Use Cases

Use Case: ExitProgram

Description: the user terminates the program

Actors: user

Preconditions: the program must be open

Flow: 1. the user closes the program

2. The program closes

Use Case: SelectFile

Description: the system prompts the user to select an input file

Actors: user

Flow: 1. The system asks the user to choose a file

2. The user enters the file path

3. The system loads the file

4.The system opens a new window

Variations:

2.1 if the path is wrong: the user chooses a new path

2.2 if the file is empty: the system shows nothing

Postconditions: The file is shown in tabular form

Use Case: CreateDataSet

Description: the user loads a file and the system creates a data set with a given name

Actors: user

Flow: 1. The system asks the user to choose a file

2. The user enters the file path

3.the system loads the file

4. The system asks the user for the data set’s name

5. The system creates a data set with the given name

Postconditions: a data set is created

Use Case: ShowDataSet

Description: The system shows the user a data set

Actors: user

Preconditions: data set/s must have been created

Flow: 1. The system asks the user for a data set

2. The user enters a name

3.1 if the name is valid: the system shows the data set

3.2 if the name is invalid: the system shows an error message in a new window to the user

Postcondition: the data set is shown to the user in tabular form

Use Case: FilterDataSet

Description: the user creates a new data set filtering an existing one

Actors: user

Preconditions: data set/s must have been created

Flow: 1. The system asks the user for a data set

2. The user enters a name

3. The user enters a filter

4. The user enters the new data set’s name

4.1 if the original name doesn’t exists: the system re-prompts the user

4.2 if the filter doesn’t exist: the system re-prompts the user for filter only

4.3 if the both exist: create a new data set with new name

Postcondition: a new filtered data set is created from the original

Use Case: ShowGraph

Description: the system uses a data set to create a graph

Actors: user

Preconditions: data set/s must have been created

Flow: 1. The system asks the user for a data set

2. The user enters a name

3. The user enters the x/y values

4. The system asks the user if he wants to give names to the x/y values

5. The system shows the graph to the user

Postcondition: the user sees the graph he chose

**Traceability Matrix**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **UC1** | **UC2** | **UC3** | **UC4** | **UC5** | **UC6** |
| **TC1** | **x** |  |  |  |  |  |
| **TC2** |  | **x** |  |  |  |  |
| **TC3** |  |  | **x** |  |  |  |
| **TC4** |  |  |  | **x** |  |  |
| **TC5** |  |  |  |  | **x** |  |
| **TC6** |  |  |  |  |  | **x** |