

Requirements Traceability Matrix

ID	Requirement	Related Use Case	Implemented by	Tested by	Fulfilled by Design Element
1	Simulations can be setup and saved to run by an administrator	Prepare Simulation (UC1)	mainwindow and Simulation_Setup	Use the setup tab to set the number of elevators, floors and users. Then continue creating elevator requests in the setup tab. They will get saved upon pressing the buttons "Save" and "Add Event" respectively.	Simulation_Setup, Execution_Control
2	The system has at least 1 elevator with full functionality and 2 floors to simulate with	N/A	mainwindow and Simulation_Setup	Use the setup tab to set the number of elevators floors and users	Simulation_Setup
3	The elevators services all requests and notifies users of arrival	Simulate Change Floor (UC3)	Simulation_Setup and Elevator	After performing the test in Requirement 2, use the add event menu in the setup tab to create elevator requests. Then head to the simulation tab and press the Start button.	Floor_Sensor, Elevator, Buttons
4	Elevator Display and Audio system	N/A	mainwindow	Simulated through the console in qt	Elevator
5	Simulation can access the elevators help request services	Simulate Help Request (UC4)	mainwindow	While simulation is running, press the "Help" button in the simulation tab.	Help_Button, Help_Request Event
6	Simulation can access door sensor and door functions	Simulate Door Hold (UC5)	mainwindow	While simulation is running, press the "Door Hold" button in the simulation tab.	Door_Sensor, Hold_Door Event
7	Simulation	Simulate	mainwindow	While simulation is	Fire Event

	can receive fire signal	Signal Fire (UC6)		running, press the “Fire” button in the simulation tab.	
8	Simulation can access weight sensor functions	Simulate Overload (UC7)	mainwindow	While simulation is running, press the “Overload” button in the simulation tab.	Weight_Sensor, Overload Event
9	Simulation can simulate a power outage situation	Simulate Power Outage (UC8)	mainwindow	While simulation is running, press the “Power Outage” button in the simulation tab.	Power_Outage event