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CS-499

Milestone Three: Enhancement Two: Algorithms and Data Structure

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

The artifact is a mobile app for Android that allows users to track their weight. It was created for my CS-260 class, in July/August of 2022.

1. **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?**

As I mentioned in my last enhancement milestone, I chose this artifact because I wanted to demonstrate my ability to take an app that was already created (even though I was the original developer, we won’t split hairs here), plan out thorough enhancements and follow through with them. Currently, as of this milestone enhancement #2, I have demonstrated: course outcome 2, professional-quality written communications that are coherent, technically sound, and appropriately adapted; course outcome 3, using computing solutions and computer science practices and standards appropriate to its solution; course outcome 4, an ability to use well-founded and innovative techniques, skills, and tools for the purpose of implementing computer solutions.

My app (artifact) has been improved by having an enhanced database schema, database management, and database data retrieval. Prior to my enhancements, my app did not pull from the database at all. As a matter of fact, after doing some logging, I realized that my original database was not functional. My enhancements have not only gotten the database to work as intended but works better than originally planned in my enhancement plan in Module One.

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

Yes, I have met the course objectives that I had planned to meet with this enhancement plan. My entire goal for this enhancement plan was to enhance the database schema and overall database retrieval. As of writing this, I have managed just that. I have also started working towards the next part of my enhancement plan, security.

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

One challenge that I faced was the database. I spent the first four days wracking my brain to try and figure out why my original database was not working as intended. Once I figured out the problem, it was just a matter of spending the next couple of days enhancing the schema and database retrieval. One thing I learned from this experience is how important debugging and logging is. Using logcat was quite overwhelming at first, trying to sift through and sort through all the various amounts of data being given to me by the console. However, learning how to use logcat was the only reason I was able to make my enhancements this week. Honestly, I’m happy that I learned how to use and read logcat and I know this is a tool/technique that I will be using for the rest of my development career.