**A building with 3 floors(height? Speed? Accelerate?)**

**2 elevators**

**Interfaces**

**-Button panels and display inside each elevator**

-should have the display window for showing the current floor

-should have the floor numbers:1,2,3 for user to select

-floor number can’t be activated when the actual staying floor number = number being pressed

-should have the open and close button

-can add additional function: emergency caller, cancellation, etc.

**-button panels and display on each floor**

-should have the down and up button (only down on third floor and only up on the first floor)

-should display the current floor of the elevator

-cancellation?

**Sensors**

**-Door open, door closed**

-open

-should be the button

-people detection (additional)

-close

-should be the button

-automatic close action

**-Elevator arrive at each floor**

-should not send the arriving signal before the limit time(need to be set)

**Controller actions**

**-Open door**

-after receive the arriving signal + the limit time(auto)

-stay at the open state if receive the open signal(hand, duration need to be set)

**-close door**

-there’s nobody stand in the door + the limit time(auto)

-there’s nobody stand in the door + close signal(hand)

**-move up**

-can’t be accessible to user

-activate automatically by software

**-move down**

-same as up

**-stop**

-power off (hazards need to be solved)

-arriving signal

Coordinate requirement

Automatically choose the nearest elevator to run

Etc.

Safe requirement

Door can open only when the elevator is on the integer floor number

Won’t move up at 3, and go down at 1

Close when no one stand in the door

Etc.