**Name**: Open

**Goal**: Open a Project

**Actor**: User

**Pre-condition**: System is displaying the application main screen and there is a project to be loaded.

**MSS**:

1. User clicks the “Open” 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-traffic simulation screen;

**Exception (Extension, Alternatives)**:

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.

**Name**: Save

**Goal**: Save to a file

**Actor**: User

**Pre-condition**: System is displaying project- grid screen

**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.

**Name**: Exit

**Goal**: Close a file

**Actor**: User

**Pre-condition**: System is displaying project-grid screen

**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.

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

**Name**: Undo

**Goal**: Undo a step

**Actor**: User

**Pre-condition**: System is displaying project-grid screen and the user did at least one step

**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.

**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

**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.

**Name**: Reset

**Goal**: Clear the current grid

**Actor**: User

**Pre-condition**: System is displaying project-grid screen

**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.

**Name**: Go to main screen

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

**Actor**: User

**Pre-condition**: System is displaying project-grid screen

**MSS**:

1. User chooses “File- main menu” option, on the top left corner;
2. System closes project- grid screen and opens main screen;

**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.