

# Final Project Announcement



## **Project Logistics**

- 3 students per team (1,2,3)
- 3 projects (a,b,c)
- 3 jobs
  - Requirement (R)
  - Development (D)
  - Validation (V)
- Student 1: a.R+b.D+c.V
- Student 2: b.R+c.D+a.V
- Student 3: c.R+a.D+b.V



# **Projects**

1. Elevator

- 2. Huarong Path (华容道)
- 3. Painkiller injection system



#### Elevator

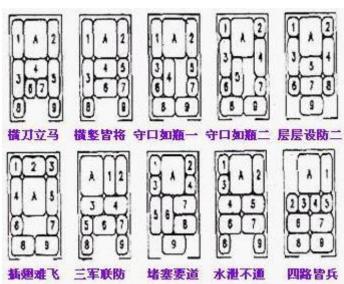
- A building with 3 floors
- 2 elevators (should be coordinated)
- Interfaces
  - Button panels and display inside each elevator
  - Button panels and display on each floor
- Sensors
  - Door open, door closed
  - Elevator arrive at each floor
- Controller actions
  - Open door, close door, move up, move down, stop



## **Huarong Path**

- Interface
  - Visualize current state
- Initial state
  - Standard
  - Random (Use UPPAAL to find solution)







## Painkiller Injection System

- Patients need painkiller after surgery
- There are limits on
  - The total amount per day 3ml
  - Amount in a short period 1ml/hr
- Baseline
  - -0.01-0.1ml/min
- Bolus
  - -0.2-0.5ml/shot
- Interface
  - For physician
  - Patient button



### Requirement

- Requirement document
- UML diagrams
  - Collaborate with development guy/gal
- Model of system environment for validation
  - Collaborate with validation guy/gal
- Traceability report
  - Collaborate with both development and validation
  - Focus on requirement
- User Manual



### Development

- Detailed UML diagrams reflecting actual design
  - Collaborate with requirement guy/gal
- Implementation of the design
- Traceability report
  - Collaborate with both requirement and validation
  - Focus on specification, model translation and code



#### Validation

- Validation planning and execution
- Risk Management
- Testing
- Model checking
- Traceability
  - Collaborate with other two guys/gals
  - Focus on test case, models in model checking



#### Job Allocation

- Finish job allocation at the following link by Fri April 3rd
  - https://shimo.im/sheets/ckjdGXtjYQQQKXhq/MODOC

Name1(1R2D3V) Name 2(2R3D1V) Name 3(3R1D2V)

• Changes in team composition and job allocation must be formally announced to the instructor team via email

CS132: Software Engineering



### Group meetings

- Weekly meetings (Required)
- Meeting report for each project
  - The requirement guy/gal for each project is the organizer of the meeting.
  - For each group member, summarize works done in the previous week
  - Summary of the meeting
  - For each group member, propose action items for the next week
  - Due every Fri at the end of day, starting next week
- This is an important traceability document
- Please be specific
  - "continue working on project" does not work