Purpose

The purpose of the current task is to test risk attitude. During the task, the subject will be presented with a given number of trials. In each trial there is a pair of numbers, for example "20 – 130". At the end of the task, one of the trials will be randomly selected by computer. Then, one of the numbers will be translated into CHF (translation formula is = the value * 0.1 CHF) and paid to the participant. However, for getting this amount of money, the subject must *secure* the trial. For doing so, on each trial, the subject needs to give a minimum and a maximum reservation prices for the pair of numbers. These prices should be comprised between 0 and 150, since the subject has 150 points of endowment. Once the random trial is selected, the computer will generate a number between 0 and 150. If the mean of minimum and maximum reservation prices is higher or equal to the generated price, the subject will get:

$$150 - generated\ price + gain$$

where $gain$ is one of the two numbers presented in the trial randomly selected by the computer (both numbers have a probability of 50% to be selected).

In our example, if the reservation price is 70, the generated price is 30 and the selected number is 130, the participant will get (150 – 30 + 130)*0.1 = 25 CHF.

However, if the reservation price is smaller than the generated price, the subject will only keep 150 points of endowment and thus get 15 CHF.

References:

Wang, T., Venkatesh, R., & Chatterjee, R. (2007). Reservation price as a range: An incentive-compatible measurement approach. *Journal of Marketing Research*, *44*(2), 200-213.

SET UP

Please check that the folder *Scientific_Programming_NSidorenko* is organized as following:
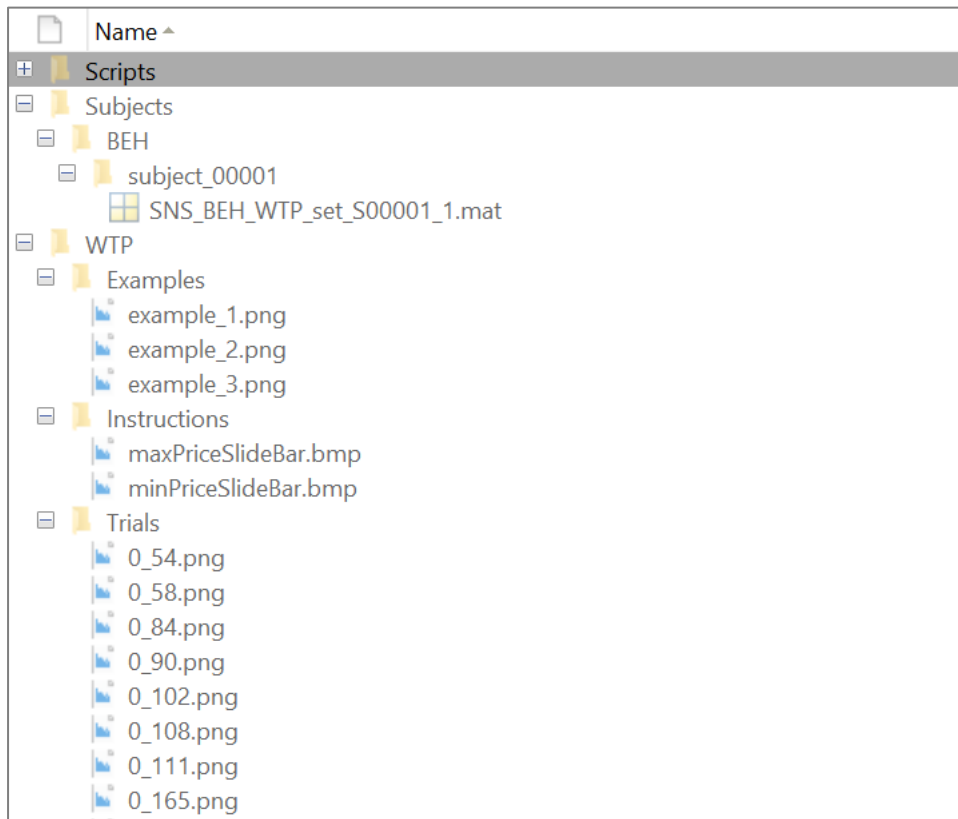
It is highly recommended to run all the scripts from the folder *Scripts,* since the scripts and functions DO NOT add any path in order to not interfere with your established organization of MATLAB path.

The folder *Scripts* contains 17 .m files.

The folder *Subjects/BEH/* contains 66 folders, each of them containing a dataset for a given subject.

The folder *WTP* contains folders called *Examples* with 3 .png images, *Instructions* with 2 .bmp images and *Trials* with 109 .png images.

Step by step running

To run the task, each subject should be assigned a specific dataset. To create a dataset for new subject, use the function *BEH_wrapper_WTP_design.* The script *generalWrapper* (lines 3-10) creates a dataset for a given number of subjects.

<u>Note 1:</u>

> Datasets have already been created for 66 subjects, which means that you do not need to create anything.

Still from the script *generalWrapper*, you can first run the Training session, then the main task and finally the data analysis.

Thus, I would suggest you doing the following:

1) Open the script *Scientific_programming_NSidorenko\Scripts\generalWrapper.m*
2) Change the path on the line 16 and run lines 14-17
3) Run the training session (line 20)
4) Run the main task (line 22)
5) Run the data analysis (line 24)

Each subject is given a dataset of 218 trials. However, for simplicity, the main task is programmed for running only 20 trials out of 218. If you want to change this number, please change the argument 'nTrials' in the function *BEH_WTP_task()* which is called by the function *BEH_wrapper_WTP_task()*

After running the function *BEH_wrapper_WTP_Data_analysis*, you will find 2 generated graphs in the subject folder.

<u>Note 2:</u>

> You should start with the subject 00002, since the task has already been run for the subject 00001. If for some reasons, running the main task is not possible, you can still run the data analysis with responses of the subject 00001.

<u>Note 3:</u>

> During the training session, you will have to answer several questions to test your understanding of the task. The right answers are given on the last page of this document. If for some reasons you answer wrong at least one of the questions, you will get asked to raise your hand. You can of course do so, but in order to continue the task, please press 'm' on the keyboard.

Outcome

Since you will probably run the task only for one subject, the data analysis part is written for looking at the *within-subject* and not *within-group* level. That is why the outcome of both training session and task is stored in the subject folder.

The function *BEH_wrapper_WTP_Data_analysis* creates two graphs for each subject. The *first one* is a histogram showing the distribution of mean prices across trials. The goal of this graph is to provide a graphical overview of subject's choices (which mean price was the most frequently chosen by the given subject, a kind of sanity check). The *second one* is a scatter plot with a regression line, which shows the relationship between the difference between the two numbers presented in the trial and the mean price announced to buy the trial. One would expect, for example, that the trials with a little difference would receive higher mean prices from risk aversive participants (the trial '80 – 80' has a difference of 0 and thus is more secure than the trial '80 – 0' => we would rather buy the first trial => the bid for the first trial would be higher than for the second one).

Both graphs are also saved in the subject folder.

***Answers*:**

1) b

2) b

3) d