Splitter:
Pivot Table for Survey Data in Excel

Student v4.0

maxi

Splitter : A Quick Guide

1. One Survey per Workbook/Excel file: Each workbook (or Excel file) should contain only one survey data set. If you need to analyze other survey data, you should use a separate workbook.

2. Survey Data Set Up: Your survey data is located on a single sheet within the workbook. The data should start in cell A1, with the first row containing the questions and the first column containing the respondent IDs (or a Timestamp that can serve as an ID). Each intersecting cell holds the answer to a specific question from a particular respondent. When Splitter is first activated, it will automatically rename the sheet to "Form Response 1."

3. One Cell Data : Answer for any question type—whether single answer, multiple answers, or open-ended—are recorded in a single cell, regardless of the length of the response. For multiple answers, separate each answer with a comma.

4. AI-Assisted Data Cleaning: Before creating tables, AI may be needed to clean the data, especially for open-ended questions. Copy the data from the relevant column, paste it into an AI tool with specific instructions/prompts, and then paste the cleaned data back into the survey data column. This AI data cleaning process may require multiple attempts, with adjustments to the **prompts** and careful double-checking, until the results are satisfactory.

5. Initial Run: On the first run, Splitter will automatically code all text data within the survey. This process may take a few minutes, depending on the size of your survey data.

6. Generating Tables: After coding is complete, you can directly generate the data tables you wish to create on a new sheet.

7. Tables Essentials: Splitter is equipped with cross-tabulation, filtering functions, and basic statistics like averages and standard deviations for in-depth data analysis, similar to Pivot Table.

8. Saving Your Work: When you save the workbook, Splitter will retain the latest arrangements, ensuring your data and analysis setup are preserved.

9. Data Safety: Your data is safe. If during organizing or editing you feel you've made a mistake, simply copy the data in the "Form Response 1" sheet to another workbook and start over.

10. Sharing Your Work: Your work, including its arrangements, can be shared with other Splitter users. Simply send the file to another Splitter user, allowing them to create tables based on your saved configurations.

Survey Data in Excel

- **Start in Cell A1:** Ensure your survey data begins at the top-left corner of the sheet in cell A1.
- **Row 1:** Contains the survey questions, with each column representing a different question.
- **Row 2 and Beyond:** Each row contains responses from individual respondent, with each column corresponding to the respective question
  - **Column A:** Contains the respondent IDs or a Timestamp that serves as an ID
- **Square Format:** The survey data is organized in a simple square format. Each cell, where a row and a column intersect, holds the answer to a specific question from a particular respondent.
- **One Cell Data:** Answers for any question type—whether single answer, multiple answer, or open-ended—are recorded in a single cell, regardless of the length of the response.
- **Handling Multiple Answers:** For multiple answers, separate each answer with a comma within the same cell.
- **Data Format Template:** This setup is similar to the format of survey data downloaded from Google Forms into Excel.

Survey Data Cleaning with AI

- You can ask AI like ChatGPT to handle any data-cleaning task, particularly for open-ended questions where respondents type their answers themselves.

- Capitalizing words, Correcting names, Fixing spelling errors, Handling abbreviations, Removing irrelevant characters, Ensuring uniform formatting, and much more depending on your needs.

- Simply copy the column for a specific question from your survey data, paste it into the AI tool like ChatGPT with a prompt like, "Capitalize Brand Names," and then copy the corrected text back into your Excel column.
    - However, this AI data cleaning process may require multiple attempts, with adjustments to the prompts and careful double-checking, until the results are satisfactory.

- The most important aspect of data cleaning for Splitter involves the use of commas as a delimiter or separator.
    - A comma delimiter or separator helps distinguish different elements or items within a single cell. For example, if a respondent lists multiple brands they prefer, Splitter will recognize each brand as a separate item when they are separated by commas
    - When you use a prompt like "Clean the Data" with AI tools such as ChatGPT, it will typically correct any improper use of commas.

