Title
Software Engineering

Lecture Topics Emphasized
Software Engineering

Introduction
In this lab, you will gain experience writing some documentation for software project, using the software engineering knowledge you gained from the lecture. After going through the steps of documenting the project, you will then implement it.

Description
Following the waterfall method of software development, there are a number of documents that will be written. Since this is a lab, we will consolidate all of these into a single document, but you will have separate parts of the document to represent each part in the software engineering model.

To give you some direction on the project, I am providing you with the concept document. You then need to write up the high-level requirements, technical specifications, detailed design document, testing document, and deployment document. This should take you most of the time allotted for lab, but if you still have more time, you can implement the project based on your documents.

The important topic I hope you gain from this lab is figuring out what belongs in each document. For example, there should not be anything related to language or platform included in the high-level requirements or technical specifications. Those are design decisions, and should not be included until the detailed design. If you have questions, do not hesitate to ask.

Concept
I would like to develop an application that allows students to enter their class schedule into the program and have it generate a table showing the times each day he has class. It would be great if this could be a web application.

Here are the documents you need to complete:
1) High-Level Requirements
2) Technical Specifications
3) Detailed Design
4) Testing
5) Deployment
Please refer to the *Final Project Description* under the *Assignments* page on the course website for the specific requirements of each document.

**Grading Criteria & Check-off Questions**

Labs are graded based on your understanding of the course material. To receive full credit, you will need to 1) complete the lab following the instructions above AND 2) show your understanding of the lab material by answering questions upon check-off.

If there is a discrepancy between your understanding of the material and your implementation (i.e. if your code is someone else’s work), you will receive a grade of 0 for the lab. Please note, it is the professor’s discretion to report the incident to SJACS.

Instructors, to ensure consistency across all lab sections, please strictly stick to the following criteria:

1) **High-Level Requirements**
   a. 0.1% - High-level All requirements for project are included without technical details
   b. 0.03% - Formatted professionally
   c. 0.03% - No grammatical mistakes

2) **Technical Specifications**
   a. 0.05% - All tasks from High-Level Requirements included
   b. 0.05% - Tasks contain descriptions that are sufficient for design phase even if designer was unfamiliar with application
   c. 0.03% - Formatted professionally
   d. 0.03% - No grammatical mistakes

3) **Detailed Design**
   a. 0.03% All of the specifications in the Technical Specifications document are designed out
   b. 0.03% GUI mockup is provided in some manner
   c. 0.03% Database schema provided
   d. 0.03% Hardware and software requirements provided
   e. 0.03% Class diagram and/or inheritance hierarchy provided
   f. 0.01% Document is formatted professionally and has no grammatical mistakes

4) **Testing**
   a. 0.1% Test cases that cover all of the functionality in the program are included, with inputs and expected outputs
   b. 0.03% Document is professionally formatted
   c. 0.03% Document has no grammatical mistakes
5) Deployment
   a. 0.13% Step-by-step instructions seem complete for getting the application running in a different environment
      i. Deduct 0.03% for each missing step
   b. 0.03% Formatted professionally with no grammatical mistakes
6) Select one thing from each document, and ask the student to explain what is the rationale behind their design decisions/specifications.
   a. Deduct 0.05% for each unjustified decision/specification – BOGUS ANSWERS DO NOT COUNT
   b. If the student has more than two unjustified decision/specification, check if the student’s work is original. Report suspicious work to Prof. Miller.