resp1.doc** represents the first questionnaire response being processed. This step should be repeated as many times as many questionnaire responses there are, each time changing the entry in the textbox labeled “File name with extension” to the name of the file containing the next questionnaire response to be processed.

Figure 4. Configuring *MyQuestLight* to Automatically Process Questionnaire Respondents



### C. Validation of Inputted Information

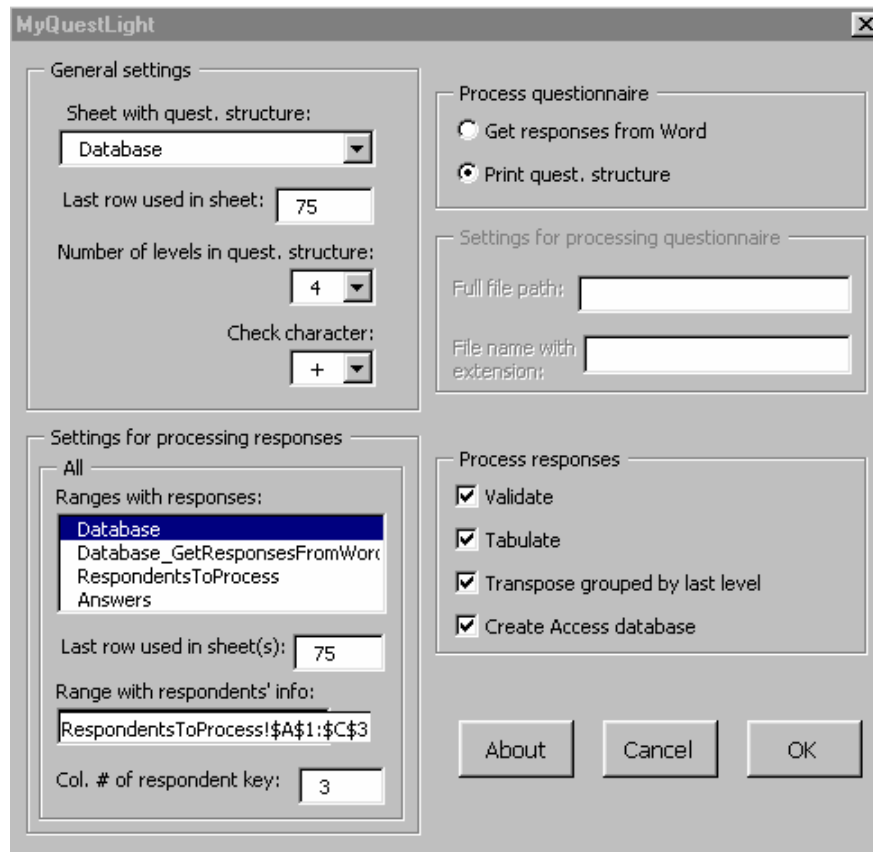
42. This function of *MyQuestLight* verifies the integrity of the inputted information and reports any errors that require user intervention. In a newly created Excel sheet “ErrorList”, *MyQuestLight* lists for each respondent and for each incorrectly inputted response to a question: the variable name of the respective question, the row in which it resides, and an error message describing the nature of the problem. A list of the possible types of error messages and the problems they describe follows:

- “Neither of the answers is checked” – in case none of the entries in the pre-defined answer set of the questions have been selected.
- “More than one answer is checked” – in the case of single-response questions, when more than one entry from the pre-defined answer set have been selected.
- “The correct Non-response not checked as in Parent/Master” – this message signals one of the following: (1) If the question, in the response to which the error has occurred, is a dependent question and a “non-response” entry is selected from the answer set to its master question, the same “non-response” should be given to the dependent question; or (2) If a “non-response” entry is selected from the answer set to the parent question, the same “non-response” should be given to all its subordinate questions.
- “Not Applicable not checked as required by response to Master question” – in case the question, in the response to which the error has occurred, is a dependent question and the trigger answer is selected as a reply to its master question, the answer to the dependent question must be a “Not applicable”.