First Time Running Splitter : Automatic Text Coding

Splitter button in Add-Ins tab
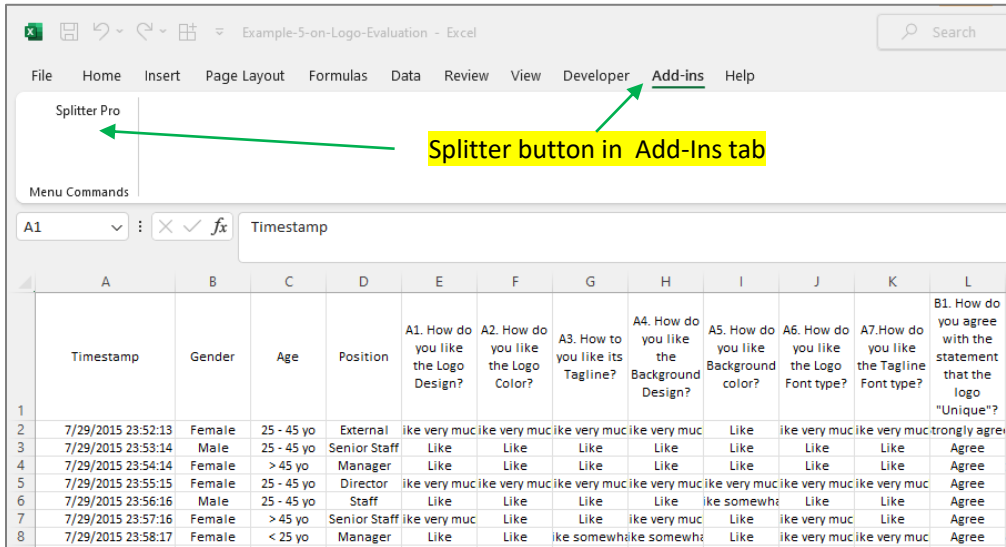
Running Splitter for the First Time:

1.Open Survey Data Workbook: Start by opening the Excel workbook containing your survey data sheet.

2.Ensure Active Sheet: If your workbook contains only one sheet with survey data, everything is set. However, if your workbook has multiple sheets, make sure the sheet with the survey data is active (it should be the front sheet with the data displayed on your screen).

3.Run Splitter: Once you are on the active survey data sheet, simply click "Splitter" button in the Add-Ins tab to initiate the process.

4. Text Data Coding: Splitter will automatically code all the text data in the survey. Depending on the size of your dataset, this process may take several minutes or longer.
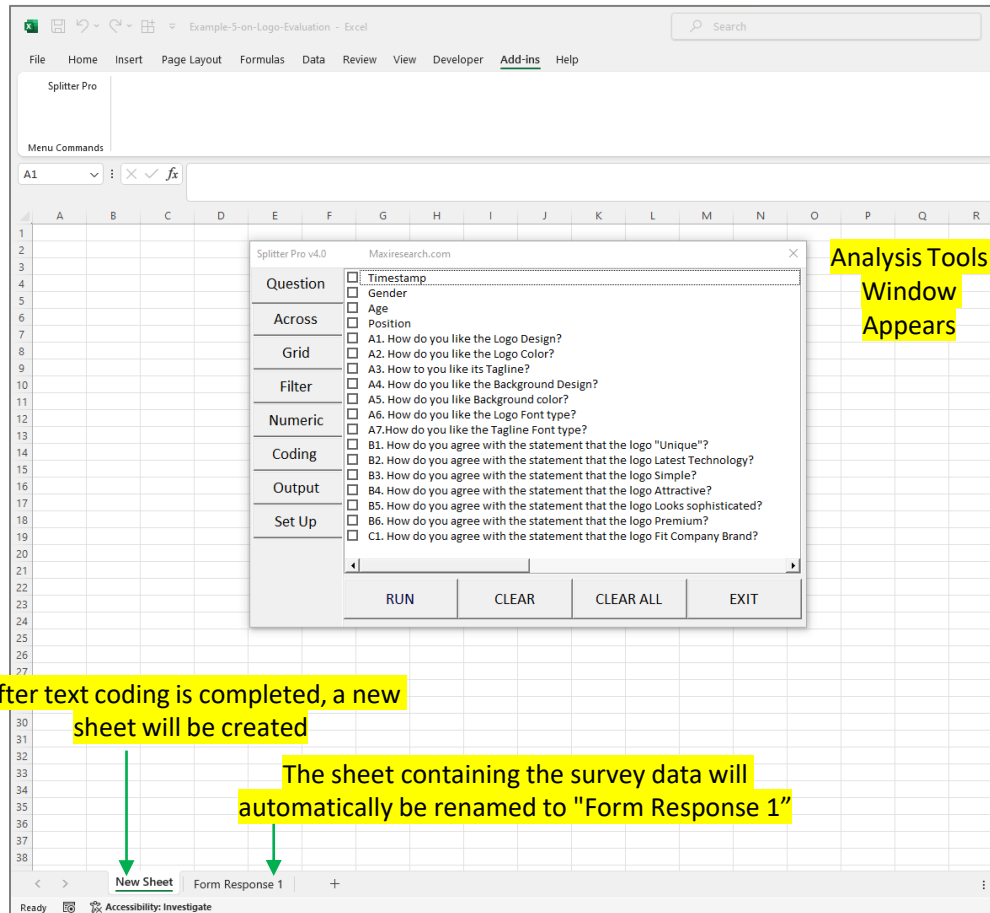
- After completing text coding, the analysis tools window appears.

