UML DIAGRAM

I have designed a UML diagram based on my Normal handling use case and Exception handling use cases

The UML diagram is based on the simulation of an elevator with different classes. I have a building class which goes to my floor class. Floor class methods will be reused by my Elevator class. The state class sets the exceptional handling scenario(firealarm, overload, power, help, normal). Since, it is a header file, and an enum. Any class can call it to set the state of my elevator. All classes have a 1 and possibly more relationship.

SEQUENCE DIAGRAM

NORMAL HANDLING

If a user calls for an elevator. I get the currentFloor number. Then use the ECS to call the elevator with an idle state. Then the state of the elevator changes to normal and takes the passenger to their desired floor. The door should open and then bell will ring

EXCEPTIONAL HANDLING

HELP-SIGNAL

When the help button is pressed. The state of the elevator changes to “help”. Then, a 911 call should be placed

LIGHT-INTERRUPTED

When the door is closing and an obstacle interrupts it, the door should reopen and a warning message should be sent

ECS (Allocation Strategy)

When user Calls for an elevator. If elevator is in an idle state it sends it, else it sends elevator_2

FIRE-ALARM SIGNAL

When the elevator receives a fire alarm signal. The state of the elevator changes to “fire”. Then, an audio and text message should be received, and the elevator should move to a safe floor

OVERLOAD-ALARM SIGNAL

When the elevator receives a overload signal. The state of the elevator changes to “overload”. Then, the door of the elevator should open

POWER-OUT ALARM SIGNAL

When the elevator receives a power out alarm signal. The state of the elevator changes to “powerOut”. Then, an audio and text message should be received, and the elevator should move to a safe floor