1. ~~Input data~~
2. Create a new Row
3. ~~Select a cell~~
4. Select rows
5. Insert/edit a point
6. Delete selected points
7. Load data set
8. Save data set
9. Draw a graph
10. Show trend line
11. Hide trend line
12. Show the formula of the trend line
13. Hide the formula of the trend line
14. Switch graph (ask professor)
15. Show background lines
16. Hide background lines
17. Show axis value
18. Hide axis values
19. Return to main interface

# ~~Use Case 1: Input data~~

* ~~Participating Actor: Initiated by Participant~~
* ~~Entry Condition~~
  + ~~New rows are available~~
* ~~Exit Criteria~~
  + ~~Participant has input one set of data~~
* ~~Flow of Events~~
  + ~~Participant input data~~
  + ~~System receives the new input data and presents the input data to participant~~

# Use Case 2: Create a new row

* Participating Actor: Initiated by Participant
* Entry Condition
  + The number of data points does not exceed the limit of 2048
* Exit Criteria
  + A new row has been created and presented to the participant
* Flow of Events
  + Participant requests to create a new row
  + System creates a new row and presents the new row to the participant

# ~~Use Case 3: Select a cell~~

* ~~Participating Actor: Initiated by Participant~~
* ~~Entry Condition~~
  + ~~There exits at least one row~~
* ~~Exit Criteria~~
  + ~~A cell has been selected~~
* ~~Flow of Events~~
  + ~~Participant selects the cell~~
  + ~~System presents that the cell is successfully selected.~~

# Use Case 4: Select rows

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exist at least one row
* Exit Criteria
  + Participant has selected the rows
* Flow of Events
  + Participant selects the rows(one or more)
  + System presents the selected rows to the participant

# Use Case 5: Insert/Edit a point

* Participating Actor: Initiated by Participant
* Entry Condition
  + Only one row in the table is selected
* Exit Criteria
  + The corresponding data point has been edited.
* Flow of Events
  + Participant requests to insert/edit a data point
  + System presents the insert/edit interface
  + Participant inputs values into the interface and confirms
  + System accepts the values, updates the point using the values and presents the updated value.

# Use Case 6: Delete selected point

* Participating Actor: Initiated by Participant
* Entry Condition
  + Participant has selected one point
* Exit Criteria
  + Selected point have been deleted
* Flow of Events
  + Participant requests to delete the selected point
  + System deletes the selected point and presents the remaining dataset to the participant

# Use Case 7: Load data set

* Participating Actor: Initiated by Participant
* Entry Condition
  + None
* Exit Criteria
  + Selected dataset is successfully loaded
* Flow of Events
  + Participant selects the dataset file and confirms
  + System loads the file into the data set and presents the loaded data set to the participant

# Use Case 8: Save data set

* Participating Actor: Initiated by Participant
* Entry Condition
  + The dataset presented is not empty
* Exit Criteria
  + The dataset is saved to a file
* Flow of Events
  + Participant selects the file in which the dataset will be saved and confirms
  + System accesses the file and saves the dataset

# Use Case 9: Draw a graph

* Participating Actor: Initiated by Participant
* Entry Condition
  + Data set presented is not empty
* Exit Criteria
  + The finished graph has been presented
* Flow of Events
  + Participant requests the system to draw the selected type of graph
  + System properly draws the graph and presents the graph

# Use Case 10: Show the trend line

* Participating Actor: Initiated by Participant
* Entry Condition
  + The Cartesian plot has been drawn and presented, while the trend line is not presented
* Exit Criteria
  + The trend line has been drawn and presented
* Flow of Events
  + Participant requests the system to show the trend line of the Cartesian plot
  + System calculates the formula of the trend line using Simple Linear Regression, draws the line according to the equation, and presents the line

# Use Case 11: Hide the trend line

* Participating Actor: Initiated by Participant
* Entry Condition
  + The Cartesian plot has been drawn and presented, with the trend line presented
* Exit Criteria
  + The trend line and the formula of the line have been hidden
* Flow of Events
  + Participant requests the system to hide the trend line
  + System hides the trend line and the formula of the trend line

# Use Case 12: Show the formula of the trend line

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn Cartesian Plot with its trend line presented, and the formula of the trend line is not presented
* Exit Criteria
  + The formula of the trend line has been presented
* Flow of Events
  + Participant requests to show the formula of the trend line of the Cartesian Plot
  + System properly presents the formula of the trend line

# Use Case 13: Hide the formula of the trend line

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn Cartesian Plot with its trend line and the formula of the trend line presented
* Exit Criteria
  + The formula of the trend line has been hidden
* Flow of Events
  + Participant requests to hide the formula of the trend line of the Cartesian Plot
  + System hides the formula of the trend line

# Use Case 14: Switch graph

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn graph.
* Exit Criteria
  + The other graph is presented.
* Flow of Events
  + Participant requests to switch the other type of graph
  + System properly draws the other graph and presents the graph

# Use Case 15: Show background lines

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn graph and the background lines are not shown
* Exit Criteria
  + The background lines have been shown
* Flow of Events
  + Participant requests to show the background lines
  + System presents the background lines

# Use Case 16: Hide background lines

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn graph and the background lines are already shown
* Exit Criteria
  + The background lines have been hidden
* Flow of Events
  + Participant requests to hide the background lines
  + System hides the background lines

# Use Case 17: Show axis values

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn graph and the axis values are not shown
* Exit Criteria
  + The axis values have been shown
* Flow of Events
  + Participant requests to show the axis values
  + System presents the axis values

# Use Case 18: Hide axis values

* Participating Actor: Initiated by Participant
* Entry Condition
  + There exists a drawn graph and the axis values are already shown
* Exit Criteria
  + The axis values have been hidden
* Flow of Events
  + Participant requests to hide the axis values
  + System hides the axis values

# Use Case 19: Return to main interface

* Participating Actor: Initiated by Participant
* Entry Condition
  + A drawn graph is now presented
* Exit Criteria
  + The main interface is now presented
* Flow of Events
  + Participant requests to return back to main interface
  + System presents the main interface to the participant