Alzheimer, Scott R
Noreikis, Christopher R
Pickett, Harrison A IV

Use Case Name: UC1 - Move Passengers
Scope: Elevator
Level: User Goal
Primary Actor: Passenger
Stakeholders and Interests:

- Passenger: Call elevator to current floor; move from one floor to another; stop the elevator
- Maintenance Worker: Call elevator to current floor; Move from one floor to another; Be able to stop the elevator

Preconditions:

- None

Post Conditions:

- Passenger is relocated to desired floor

Actor Action	**System Responsibility**
Main Success Scenario:	
1. Actor presses button to call elevator	
	2. Elevator moves to floor
	3. Elevator opens door
4. Person gets on elevator	
	5. Elevator closes door
6. Person chooses floor	
	7. Elevator moves to floor
	8. Elevator opens doors
9. Person gets off elevator	
	10. Elevator closes doors
Alternative Flows:	
Passenger presses stop:	
1. At any time, passenger pushes stop button	
	2. Elevator follows UCX – Press Stop
	3. Elevator resumes operation per UC1 – Moving Passengers
Elevator receives alarm:	
	1. Anytime elevator receives alarm signal
	2. Elevator follows UC3 - Alarm Code
3. Passenger exits at the nearest floor	
Elevator enters maintenance mode:	
	1. Anytime elevator gets maintenance signal
	2. Elevator follows UC2 - Maintenance Mode
3. Passenger exits at desired floor	

Use Case Name: UC2- Maintenance Mode
Scope: Elevator
Level: Maintenance Worker Goal
Primary Actor: Maintenance Worker
Stakeholders and Interests:

- Maintenance Worker: Maintenance worker wants to be able to perform safe uninterrupted scheduled / unscheduled maintenance on elevator
- Passenger: Passenger wants maintenance to complete quickly so they can ride elevator

Preconditions:

- None

Post Conditions:

- Elevator is on first floor
- Elevator is ready to accept requests

Actor Action	**System Responsibility**
Main Success Scenario:	
1. Maintenance Worker validates system	
2. Maintenance Worker requests maintenance mode	
	3. Elevator updates status to maintenance mode causing it to reject new requests
	4. Elevator processes all current requests as per UC1 - Move Passengers
	5. Elevator moves to the first floor
	6. Elevator opens doors
7. Maintenance Worker performs required maintenance action	
8. Maintenance Worker requests exit maintenance mode	
	9. Elevator closes doors
	10. Elevator proceeds as per UC1 - Move Passengers
Alternative Flows:	
At any time Elevator is immobile:	
	1. Elevator hangs at UC2 step 4

Use Case Name: UC3- Alarm Signal Received
Scope: Elevator
Level: Alarm System Goal
Primary Actor: Alarm System
Stakeholders and Interests:

- Passengers: Exit building safely
- Emergency Personnel: Wish elevator to be cleared as fast as possible

Preconditions:

- None

Post Conditions:

- Elevator is on first floor
- Elevator is ready to accept requests

Actor Action	System Responsibility
Main Success Scenario:	
1. Alarm sends alarm signal to Elevator	
	2. Elevator updates alarm status
	3. Elevator clears all pending requests
	4. Elevator proceeds to nearest floor
	5. Elevator opens doors
6. Alarm sends all-clear signal to Elevator	
	7. Elevator closes doors
	8. Elevator proceeds to first floor uninterrupted
	9. Elevator proceeds as per UC1 – Move Passengers
Alternative Flows:	
At any time Elevator is immobile:	
	1. Elevator hangs at UC3 step 4

Use Case Name: UC4 - Call Elevator to Location
Scope: Elevator
Level: Passenger Goal
Primary Actor: Passenger
Stakeholders and Interests:
- Passengers: Be able to call an elevator to a specific location

Preconditions:
- None

Post Conditions:
- Elevator is on the last requested floor
- Elevator is ready to proceed to next request

Actor Action	**System Responsibility**
Main Success Scenario:	
1. Passenger presses call elevator button	
	2. Elevator records floor request
	3. Elevator services requests in order of priority
	4. Elevator arrives at requested floor
	5. Elevator opens doors
6. Passenger enters elevator	
	7. Elevator closes doors
Alternative Flows:	
At any time Elevator is immobile:	
	1. Elevator hangs at UC4 step 2
Elevator is in Maintenance Mode:	
	1. Elevator ignores request
Elevator is in Alarm Mode:	
	1. Elevator ignores request

Use Case Name: UC5 - Drop a Passenger at a Location
Scope: Elevator
Level: Passenger Goal
Primary Actor: Passenger, Elevator
Stakeholders and Interests:
- Passenger: Arrive at desired floor safely and quickly
- Elevator: Drop passengers off quickly and safely

Preconditions:
- Elevator must have a passenger with a desired location in the queue

Post Conditions:
- Passenger is on desired floor
- Elevator is ready to proceed to next request

Actor Action	System Responsibility
Main Success Scenario:	
1. Passenger presses button of the desired floor	
	2. Elevator records floor request
	3. Elevator services requests in order of priority
	4. Elevator arrives at requested floor
	5. Elevator opens doors
6. Passenger exits elevator	
	7. Elevator closes doors
Alternative Flows:	
At any time Elevator is immobile:	
	1. Elevator hangs at UC5 - step 2
Stop Request:	
	1. Elevator receives stop request
	2. Elevator proceeds as per UC6 - Stop Request
Elevator receives an Alarm Code:	
	1. Elevator receives alarm call while in route to floor
	2. Elevator proceeds per UC3 - Alarm Code

Use Case Name: UC6 - Stop Request
Scope: Elevator
Level: Passenger Goal
Primary Actor: Passenger
Stakeholders and Interests:
- Passenger: Delay Elevator's progress

Preconditions:
- Elevator must have a passenger

Post Conditions:
- Elevator resumes servicing new and existing requests

Actor Action	**System Responsibility**
Main Success Scenario:	
1. At any time, Passenger presses Stop Button	
	2. Elevator halts immediately
	3. Elevator records any new requests
4. Passenger presses Stop Button	
	5. Elevator proceeds per UC1 - Move Passengers
Alternative Flows:	
Elevator receives an Alarm Code:	
	1. Elevator receives alarm call while in route to floor
	2. Elevator proceeds per UC3 - Alarm Code