San José State University
Department of Computer Engineering

CMPE 135
Object-Oriented Analysis and Design

Fall 2018
Instructor: Ron Mak

Assignment #1

Assigned: Tuesday, August 28
Due: Wednesday, September 5 at 11:59 pm
Team assignment, 100 points max

Functional Specification

Write a Functional Specification for a Rock-Paper-Scissors game program where a human player plays against the computer. Your specification should include functional requirements, nonfunctional requirements, and use cases for your game program.

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**. You can let the computer be a separate actor, even though in reality, your computer's choice logic may be incorporated internally in your program.

Pick *three* of your use cases and write a **use case description** for each one. Use this Microsoft Word template to write your use case descriptions:
http://www.cs.sjsu.edu/~mak/CMPE135/assignments/1/UseCaseForm.docx

The goal of this assignment is to write a good Functional Specification. Use your imagination! You will not be held to this specification on future programming assignments.

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/CMPE135/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. If there are multiple files, create a single zip file containing the files, and 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
• Product name	• **3**
• Problem statement	• **3**
• Product objectives	• **3**
• Six functional requirements	• 6 x 5 = **30**
• Four nonfunctional requirements	• 4 x 5 = **20**
• Use case diagram with six use cases and at least two actors	• **6**
• Three use case descriptions	• 3 x 10 = **30**
• Writing quality	• **5**