## D. Output Generation

43. Figure 5 shows how to configure *MyQuestLight* to generate all possible outputs from the questionnaire responses contained in the example file. Please note that this is an old screen shot of the macro that does not show the two new functionalities added in the latest version of *MyQuestLight*. **Before each run of *MyQuestLight* users should change the names of the sheets previously created by *MyQuestLight* to prevent name conflicts.**

Figure 5. Configuring *MyQuestLight* to Generate Different Outputs



Note: In case the questionnaire responses are placed in more than one Excel sheet, in the listbox "Ranges with responses" users should select all sheets that contain questionnaire responses.

### **Tabulation of questionnaire responses**

44. Fill-in all fields in the left-hand side of the form and check the entry “Tabulate” under “Process responses”. Results appear in a newly created Excel sheet “Tabulations”.

### **Tabulation of questionnaire responses by cross-products of categories of grouping variables**

45. To make use of this function, the reference info fields in the sheet “RespondentsToProcess” should contain at least one categorical variable that identifies common characteristics of respondents. The function generates tabulations of questionnaire responses for each combination of categories of the grouping variables.

46. Fill-in all fields in the left-hand side of the form and check the entry “Tabulate by group” under “Process responses”. In the left-side panel “Tabulate by group”, for each grouping variable (up to 3), type the reference address of the **first data cell** (i.e., the first cell below the variable name, for example D2). Results appear in newly created Excel sheets.

### **Organizing the questionnaire structure in relational tables**

47. Fill-in all fields in the top left-hand side panel of the form and check the entry “Print quest. structure” under “Process questionnaire”. Results appear in newly created Excel sheets “QuestionsLevel1”, “QuestionsLevel2”, ..., etc.

### **Generation of relational data tables**

48. Fill-in all fields in the left-hand side of the form and check the entry “Create Access database” under “Process responses”. Results appear in newly created Excel sheets “MainTable1” and “TextResponses1”.

49. **It is imperative that before using table “TextResponses1” in construction of relational databases, the users append to it all entries from sheet “Answers”.** The “AnswerKey” of each entry from the sheet “Answers” should be constructed by concatenating (placing one next to each other): (1) The maximum value of the unique identifier of questions that has the same first digit as all question codes assigned to info field “Codes” of the questionnaire structure (i.e. in our example 1999); (2) The maximum value of the unique identifier of questionnaire respondents that has the same first digit as all respondents codes assigned to reference information field “RespondentIdentifier” in sheet “RespondentsToProcess” (i.e. in our example 199); and (3) The value of the unique identifier of the respective answer (e.g., in the case of answer “Yes” in Figure 2 – 120). Then the “AnswerKey” of the answer “Yes” would be 1999199120. See also column “A” in sheet “Answers” of the file “Example\_MyQuestLight.xls.”

50. Appendix I presents the structure of the relational database that can be created from table “MainTable1”, table “TextResponses1” augmented with the entries from sheet “Answers” and the tables from sheets “RespondentsToProcess”, and “QuestionsLevel1”, “QuestionsLevel2”, ....

### **Generation of full-sample queries on answers to questions**

51. Fill-in all fields in the left-hand side of the form and check the entry “Transpose grouped by last level” under “Process responses”. Results appear in Word files—one for each question — saved in the directory C:\Temp. Before using this functionality, please make sure that the directory C:\Temp exists on your hard drive.

### **Creation of rectangular dataset for further statistical processing**

52. This function generates a rectangular dataset, in which variables are placed in columns and respondents’ answers in rows. A single-response question is represented by a single variable with a name taken from column “J” of the sheet containing the questionnaire structure (Table 1). The values taken by the variable are the answer codes associated with the responses to the respective question. A multiple-response question is represented by a set of (dummy) variables with names constructed by combining the variable name associated with the question with each entry in the answer set associated with the respective question. A dummy variable takes the value of 1, if the respondent has selected the answer to the multiple-response question that the variable represents, 0—otherwise.

53. Fill-in all fields in the left-hand side of the form and check the entry “Create SPSS database” under “Process responses”. Results appear in newly created Excel sheet “SPSS1”.

RELATIONAL DATABASE STRUCTURE