- You can now start creating tables using the various tabs available for deeper analysis, including crosstabulation, filtering, and more detailed data breakdowns.

Set Up Tab – Organize Automatic Coding Result
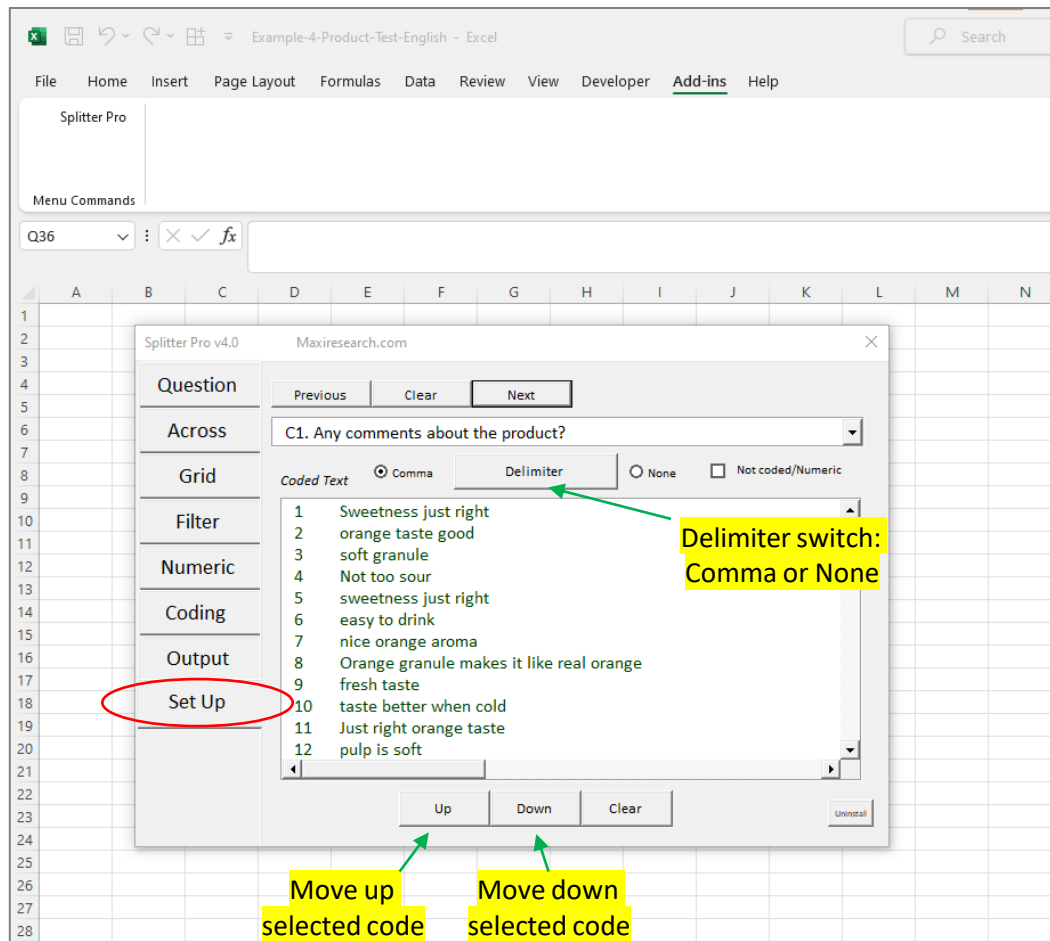
- In the setup tab, you can review the text coding results and adjust the coding order.
- There are two types of text coding in Splitter : With comma delimiter and without delimiter.
  - With the comma delimiter, any text between commas is treated as one code, allowing more than one code in a single cell.
  - Without the delimiter, however, all the text in the cell is treated as one code, including any commas if present.
- The default text coding in Splitter is with comma delimiter.

