3-2 Milestone Two: Enhancement One: Software Design and Engineering

Narrative

CS-499-Computer Science Capstone

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1. Briefly describe the artifact. What is it? When was it created?

   The NuMe app is a straightforward weight-tracking mobile application designed for users seeking an easy way to monitor their weight goals. The concept was developed during the September/October term of 2024. The app features a simple UI that allows users to interact with the following:

   - Log daily weights
   - Set and monitor a goal weight
   - Be notified when they reach their target via SMS

2. Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?

   I chose the project from CS-360 Mobile Architecture and Programming as my artifact because it was a project I was very excited about. I was intrigued by what was involved in creating a usable application, even though it was Android-based. From the UI setup, using XML for layout design, to the various Java files that separate the UI logic, it was a fun and valuable learning experience. I also enjoyed using Android Studio, as it resembles other IDEs, such as Eclipse and NetBeans, which added a nice level of familiarity to the process. The NuMe mobile application was developed as part of a project during the September and October 2024 term. Although it met all the assignment criteria, I felt it needed improvement and had a list of user issues that needed to be addressed. I was excited to have the opportunity to select this as an enhancement option.

3. Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?

Honestly, my opinion, I believe I have achieved the outcomes initially planned in my enhancement plan. For example:

Course outcome:

3. Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.

   Outcome met by:

   I implemented a real-time algorithm to provide users with feedback on the reasonableness of their goal weight.

4. Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals.

   Outcome met by:

   Using algorithmic techniques and tools that deliver a better user experience

4. Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?

Reflecting on the enhancement, I learned that it is easy to forget what you have learned, and picking up where you left off is not so easy when a significant amount of time (months) passes without actively working on the project, or on any code for that matter. It was a minor challenge to jump right back in, having to review a larger section of the code. Reviewing each section and relaunching the application, as well as conducting basic User Acceptance testing, would help refresh my memory and put me back on track. Additionally, this process reminded me of all the enhancements that needed to be made for the application to be considered a valuable tool for someone who wants to easily track their weight without a lot of in-app distractions. One of the most helpful processes was completing the Code Review assignment. Although it was very

challenging, it was a good way to not only review the code but also verbalize what was needed and the code's intended purpose. I guess this is why talking out loud is helpful, as internalizing thoughts can get jumbled; sometimes, talking to yourself isn't so bad.