**12.Name:** Create new project

**Goal:** Create new project

**Actor:** User

**Pre-condition:** System is in working state.

**MSS:**

1. Actor click new simulation button.

2. The system creates a new project and the user sees the Project-Grid screen (the system changes it status to initial state).

**Exception:** None

**13.Name**: Load project and statistics

**Goal**: Load a Project

**Actor**: User

**Pre-condition**: System is displaying the application main screen.

**MSS**:

1. User clicks the “Load” button;
2. A file-dialog window will pop-up and user chooses the file which is going to use;
3. User selects a file and clicks “Ok”;
4. System loads the file and displays the Project-Grid screen(the system is in “initial state”);

**Exception (Extension, Alternatives)**:

3 – a) If there is a project running, the user can not choose a new file. It shows a message” The has existed a project ”.

3 – b) User may want to change a file, the user needs to close an existing file first(is not possible to open two files at the same time) and goes to use case 15(Exit Application).

Now user can select a new file.

4 – a) If the system doesn’t have enough permissions to open the file, it displays a message “Not enough permissions to open this file” and the use case ends.

4 – b) If the system can’t parse the file correctly, it displays a message “This file could not be loaded.” and the use case ends.

**Post-condition**: The project-grid screen will be ready for the user.

**14.Name**: Save project and statistics

**Goal**: Save to a file

**Actor**: User

**Pre-condition**: System is displaying project- grid screen. System is in state “initial state”.

**MSS**:

1. User chooses “File-Save” option, on the top left corner;
2. System saves the current grid to a file;

**Exception (Extension, Alternatives):**

2 – a) If the current grid hasn’t been saved before, the system displays a file-dialog where the user needs to choose the folder and the name of the file he wants to save.

2 – b) If the system doesn’t have permissions to save the file, it displays a message “Not enough permissions to save this file” and the use case ends.

**Post-condition**: The file is saved by the system.

**15.Name**: Exit Application

**Goal**: Close a file

**Actor**: User

**Pre-condition**: System is displaying project-grid screen. System is in state “initial state”.

**MSS**:

1. User chooses “File-Close” option, on the top left corner;
2. System asks the user for confirmation;
3. The system exits;

**Exception (Extension, Alternatives):**

2 – a) User clicks ’No’ option, the system will not exit.

2 – b) There are files that have been edited without being saved.

The system asks if you want to save opened files.

User may close file without saving.

2 – c) User may want to save file before close it.

Then user goes to use case 14 (Save project and statistics).

**Post-condition**: The file is closed by the system.

**16.Name**: Go to Main screen

**Goal**: Takes the user back to the main screen

**Actor**: User

**Pre-condition**: System is displaying project-grid screen. System is in state “initial state”.

**MSS**:

1. User chooses “File- main menu” option, on the top left corner;
2. System closes project- grid screen and opens main screen(the system is in “working state”);

**Exception (Extension, Alternatives):**

2 – a) If the user didn’t save the progress, the system will show a message asking if the user wants to leave without saving. The user can choose “Yes” or “No”.

**Post-condition**: Main screen is displayed.

**17.Name**: Undo

**Goal**: Undo a step

**Actor**: User

**Pre-condition**: System is displaying project-grid screen and the user did at least one step (add crossing, change flow, etc.) System is in state “initial state”.

**MSS**:

1. User clicks the “Undo” button;
2. The system shows grid before the user’s last action on the screen;

**Post-condition**: The grid is the way it was before the last step.

**18.Name**: Redo

**Goal**: Redo a step

**Actor**: User

**Pre-condition**: System is displaying project- grid screen and the user did at least one undo action. System is in state “initial state”.

**MSS**:

1. User clicks the “Redo” button;
2. The system shows grid after the user’s last action on the screen;

**Post-condition**: The grid is the way it was after the last undo.

**19.Name**: Reset

**Goal**: Clear the current grid

**Actor**: User

**Pre-condition**: System is displaying project-grid screen. System is in state “initial state”.

**MSS**:

1. User chooses the “File- Reset” option;
2. System displays a message, asking the user to confirm the action;
3. User confirms the action;
4. The system shows the empty grid on the screen;

**Exception (Extension, Alternatives)**:

3 – a) The user clicks in the “No” option, the system display grid the way it was and the use case ends.

**Post-condition**: The grid is empty.