Team Projects

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Overview of Team Projects

- ✧ Why do we need team projects for a software engineering class?
  - To learn and exercise how to communicate with other developers
  - To learn and exercise how to develop a software from requirement analysis to verification & validation

- ✧ What will we do?
  - Develop a (simple) software as team
  - Write documents as well as code

- ✧ Due to the time limit, we will iterate software development cycle only once
  - But we do not adopt the waterfall model
  - You can modify the output of the earlier stage's output

Project 0: Make a team

✧ You can make a team with who you want

✧ Each team should consist of 5±1 students

✧ Students who are not involved in a team by 9/24 (Sun) will be involved in an arbitrary team

✧ Submit your team information through e-mail (yunhokim@hanyang.ac.kr) by (9/24 Sun)

Project 1: Project Proposal

- Each team prepares a proposal document up to 5 pages
  - Excluding a cover page
- The proposal should include, but not be limited to
  - Introduction
  - Objectives of your software to develop
  - Target customers
  - Features
  - Tools & Resources to use
  - Challenge
- **Deadline: 10/6 (Fri)**

Project 2: Software Requirements Specification (SRS)

- ✧ Each team elicit, specify requirements of their system and submit the Software Requirements Specification (SRS) document
  - ▪ The specification should be understandable to other engineers and developers.
  - ▪ Use of UML diagrams, such as Use-case, Class, Sequence diagrams

- ✧ SRS must not exceed 30 pages
- ✧ Each team will evaluate the other teams’ SRS documents and writes an evaluation report of the given SRS documents

- ✧ **Deadline: 10/20 (Fri)**

Project 3: Software Design Document (SDD)

✧ Each team conducts software design based on the SRS

- Your SDD contains an architecture of the software system and a description of how requirements can be implemented
- The details will be discussed in class

✧ You can change SRS in this stage

✧ SDD must not exceed 50 pages

✧ Each team will also evaluate the other teams' SDD documents and write an evaluation report of the given SDD documents

✧ **Deadline: 11/10 (Fri)**

디자인이 요구사항을 얼마나 반영했는가

- You may need to start your implementation early because you will not have enough time for Project 4

Project 4: Implementation & Testing

- ✧ Each team writes an implementation and test plan based on SRS and SDD
  - ▪ You have to write code, test plans, and test cases
- ✧ What should you submit by the deadline?
  - ▪ Implementation
  - ▪ User manual
    - It should include how to install and use your software
  - ▪ Test plan document
  - ▪ (If necessary) Updated SRS and SDD
- ✧ Also, you need to demonstrate your software
- ✧ **Deadline: 12/1 (Fri)**

Project 4: Implementation & Testing

✧ What should you include in your test plan documents?

- You can think the test plan document as a checklist for your requirements
- For each requirement, you need to write at least
  - Test scenario
    - Both of normal case and exceptional case
  - Expected output
  - Actual output

✧ Unit testing is optional due to the lack of time

- even though unit testing is important and mandatory in practice
- If you perform unit testing and report reasonable code coverage (e.g., more than 70% of line, statement, or branch coverage), you will get extra credits

Project 4: Implementation & Testing

✧ You need to demonstrate your software to me

- ▪ Each group will have a demo session
  - You need to demonstrate your software
  - After that, I will ask questions and some operations

✧ Demo week will be 12/4 ~ 12/10

Project Schedule Milestones

- ✧ Project 0 due: 9/24 (Sun)
- ✧ Project 1 due: 10/6 (Fri)
- ✧ Project 2 due: 10/20 (Fri)
- ✧ Project 3 due: 11/10 (Fri)
- ✧ Project 4 due: 12/1 (Fri)