1. Add a new point
2. Update a point
3. Delete selected point
4. Load data set
5. Save data set
6. Draw a graph
7. Show trend line
8. Hide trend line
9. Show the formula of the trend line
10. Hide the formula of the trend line
11. Switch graph
12. Show background lines
13. Hide background lines
14. Show axis values
15. Hide axis values
16. Return to main interface

# Use Case 1: Add a new point

* Participating Actor: Initiated by Participant
* Entry Condition
  + The number of data points does not exceed the limit of 2048
* Exit Criteria
  + The new data point has been added.
* Flow of Events
  + Participant requests to add a data point
  + System presents the data point creation interface
  + Participant inputs values into the interface and confirms
  + System receives the values, create a new point, adds the new point to the end of the dataset and presents the updated dataset.

# Use Case 2: Update a point

* Participating Actor: Initiated by Participant
* Entry Condition
  + A data point is selected
* Exit Criteria
  + The corresponding data point has been updated.
* Flow of Events
  + Participant requests to update a data point
  + System presents the update interface
  + Participant inputs values into the interface and confirms
  + System receives the values, updates the point using the new values and presents the updated dataset to the participant.

# Use Case 3: Delete selected point

* Participating Actor: Initiated by Participant
* Entry Condition
  + Participant has selected one point
* Exit Criteria
  + The selected point has 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 4: Load dataset

* Participating Actor: Initiated by Participant
* Entry Condition
  + None
* Exit Criteria
  + The 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 5: 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 6: Draw a graph

* Participating Actor: Initiated by Participant
* Entry Condition
  + Dataset is not empty
* Exit Criteria
  + The 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 7: Show 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 formula, and presents the line

# Use Case 8: Hide 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 9: 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 presents the formula of the trend line

# Use Case 10: 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 11: Switch graph

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

# Use Case 12: 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 the system to show the background lines
  + System presents the background lines

# Use Case 13: 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 14: 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 15: 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 16: 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