- To generate tables, go to Question tab and select one or more questions you want to create tables from.
- Put your cursor at any location other than in survey data sheet "Form Response 1". Click Run.

Across Tab – Creating Crosstabulation Tables

- To create crosstabulation tables, in addition to selecting questions in the Question tab, also select one or more questions in the Across tab to be the column headers.

Filter Tab – Creating Tables Based on Specific Respondent Criteria

- Use the Filter tab to narrow down your tables by applying criteria that focus on specific respondent characteristics or responses.
- This allows you to generate tables for targeted segments of your survey data, such as respondents of a certain age group, location, or those who gave particular answers to specific questions.
- You can add up to 10 questions for filters.

Grid Tab – Merging Multiple Tables with Same Answer Options into a Single Table

- Besides the Question tab, tables can also be generated in the Grid tab. In this tab, multiple questions are displayed horizontally as a grid, rather than listed one by one vertically as in the Question tab. Splitter automatically recognizes grids when multiple questions share the same set of answer options.

- To display multiple tables as a grid, each table must have the same answer options in the same order. You can rearrange the answer codes in the Setup tab or Coding tab.
- In cases where answer options are unavailable (because no respondents selected that option and thus no result was found during text coding), you can add a dummy answer—an answer with 0 responses—in the Coding tab (refer to the Coding tab section)

Numeric Tab – Coding for Numeric Data (1)

Column Q: Open-Ended Question Expecting a Numeric Answer

Numbers without units or symbols are treated as numeric data; otherwise, they are considered as text data, including ranges.

The 'numeric data coding' in Splitter is designed to create groups of numbers based on criteria that we specify.

