# Introduction

The purpose of this test-plan is to see whether all functionalities described in the use-cases are working correctly and whether certain undesired actions affect the program’s workflow. Instead of constant warning pop-up when a certain action is not permitted we focused on preventing the user from creating mistakes as much as possible, meaning certain functions will be disabled when they’re not supposed to be accessed.

We will conduct a small test with a handful of testers and conduct a final reconfiguration before the final acceptance test with the client.

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| No. | Test Name | Purpose | Target on screen | Test Data/Simulation | Expected Result | Actual Result | Outcome and Actions required |
| 10. | Pause Simulation | Pause the simulation played by the system. | Power-grid screen->Pause button. | 1. When simulation is in “Running state”.  2. When simulation is NOT in “Simulation running state”. | 1. The pause button appears on the place of the star button. The user clicks the pause button, the simulation is paused.  The paused button changes to play button again.  2. User will not see the pause button and cannot press it. |  |  |
| 11. | Stop Simulation | Stops the simulation played by the system. | Power-grid screen->Stop button. | 1. When simulation is in “Running state”.  2. When simulation is in “Paused state”.  3. When simulation is in “Initial state”. | 1. User is presses the Stop button .The simulation stops, The system goes to “Initial State”.  2. User is presses the Stop button .The simulation stops, The system goes to “Initial State”.  3. The stop button is disabled. |  |  |
| 12. | Create new project | Creates a new project, which the user can work on. | Main-Screen  ->Create a new project button. | 1. When we start the application.  2. When simulation is in “Running state”/ “Paused state”.  3. When simulation is in “Initial state”. | 1. User is clicks the Create a new project button, a pop-up menu appears, so he/she can choose where to save their file. After browsing the user clicks ok, the project is created, the system is at Project-grid screen and in initial state.  2. User needs to stop the simulation (clicks the stop button).Use point 3.  3. User clicks on the main menu icon. A pop-up menu appears-the user chooses the Create a new project option, a pop-up menu appears, so he/she can choose where to save their file. After browsing the user clicks ok, the project is created, the system is at Project-grid screen and in initial state. |  |  |
| 13. | Load project and statistics | Load a Project. | Main screen->Load button. | 1. When the user starts the application.  2. When simulation is in “Initial state” and saved.  3. When simulation is in “Running state”.  4. When simulation is in “Paused state”. | 1. The file is loaded, the system is at Project-grid screen and in “initial state”.  2. A message will be shown “There has existed a project”.  3. The target button is disabled.  4. A message will be shown “There has existed a project”. |  |  |
| 14. | Save project and statistics | Save to a file. | Power-grid screen->File->save button | 1. When simulation is in “Initial state”.  2. When simulation is in “Running state”.  3. When simulation is in “Paused state”. | 1. The file is automatically saved.  2. User cannot save the project when it is running. The button is disabled.  3. A message shows to ask the user if he’d like to stop the simulation. |  |  |
| 15. | Exit Application | Close a file. | Power-grid screen->File->close button | 1. When simulation is in “Initial state” and saved.  2. When simulation is in “Initial state” and not saved.  3. When simulation is in “Running state”.  4. When simulation is in “Paused state”. | 1. The project is closed.  2. A message shows to notify user that his project has not been saved. Asks user if he’d like to save.  3. The button is disabled.  4. A message shows to ask the user if he’d like to stop the simulation. |  |  |
| 16. | Go to main menu | Check if we can safely redirect the user to the main menu screen without losing data. | File -> Go to “main menu” | 1. When simulation is in “Initial state” and progress is saved.  2. When simulation is in “Initial state” and progress is not saved.  3. When simulation is in “Paused state”.  4. When simulation is in “Running state”. | 1. User is automatically redirected to the “Main Menu” screen.  2. A command prompt pops up to notify user that his project has not been saved. Asks user if he’d like to save.  3. A command prompt pops up asking the user if he’d like to stop the simulation.  4. The target button should be inactive/ inaccessible. |  |  |
| 17. | Undo | Undo the most recent change made on the grid. | Undo button | 1. Perform one change on the grid and undo it.  2. No actions have been performed yet.  3. Perform 1 action then try to undo 2 times.  4. Try undo when simulation is in “Running state”. | 1. When action is performed undo button is activated. When we press it, it deactivates and change has been reverted.  2. Button should be inactive.  3.After the first undo the button should deactivate  4. The button should be inactive/inaccessible. |  |  |
| 18. | Redo | Redoes previously undone change on the grid. | Redo button | 1 .Make a change undo and redo it.  2. Try to redo when nothing has been undone.  3. Undo 1 time and try to redo 2 times.  4. Try to redo when simulation is in “Running state”. | 1. After the redo the change we made is the same.  2. The button should be inactive.  3. After the first redo the button deactivates. The change we have undone is back on the grid.  4. The button should be inactive/inaccessible. |  |  |
| 19. | Reset | Resets the grid to its initial state.(before we start inserting) | Reset button | 1. Make a few changes and reset.  2. Try to reset when nothing was created.  3. Try to reset when simulation is in “Running state”. | 1. The grid reverts back to its initial state/ starting point.(has no crossings)  2. The button should be inactive.  3. The button should be inactive/inaccessible. |  |  |

## Purpose:

Explains what the purpose of the taken test is. In our case we want to check if we can redirect our user to the main menu screen under certain conditions.

## Target on screen:

The actual screen commands the user will interact with.

## Test Data/Simulation:

Test our actions under different kinds of conditions and with different kinds of data to check if we have captured all the exceptions and if we take necessary precautions to prevent the action from crashing.

## Expected Result:

What is the expected result in each different case we ran the test.

## Actual Result:

The actual result that occurred during the test.

## Outcome and actions required:

Compare the Expected results and the actual results to come to a conclusions what kind of actions are to be taken to fix the inaccuracies.