

San José State University  
Department of Computer Engineering

CMPE 280

Section 4

# Web UI Design and Development

Spring 2018

Instructor: Ron Mak

## Assignment #1

**Assigned:** Thursday, February 1

**Due:** Friday, February 9 at 11:59 pm

**Team assignment, 100 points max**

### Functional specification and prototype

Write the first draft of your team project's **functional specification** and create an early **prototype**. For this assignment, your functional specification should include functional requirements, nonfunctional requirements, and use cases for your web application.

**Part 1:** Your functional specification must have the following sections:

1. Product name
2. Problem statement
3. Product objectives
4. Functional requirements
5. Nonfunctional requirements
6. Use cases

For this assignment, include at least **six functional requirements** and **four nonfunctional requirements**. Include a **UML use case diagram** that contains **six use cases** and **at least two actors**. Pick *three* of the use cases and write a **use case description** for each one. You may use this Microsoft Word template to write your use case descriptions:

<http://www.cs.sjsu.edu/~mak/CMPE280/assignments/1/UseCaseForm.docx>

**Part 2:** Choose two of your use cases and create a prototype using node.js and Express on the server side and HTML on the client side.

## Writing quality

A functional specification must be understandable by users, clients, developers, project managers, and others. It's part of the informal contract between the product stakeholders and the developers. It should not contain implementation details. Here are some formal rubrics for writing a report to a high standard:

<http://www.cs.sjsu.edu/~mak/CMPE280/assignments/1/FormalReportRubrics.pdf>

## What to turn in

There should be one submission per team. Your functional specification can be a single file or multiple files. Create a single zip file containing the functional specification and the entire directory structure of your prototype application, except do not include the `node_modules` subfolder). Name the zip file after your team. Example:

**SuperCoders.zip**

Submit to Canvas: **Assignment #1**

## Rubric

Your functional specification will be graded according to these criteria:

Criteria	Maximum points
<b>Functional specification</b>	<b>50</b>
• Product name	• 2
• Problem statement	• 2
• Product objectives	• 2
• Six functional requirements	• 12
• Four nonfunctional requirements	• 8
• Use case diagram with six use cases and two actors	• 6
• Three use case descriptions	• 18
<b>Prototype (2 use cases)</b>	<b>50</b>
• Client-side HTML code	• 20
• Server-side node.js and Express code	• 30