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CS 499

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Milestone Three

The artifact that I am going to enhance for milestone two is the final project for CS 360. We created an app that allowed a user to track their weight based on the information they input. Firstly, the user would have to log into the program or sign up to the program if they did not already have an account. All this information in stored inside a database that the app uses to check if the user already exists. Once the user logs into the app they would then come to a screen that would display the weights they have previously into the app. It would also allow them to add new weights whenever they wanted, as well as delete and update previous entries. Again, all this information would be stored inside a database that would be connected to their profile. This app was first created at the beginning of April 2020 and was completed for submission in June of 2020.

This artifact is being included in my ePortfolio for my algorithms and data structures is because it is an artifact that I feel shows my skills in these areas. Data validation are a form of data structures where you are testing your code to make sure that it meets a specific set of standards for your program before using those variables. Data validation uses a bunch of data structures such as if statements or while statements to allow the user to reenter their data until they meet those requirements. They are also a great way to show your knowledge in data structures as you can use multiple different types of them to have good data validation. I enhanced this artifact by creating a set of rules that the user needed to follow before they could use the values that they input for certain variables. This creates more secure code and allows for less vulnerabilities. It also makes sure that the code will be able to remain useful until those variables need to be updated to meet a new standard.

For the course objectives that I set myself in Module One I would say I meet them for this enhancement. I wanted to add data validation to this program that would not allow the user to input anything they wanted into the code. My plan was to do a code review of the program and then decide what variables and functions needed to have data validation added to them. After the review I went into the program and added those validations to the program. I plan to improve the data validation that I created and add onto it to test for more requirements in the future.

My process for enhancing my code was to first do a code review. I went through the program and identified variables in the program that needed to have data validation added to them to make sure the user was not inputting anything they wanted into the program. Once those variables were identified I then started by creating the data structures that I needed to make sure that the code would still function correctly but test the variables to make sure they meet the requirements for each of them. The thing I learned from creating this data validation is how hard it is to create data validation that test everything you would want for a variable. It could take hundreds of lines to test a variable to make sure that it meets exactly what you want for it from the size of the variable to making sure that it does not have uppercase letters. That would probably be the biggest challenge for this enhancement was creating data validation that tested the variable and made sure the user could not just input anything they wanted for the variables. This challenge also is something that I feel can be constantly improved on and built upon to create stronger code in the future.