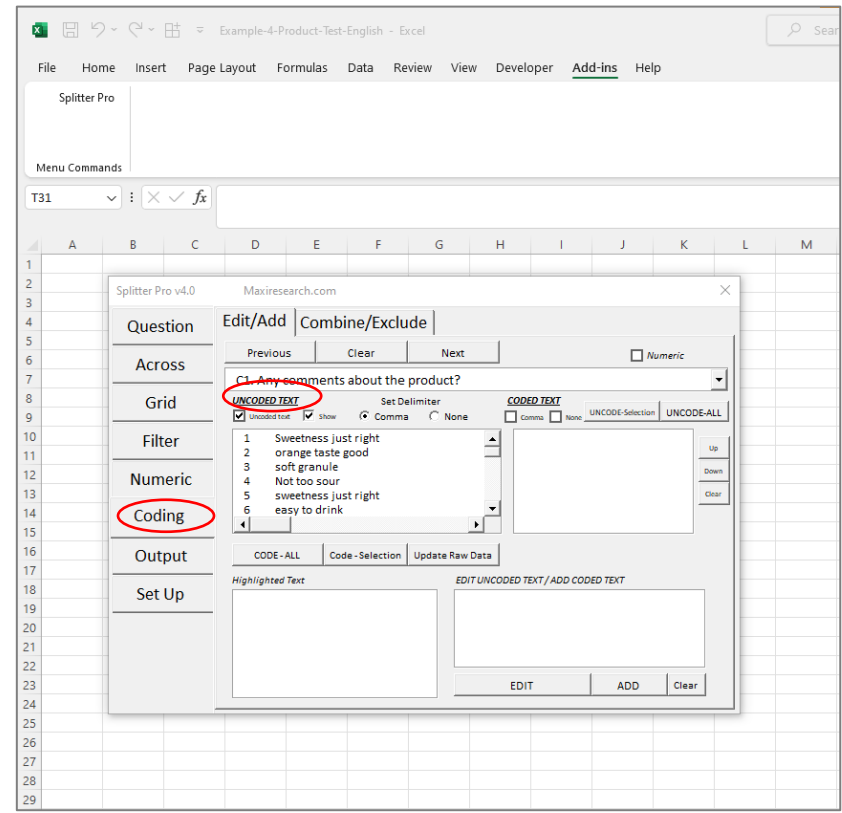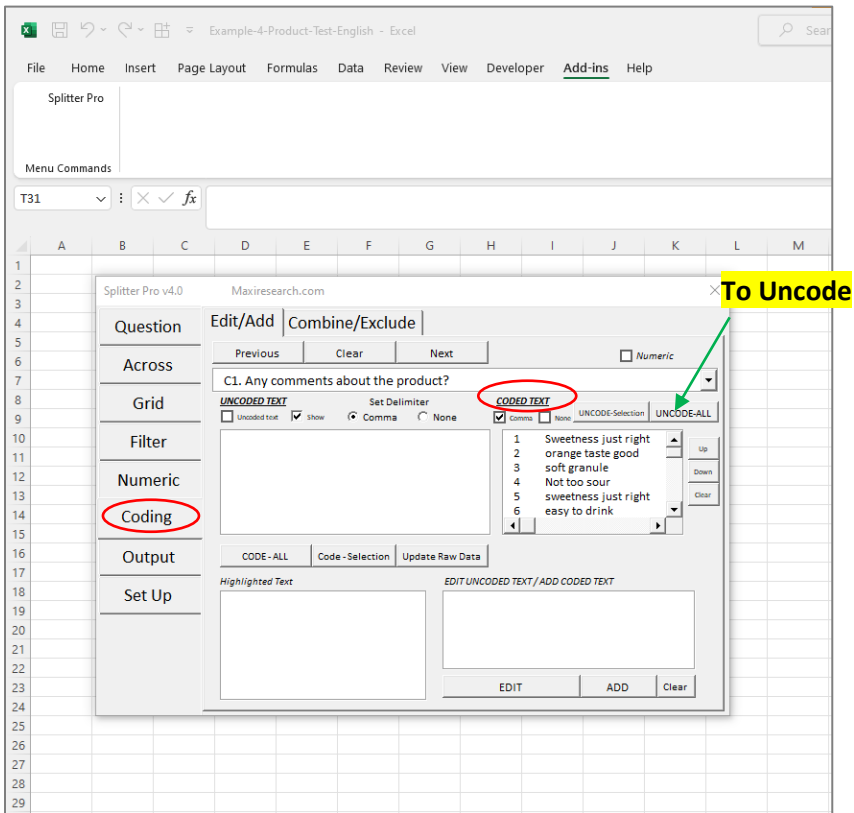Suppose after looking at the data distribution, we would make 3 groups out of these numbers < 2, 2 <= x <= 4, and >4

Coding Tab – Editing Text Data (1)

- In Splitter, text data has to be coded to create table.
  - All text data are automatically coded the first time you run Splitter.
- On the other hand, text data has to be uncoded to edit it.
  - To edit text data, you start with uncode it first.

