

ID	Requirement	Related Use Case	Fulfilled By	Test	Description
1	The application interface contains button, display	UC1(Normal handling of an elevator for a passenger)	Floor, Floorbutton, Displayaudio	Run the app in the VM box to observe the ui.	The application interface has elevator buttons and a display for each floor it gets to and the signal it receives
2.	The elevator contains up and down marked buttons	UC1(Normal handling of an elevator for a passenger)	Floor	Run the app, and allow user to go a floor up and down the elevator	The app has a character marked u and d. For when the user wants to go up and down the elevator
3.	Elevator opens for a fixed time of 10secs, rings the bell then closes	UC1(Normal handling of an elevator for a passenger)	Door	Simulate the app for when the elevator door opens	The elevator door opens for a fixed time (10 seconds) allowing people to exit or board
4.	App allows user to enter and exit an elevator	UC1(Normal handling of an elevator for a passenger)	Elevator	Simulate the app for when passenger ≥ 1 and when passenger = 0	When passenger is ≥ 1 , it means user is in the elevator. When it is 0. It means user has exited the elevator.
5.	Elevator has an overload level range in the level [0,20] passengers	N/A	Elevator	Simulate the app for when the passengers are greater than 20	When the passengers are greater than 20. An overload alarm signal should be received

6.	Elevator has a fire alarm signal	UC3(Control System receives a “Fire” alarm signal)	Signal	Simulate the app for when the fire alarm signal is set to true	When the elevator receives a fire alarm signal. It should set the Boolean to true and an audio and text message should be received
7.	Elevator has an overload alarm signal	UC4(Overload alarm signal)	Signal	Simulate the app for when the overload alarm signal is set to true	When the elevator receives an overload alarm signal. It should set the Boolean to true and an audio and text message should be received
8.	Elevator has a help alarm signal button	UC1(Passenger presses the help button)	Floorbutton	Simulate the app for when a user presses the help button. Help alarm signal is set to true	When the help button is pressed. It should set the Boolean to true and a 911 call should be placed
9.	Device becomes non-functional when it receives a power out alarm signal	UC 5(PowerOut alarm signal))	Signal	Simulate the app for when the power out alarm signal is set to true	When the elevator receives a power out alarm signal. Device should first become non-functional then a backup power should kick

					in moving the passengers to a safe floor
10.	A saved record saves the number of doors, number of passengers, time period when an elevator opens to when it closes	N/A	Door, Passenger	N/A	Door and Passenger class has attributes for time period, number of passengers, doors as they are created. These classes will store and retrieve this records as required when simulated.
11.	Two allocation strategy	N/A	ECS	N/A	When user calls for an elevator. If Ecs_id == 1. Call strat_A else call strat_B
12.	The application doesn't contain any memory leak	N/A	N/A	Run valgrind to check for memory leaks	All dynamically allocated memory that the program was designed to allocate is deleted in the appropriate class destructor.