

Informatics Institute of Technology

**5COSC019C.1**

**Object Oriented Programming**

**INDIVIDUAL COURSEWORK**

Name : **Himsara De Costa**

UOW ID : **W2084796**

IIT ID : **20231262**

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# Class Diagram

A diagram of a software company

Description automatically generated with medium confidence

# Sequence Diagram

A screenshot of a document

Description automatically generated

# Test Cases

CLI

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Case ID | Description | Input/Scenario | Expected Output | Actual  Output | Status |
| TC01 | Load configuration from JSON file | Configuration.json exists with valid data | Configuration should load successfully. | Configuration is loaded successfully. | Pass |
| TC02 | Asking user to keep existing amounts or add new amounts | Press 1 in Main menu | System should ask user to enter new amounts or keep existing amounts | System is asking user to enter new amounts or keep existing amounts | Pass |
| TC03 | Keep existing amounts and continue the simulation | Types “yes” | System should run the simulation according to current amounts | System is running the simulation according to current amounts | Pass |
| TC04 | Enter new amounts | Type “no” | System should ask user to enter the new amounts and run the simulation according to that amounts | System is asking user to enter the new amounts and running the simulation according to that amounts | Pass |
| TC04 | Handle invalid user inputs during configuration setup | Provide invalid inputs for total tickets, capacity, etc. | Should prompt the user to re-enter valid values until valid inputs are provided. | Prompts the user to re-enter valid values until valid inputs are provided. | Pass |
| TC05 | Verify stopping simulation before ticket limit is reached | Stop simulation by pressing Enter before tickets are sold. | Simulation should stop successfully. Logs indicate simulation stopped manually. | Simulation stops successfully. Logs indicate simulation stopped manually. | Pass |
| TC06 | Stop the simulation automatically | Program stop when total tickets are finished | Simulation should stop after the tickets finish | Simulation is stopped after the tickets finish | Pass |
| TC07 | Save configuration to JSON and text files | Configuration with valid parameters | Configuration.json should create/update successfully. Logs reflect save operations. | Configuration.json is creating/updating successfully. Logs reflect save operations. | Pass |
| TC08 | Create txt files | Files that have information about configuration amounts and logs | Should create/update the txt files | Creating/updating the txt files | Pass |
| TC09 | Create a log file | Run the program to initialize logger. | Logger should write logs to system.log | Logger writes logs to system.log and displays | Pass |
| TC10 | Exit | Press 2 in main menu | System should stop in terminal | System is stopping in terminal | Pass |

Frontend and Backend

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Case ID | Description | Input/Scenario | Expected Output | Actual  Output | Status |
| TC01 | Backend Frontend connected message | A message shows in green color if it connects | Should show the message | Message is showing | Pass |
| TC02 | Updating the Configuration Form in valid inputs | User input valid values | System should show the successful message if user presses Update configuration button after entering valid amount | System shows the successful message if user press Update configuration button after entering valid amount | Pass |
| TC03 | Database update | Enter the inputs in configuration form | Inputs should store at MySQL database | Inputs storing at MySQL database | Pass |
| TC03 | Invalid amounts in configuration form | User input invalid values | System should accept only integers | System accepts only integers | Pass |
| TC04 | Start Button | Press Start button | System should show a message that says system was started and user can see the simulation in the front end | System shows a message that says system was started and user can see the simulation in the front end | Pass |
| TC05 | Stop button | Press Stop button | System should show a message that says system was stopped and user can see the simulation stopped in the front end and should see a summary in backend | System shows a message that says system was stopped and user can see the simulation stopped in the front end and see a summary in backend | Pass |
| TC06 | Reset Button | Press Reset Button |  |  |  |
| TC07 | Real-time Updates | Logs display in front end | Users should receive synchronized updates, UI reflects changes immediately, no message delays | Users receive synchronized updates, UI reflects changes immediately, no message delays | Pass |
| TC08 | Summary in backend | Show summary in backend | When system stops backend should show summary details | When system stops backend shows summary details | Pass |