

Team1

Elevator System Service Specification

Version 0.1

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# Introduction

Goal of system is :  
Concurrency: design an elevator simulator and control mechanism. Verify that is satisfies certain properties using model checking.

1. Hardware Access
2. General Rules
3. Scheduling

Input: Number of floors, Number of Elevator units

Output: GUI created by ElevatorSystem.jar

Usage:

Java –jar Elevatorstsem.jar [number of Floors] [Number of Elevator Units] [Scheduler]

Manual: Elevator Simulator Manual.pdf

# Services offered

1. Access for users
2. The user can use the system to specify the number of floors, and number of Elevator units. The user will be able to specify the number of elevators (n) and the number of floors (m) through which the elevators will move.
3. The floors will be numbered from 0 to m-1, from bottom to top. The elevators will be numbered from 0 to n-1, from left to right. The number of Elevator units (n) >0 and <=100. The number of floors (m) >0 and <=500.
4. You can choose schedule; system provides default settings if nothing is specified.
5. The animation generated by the simulator will show elevators moving up and down, stopping at floors, and opening and closing their doors. The animation will also display the state of all buttons. The user of the simulator system will be able to “push” any button (internal or floor) by using the mouse to click on the image of the button.
6. Requesting Elevator: Elevator unit can be requested by user, User must specify direction he wants to travel, only then scheduler schedules Elevator unit for service.
7. Movement of Elevator: this falls under system control, User any sense won’t be able to change it anyway, unless he formally requests developers to change the underlying system’s hardware configuration.
8. Using Interfaces:
9. Buttons: This includes all the buttons available in UI for user to use
10. Up
11. Down
12. Read only Fields
13. Selected Elevator Unit Number
14. Current Floor Number
15. Last Requested Floor Number
16. Others
17. Enter Floor Number Field.
18. Floor You want to go

1. General Rules
2. Elevator can move in one and only one direction, unless user wants to modify this mechanism by adding own logic for scheduling.
3. Floor 0 has only an up button and floor m-1 has only a down button.
4. Elevator system will report,

Request Number,  
Time till elevator unit arrives requested floor [] in sec,

Time till elevator unit reaches destination floor [] in sec,

Number of floors unit stopped before reaching requested floor,

Number of floors unit stopped before reaching destination floor,

1. Ease of Use is defined as usability and how user can use an elevator system with minimum amount of training time. This includes availability of User manual, valid help procedure.
2. Test-Cases availability: Elevator System must provide a demo run, where system works as expected without any interaction from user.
3. No critical data is used by an elevator system, so elevator system can provide log, it optional unless user explicitly requests for it.

Log will include, all output {of format 2.c} since system invoked and till it is explicitly killed.

1. Scheduling

# Fees, payments, and service terms

[List all fees, payments, and service terms that relate to this service offering.]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Total Service Payment | Fees | Service Terms | Payment Schedule | Primary Contact at Team1 |
| Own Schedule | 0 | You schedule Elevator units to own accordance | - | - |
| Default Schedules | 0 | Free to use any schedules that we provide | Paid | - |
| Changing implementation or modification request | 10/change | Request changes in terms of formal document | After service has been provided | karma@udel.edu |

# Accurate information

[Provide detailed standards by which your company compiles information about and for your customer.]

# Privacy statement

[Specify the privacy policies your company follows and the standard by which you expect your customer to operate.]

# Ownership

[Provide a statement that details what your company owns and what the customer owns after the service is delivered.]

# Disclaimer

[Use this section to limit your liability for the services and product(s) you provided. This section covers your business, product use, and service agreement.

List the standards by which your company offers its services and whether your company or your customer reserves the right to alter the agreement. Also state if changes are allowed, and if so, when changes are allowed and what must take place to facilitate those changes.]

# Indemnity

[In this section include statements that release your company from harm. Provide your company's statement of security against loss, damage, or injury.]