Coding Tab – Editing Text Data (2)

- Then Set Delimiter to "None"
  - This will restore the text data to its original form before delimiter is applied.
- After editing is completed :
 - Set Delimiter back to Comma
  - Code the text data.
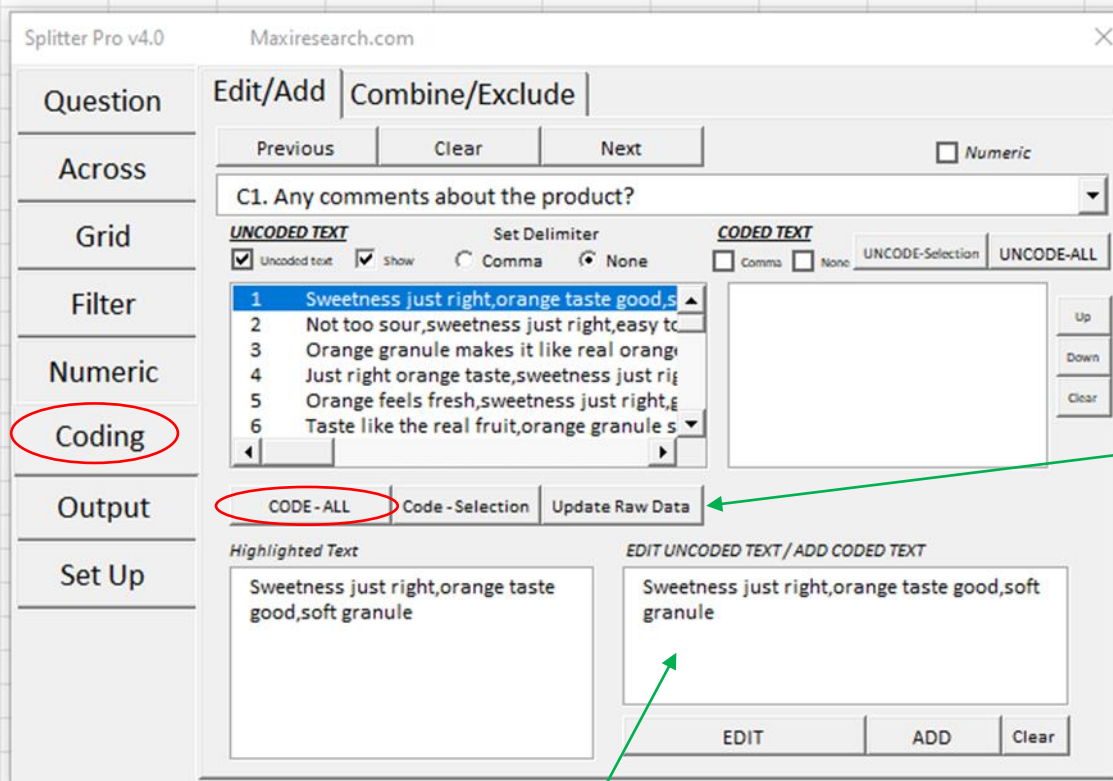
To update survey data, go to the specific column in survey data sheet (Form Response 1), update survey data and click this button.
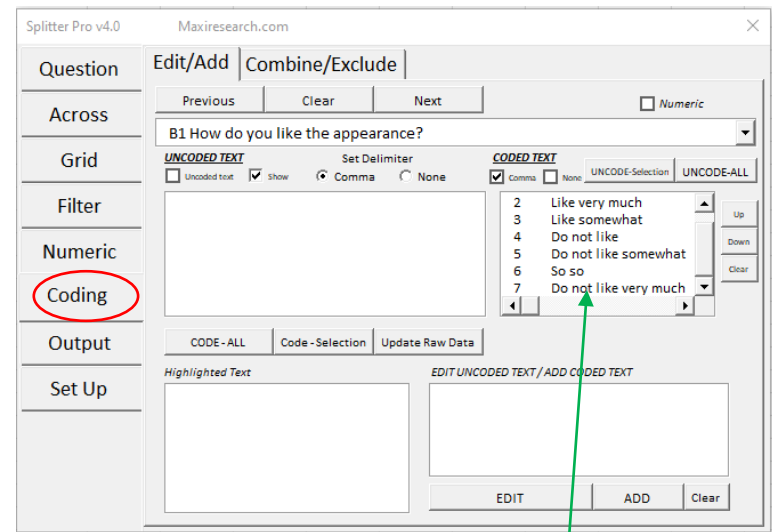
Edit here

