

Use Case: Elevator Request

Primary Actor: Passenger

Scope: Elevator Control System

Level: User goal

Preconditions: There is no elevator on the current floor.

Success Scenario:

- 1、 Passenger selects the “Up” or “Down” button on the floor.
- 2、 The selected button illuminates and remains illuminated until an elevator arrives at the current floor.
- 3、 The bell rings and the door opens for 10 seconds.
- 4、 After 10 seconds, the bell rings again and the door closes.

Extensions:

- 1、 Door keeps open.
 - a) Passenger presses the “Open door” button in the elevator.
 - b) The door remains open beyond its default period.
- 2、 Door closes early.
 - a) Passengers press the “Close door” button in the elevator.
 - b) The door can be closed prematurely.

Use Case: Elevator Move To The Specified Floor

Primary Actor: Passenger, Elevator

Scope: Elevator Control System

Level: User goal

Preconditions: Passenger enters the elevator

Success Scenario:

- 1、 Passengers choose a destination floor in the elevator.
- 2、 The Elevator Control System controls the elevator to start moving.
- 3、 The display shows the current floor of the elevator.
- 4、 The Elevator stopped at the destination floor.
- 5、 The bell rings and the door opens for 10 seconds.

User Case: Help Request

Primary Actor: Passenger

Scope: Elevator Control System

Level: User goal

Preconditions: Passenger pressed “Help” button in the elevator

Steps:

- 1、 The Elevator Control System receives a help signal from the elevator.
- 2、 The passenger is connected to building safety service through a voice connection.
- 3、 If there is no response from building safety within 5 seconds or if there is no response from the passenger.
- 4、 A 911 emergency call is placed.

Use Case: Door obstacles

Primary Action: Passenger

Scope: Passenger, Door

Level: User goal

Preconditions: The door is open

Steps:

- 1、 The light sensor is interrupted when the door is closed.
 - 2、 The control system stops the door from closing and opens it.
- a) If this occurs repeatedly over a short period of time.
- b) A warning is sounded over the audio system and a text message is displayed.

Use Case: Fire

Primary Action: Passenger

Scope: Passenger

Level: User goal

Preconditions: The Elevator Control System receives a "Fire" alarm signal.

Steps:

- 1、 The Elevator Control System commands all elevators to move to a safe floor.
- 2、 An audio and a text message are presented once the safe floor is reached.

Use Case: Overload

Primary Action: Passenger

Scope: Passenger, Elevator

Level: User goal

Steps:

- 1、 The Elevator Control System receives the "Overload" alarm signal from an elevator.
- 2、 The elevator does not move and an audio and a text message are present.
- 3、 After the load is reduced, attempt to move again.

Use Case: Power Out

Primary Action: Passenger

Scope: Passenger

Level: User goal

Steps:

- 1、 The Elevator Control System receives a "Power Out" alarm signal.
- 2、 Backup power start.
- 3、 All elevators moved to a safe floor and passengers are asked to disembark.
- 4、 An audio and a text message are presented.