## Writing Assignment 3 – Project Specification Document

Project 3, our group project, has existing descriptive words. Your group must create its own project 3 specification document. The Project 3 description can be improved. You must read the Project 3 description, form your own opinions/assumptions, think about the design together, and determine which of your assumptions are incorrect (or perhaps another stakeholder may need to clarify). At the end of this phase, the requirements should be spelled out in sufficient detail such that there is very little left unsaid about *what* the system will do and how you will accomplish it.

Your document should be written for the stakeholders of the system. A wide audience, including developers, clients (people requesting the system), and end users, may read it. Try to avoid unnecessary technical jargon.

You should provide an overview of the document and your system. Describe in detail the concept of the system that you are building. Document the functionality that the system will have by including use case descriptions and diagrams. Document your system design.

### Important Notes

#### Note 1

Describing a feature is a heck of a lot quicker than designing it, which in turn is a heck of a lot quicker than coding it and testing it. Therefore, you will be able to describe far more features than you will have time to implement in this course.

For this reason, please understand that describing a feature in your use case model does not obligate you to implement that feature in code later. You should indicate the priority of features – for example essential priority features will be implemented, medium priority features are planned to be implemented, and low priority features will be implemented if time permits.

Each team member should author at least four use cases. If you're planning on building a pretty bare bones Bike Parts Distributorship system, your final implementation might not even have twelve use cases. That's okay. Imagine sufficient functionality in this phase to have a good twelve or more.

#### Note 2

Note that as a team, you should review each other’s work and give feedback. This is the only way that a truly quality result will emerge. A big part of the goal of creating this document is to ensure that the whole team has a consistent understanding of the direction of your project.

#### Note 3

Remember the goal. The goal is not to do a bunch of busy work, but to elucidate the system behavior so that your team is all on the same page when you begin design. To be honest, the deliverables themselves are just the icing on the cake – the cake itself is the process of exploring, brainstorming, and negotiating so that you emerge from this phase with a thorough understanding of what it is you want to build. The deliverables are simply the tangible record of that understanding.

Stuff always changes, and as you begin design and implementation in later phases, you will inevitably change your mind about things and encounter issues that you didn't think of before. That's okay. That's part of software development. You can go back and refine your use cases in later phases as you discover these issues and confront the reality of change.

Think ahead. The use cases you write in phase 1 will have a profound effect on what happens later. You want to resolve ambiguity about what the system is going to do, so that you have a joint understanding moving into the implementation phase.

#### Note 4

In addition to including diagrams, explain everything in text form.

#### Note 5

Don’t forget to number and label all figures that you include.

### Specification Document Template

**Title Page with Index**

**1. Introduction**

* Provides an overview, explains the document purpose, and how it is organized.

**1.1. Document Purpose**

* Explain the purpose of this specification document.
* Make sure that you identify the intended audience for the document.

**1.2. System Scope**

* Briefly describe the system that you’re building. Provide the motivation for this system.
* Include a very high level overview (1-2 paragraphs).

**1.3. Overview of the remainder of the document**

* Explain how your document is organized. Write a sentence or two summarizing each large section so that if the reader wanted to know where to find some information about the system, they’d have a good idea of where to look within this document.

**2. Overall Description**

* This section should discuss background information about your system including a definition of client/s, definition of users, and detailed description of the included functionality. This information should be broken into subsections. One example breakdown is shown below.

**2.1. Client characteristics**

* Who is your client? Why is this system important to him/her/them? This is fictional and can be made-up.

**2.2. User characteristics**

* Who are the intended users of the system? Describe them. What characteristics of your users make them unique? How do users interact with your system?

**2.3. Product functions**

* Here’s where you should describe the software in more detail than you did in section 1.2 (probably about a page overview plus your use cases).
* What type of functionality will be included? Describe the features in detail.
* Document the system functionality with a set of written use case and a system-level use case diagram.

**3. System Specification**

Explain your system design. What data will be stored in each class? What operations will each class include? What type of relationships will exist between classes in your system? How will the various classes interact? In addition to your text explanations, include a class diagram for your system.

**4. Assumptions**

List any assumptions that you have made about the system. You should have a brief introduction statement/paragraph in this section. The actual assumptions should be communicated as a bulleted list.

### What to Submit, Due Class 21 (Friday, Nov 10)

* Submit on Canvas one specification document for your group, and provide a printed copy in class.

Completing the specification document should be priority number one this week. As a group, you need to have a consistent vision for the system, how it will be used, what it includes, what it omits, and how it is organized. It is best to suspend implementation until the project is understood at the specification level.

### Specification Rubric

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| **Criteria** | **Ratings** | **Pts** |
| Uses the Template: Includes all the required sections. Numbers the sections for easy reference and organization. |  | 5 |
| Introduction: Provides a description of the document's purpose, a brief overview of the system, and a description about how the document is organized. |  | 10 |
| Description: Includes a description of the system, the client, and the end users. |  | 20 |
| Functionality w/Use Case Diagram: Includes a use case diagram and 12-16 numbered use case write-ups. |  | 20 |
| Specification & Class Diagram: Describes the system design in text and includes a system level class diagram |  | 20 |
| Assumptions: Bulleted list of assumptions made. Don't forget to include a sentence or two introducing the list. |  | 5 |
| Tone/Writing Style: Sounds professional and uses a consistent format |  | 10 |
| Grammar & Spelling |  | 10 |
| Total |  | 100 |