

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

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