Requirement Analysis of Simulated Elevator

Catalogue

1. Summary

This document is the foundation of planning, general design and detailed design of Simulated Elevator

1.1 **User Synopsis**: student and software testers.
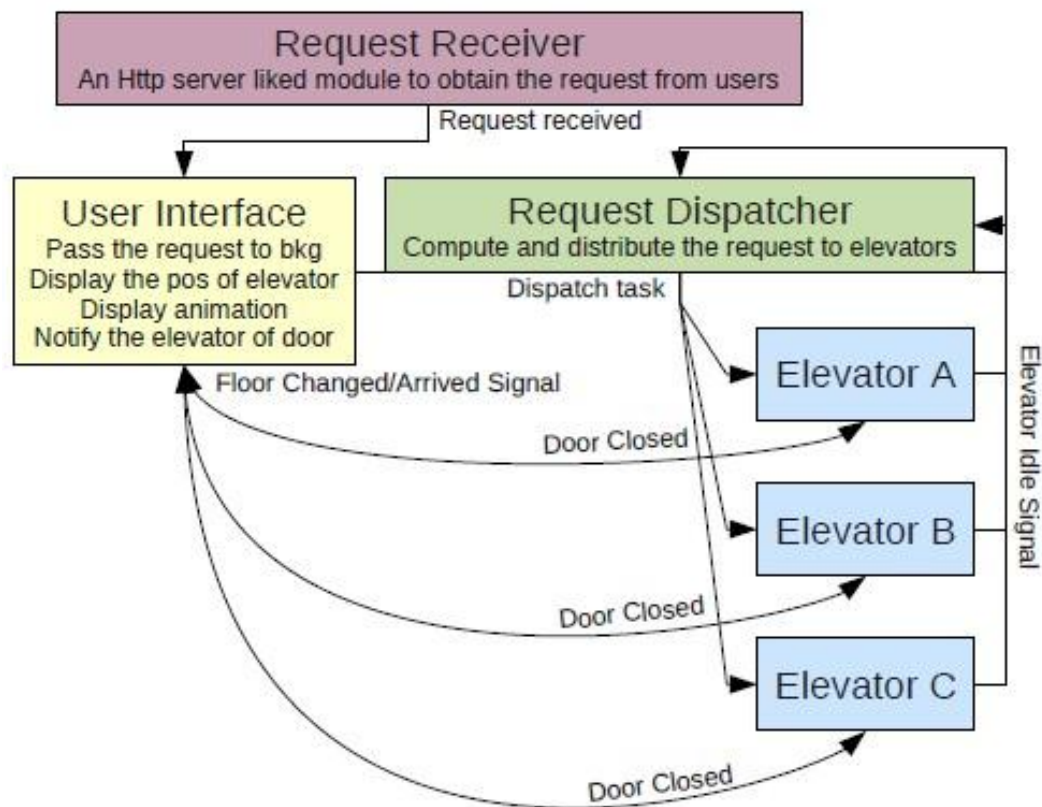
1.2 **Purpose and Aim of Project:**

Implementing an object oriented application architecture for the simulated procedure of an elevator or a group of several elevators.

1.3 **Related Documents:**

Requirement specification, the document written by Chen Jie.

2. <u>System in Target</u>

2.1 Busywork Flow

3. Specific Requirements Analysis

3.1 Functional requirement
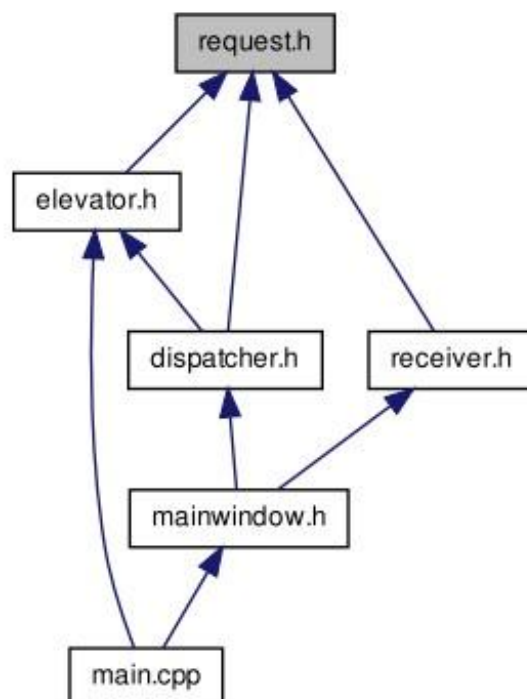
a) Quotation

This application's name is Simulated Elevator, it implement an object oriented application architecture for the simulated procedure of an elevator or a group of several elevators. The dominant control of the app is UI, which is designed by QT4

b) Input

The app read the request of user by a simple HTTP server modeled class. Thus, all the devices including laptop and smart-phones in the same network can make easy control of the request.

c) Information processing

The request of users will be processed by the internal algorithms, which are divided into six modules.As shown in figure:

d) Output

The operation demo of elevators is presented by UI. The UI can show the up–or- down of elevators, the open –or- close of doors and the running of the passengers.

3.2   Interface requirement

The principle of interface requirements: convenience, succinct, accordance, artistic.

    i.   The input equipment: keyboard

   ii.   The output equipment: displayer

  iii.   The style of output: graphical interface

  iv.   Output format : display layout

3.3   Interface models

a) The interface of user

The users make use of the command interface to control the application. The command is http://<Hostname>:8369/<FloorFrom>-<FloorTo> .User only need to input the usage into the web browser.

b) Communication interface

Local network protocol

3.4   Performance Requirements

a) Time request :

    i.   Launch Time: it only need several second to launch the app.it depend on PC.

   ii.   Update request : 2s.

b) Space request:

    i.   Process the count of passengers: in theory, the count is infinite.

   ii.   Support the count of RTU: one.

3.5 Other Requirement of Target System

a) **Security** :   safety.

b) **Dependability**: the application is processing on win7, compatibility is better, the operation is stable.

c) **Agility**: the application is intelligent and fast.