CS-499

Professor Ogoh

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Milestone Three Narrative

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

The artifact I chose was my full-stack mobile application from CS-360 Mobile Architecture and Programming. I called the app “Track My Weight”, and it is a weight tracker app that lets the user create an account and login, add new weight values, and check their weight history. I created this app back in February of this year, so just around 9 or 10 months ago. The current artifact can be found here, but you can check the commit history to go back to the original: [https://github.com/michaelTurco/CS-360-Mobile-Architecture-And-Programming]

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 algorithms and data structure? How was the artifact improved?

I picked this artifact to include in my portfolio, since it is a full-stack application and had a lot of room for improvement. Through my learning at SNHU and personal projects, I’ve learned a lot about both front-end design for UI and user experience, as well as back-end database management and coding standard best practices, and this artifact will be a good example of how I’ve grown over the years. For this artifact in the category of algorithms and data structures, I added a new ‘graph’ feature that plots the users weight data on a graph with lines, as well as calculating a weighted linear regression to show a trend line and estimated date on when they

will reach their goal weight. I think this was a great way to show off my skills in algorithms in data structures, since in the end it all came together to form a useful new menu that the users can see to gain new information about their data.

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?

Yes, I did indeed meet the outcomes I had planned back in Module One. I planned to reach course outcome #3 mainly, since it was related to data structures and algorithms, but also for#1, #2, and #4 as well. I believe I reached all 4 of these course outcomes in my Milestone Three submission. I do not have any updates to my outcome-coverage plans.

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?

This time when enhancing the artifact, my work and experience from the previous Milestone had helped me get off to a fast start. The code was already cleaned and neatly organized, and I was able to just jump right in to working on the graph. The graph was very finicky to work with, I used the MPAndroidChart UI Element, which had a lot of configurable settings, and I was constantly editing the settings and reloading over and over again, just making slight adjustments or testing out new settings until the graph looked right. I had to refactor my code towards the end and it turned out pretty nice, but the whole process was quite tedious and there are still a few things I'd like to change with the graph UI, but I'm not entirely sure if MPAndroidChart can support that. When implementing the weighted linear regression on the data points, I learned a lot about converting a mathematical formula down to code, and was eventually able to get a clean way of calculating it with my input data. I didn't run into any challenges outside of the graph and algorithm, since this is what the entire Milestone Three was centered around for me.

I’ve attached an image below of my updated LucidSpark diagram showing my actual implementation in Android Studio