3-2 Milestone Two

Joseph Dunn

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Southern New Hampshire University

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The artifact that I chose to improve upon is the two diagram designs from IT-315 Object Oriented Analysis/Design. In this class, we were asked to create both a sequence diagram and a communication diagram for an information system that allowed a student or staff member to register for classes. Things like the class, and format of the class were things to be included in the overall design. In my enhancements, I decided to add a “professor selection” feature to the design. The sequence diagram displays the steps taken by the user and the information system. The stick figure represents the user, where the boxes represent use cases. The arrows represent the type of information passed between the use cases and user, and the diagram flows in a top-down fashion to represent the natural progression of the system. I created the initial designs in summer of 2020.

The reason I decided to include this project in my portfolio is because it showcases my ability to actually conceive and design and information system so that the programmers understand what exactly needs to be constructed instead of just haphazardly coding and hoping to arrive at a finished product. By having an initial design for an information system, it much easier to keep the focus on customer needs in a simplistic fashion. Both diagrams show my ability to understand the progression and communication necessary for such a hypothetical information system. For example, many of the use cases on the sequence diagram could be turned into classes within a java project. I could then follow the sequence of events and use the communication diagram as a reference for the information required to be passed along in order to begin the actual construction of this information system. As you can see if the attached screen shots, and links to the actual draw.io projects, the improvement I added was the professor selection. This was a challenge because I couldn’t just simply add the use case to the existing designs as it would completely interrupt the natural progression. I chose instead to start the design from scratch and used my prior designs as a reference.

Reexamining my work after completing the improvements, I’m pleased with the outcome of my updates. Both the sequence and communication make sense chronologically and align with one another. I used industry standards so that others in the field can easily interpret my designs through both the symbols used, and the format of each diagram’s design. Any future updates, or improvements will come from any feedback I receive from my instructor or from those who decide to examine my work on my final portfolio submission.

Enhancing this artifact has taught me some valuable lessons as coming back to an old project after having less exposure to the subject matter was a new experience. First, I learned the importance of keeping detailed documentation. Since it’s been several months since I’ve worked on a project of similar nature, I found that looking back at old notes and the documentation that I included with the initial designs helped me pick back up where I left off. If I were someone approaching this project as an outsider, I feel fairly confident that someone else with basic knowledge of object-oriented analysis and design could continue to add or modify to this design with ease due to the documentation I previously provided. I also learned that adding extra features can exponentially increase the complexity of a project which is why it’s so important to create initial designs that are above all, simple and easy to follow. Adding unnecessary use cases, can present an opportunity for a design flaw which decreases the security of the overall system. Lastly, I learned that initial system designs; although malleable throughout the SDLC, are an extremely important step in order to achieve desired functionality, efficiency and bolster the systems security. As with most team efforts, creating a system requires detailed planning that makes sense. Having an actual blueprint to reference will ultimately help those programmers perform their coding tasks. It’s important to remember that you’re not just making designs for the sake of making designs; the goal is to add value to the team and the process.

Below are screenshots of the sequence diagram (figure 1) and the communication diagram (figure 2) that are included in the zip file provided in my submission.

Figure 1.

Diagram

Description automatically generated

Figure 2.

Diagram

Description automatically generated