Coding Tab – Adding Dummy Coded Text

- Adding dummy codes is sometimes necessary, especially for scaling questions. For example, if no respondents select "Do not like very much" on a scale from "Do not like very much" to "Like very much," the calculation of averages and standard deviations would be skewed. Since these calculations are based on code numbers, incomplete coding can lead to inaccurate results, impacting the intended score.
- Complete codes for a series of grid questions are necessary to display them in the Grid tab.
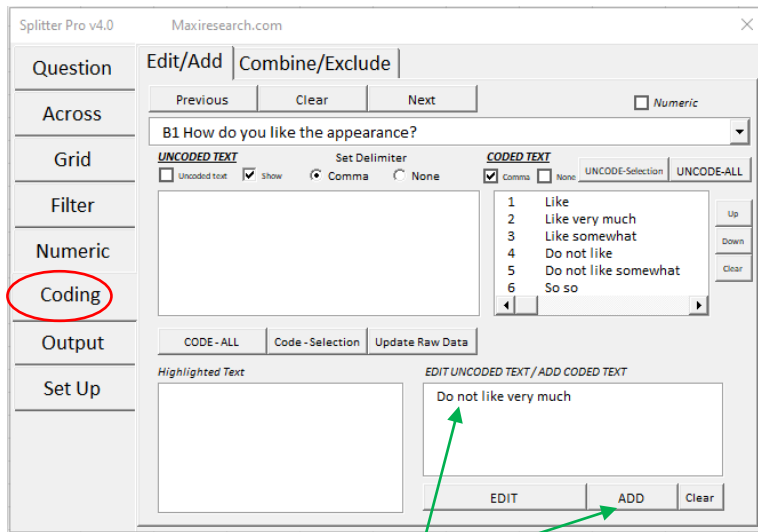
To add dummy coded text simply type in the box. Then click Add

Dummy coded text added. It has 0 responses from respondents.

Coding Tab – Combining Codes (1)

- Combining codes is often needed for open-ended questions, where we want to group words with similar meanings.

Combine button

Group Name

- Simply highlight the codes you wish to combine, click the Combine button, and assign a name to the group

Coding Tab – Combining Codes (2)

Group name and components of the group

Coding Tab – Excluding Codes

Check this to show group components in the table

To exclude component from a group, highlight the component and hit this button. In this example we have excluded component 'tastes better when cold' from the group 'Refreshing Taste'

Output Tab

This option applies to combined codes in the Coding tab. In net count, if a respondent has multiple responses within the same group, only one response will be counted.

Show tables in Percentage or Count

For cases where missing data exist, choose whether to include the missing data as respondent base or just respondents with answers.

To show the average (of code number).

To show standard deviation (of code number)

For question with numeric data, whether to show average and standard deviation of the actual numeric value or its code number

To show Top 1, Top2, Top 3 (of code number) percentage. Usually for scaling where we are interested in combining responses.

Calculate Pearson Correlation.
For scaling questions in Grid format.

Significant test on the means or proportion (Percentage of Top 1, Top2 or Top 3 Boxes)

Go to Question tab

Go to Grid tab

Table color theme

Adding and Deleting Cases

- To add new cases, simply enter the data in the row immediately following the last row in survey data sheet "Form Response 1".
- To delete cases, simply delete the rows where those cases are located.
    - Remember to have unique respondent ID in first column in your survey data (or Timestamp that serves as an ID)

Formula

- For mean significant difference:

$$t = \frac{|m_1 - m_2|}{\sqrt{s_1^2/n_1 + s_2^2/n_2}}$$

- For proportion significant difference:

$$z = \frac{|p_1 - p_2|}{\sqrt{\dfrac{\bar{p}(1-\bar{p})}{n_1} + \dfrac{\bar{p}(1-\bar{p})}{n_2}}} \qquad \bar{p} = \frac{p_1 n_1 + p_2 n_2}{n_1 + n_2}$$

- For Pearson correlation:

$$r = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

Only for Grid, scaling question

THANK YOU

maxi

MAXI research
www.maxiresearch.com
splitter@maxiresearch.com