**Professional Self-Assessment**

Throughout my Computer Science program here at SNHU I had learned a lot about coding. Every class has been something a little different, some more challenging than others and for different reasons. All these classes helped push home the basic programming techniques that everyone should use such as, fail fast and fail often, test often, comment everything, and the value of extra white space. I have learned to use adequate spacing in my programming as well as using comments when necessary, at times that also means grouping lines of code together that belong together. These classes made me learn how wide spread programming can be, all these extra add on codes/programs that will allow you to do other things, such as the mongodb jar files on my final project here, the additional coding allowing 3D models in Microsoft Visual Studios, or the ability to make a calculator with working buttons using Eclipse.

One of my favorite classes relates to Computer Science, it was the GAM305 class that I had taken on the side. It focuses around group creation of a game, 6 students working together towards making a game of our choice. From here I have learned the problems with other programs that use GIT, our game was in Bitbucket and the website’s GIT program called SourceTree made it very interesting, at times it made it easy while at other times making it incredibly difficult to get something fixed. The class and the game went so well that we are still working together on the game to create more levels with hopes to release it out on Steam later in the year. A few of us put it on hold due to classes, me and another are in our last two classes, we did not want our class work to suffer, I will be continuing up with it after these set of classes are over.

These final two classes I am in, CS499, and IDS403 both help me with how I would communicate to stakeholders. I am not the best at public speaking but both these classes have used/using programs in which we are to record ourselves talking about our project and what we intend to do. These classes helped me with what to focus on while talking, and helped me in general with my communication skills. A bunch of my IT classes covered security when it comes to computers and/or programs. Ways to keep yourself and others safe such as passwords and user access. I found it interesting the ways you can control the user access in Windows vs Linux, and databases, what’s the same as well as what is very different.

Throughout my classes here I have had a few classes with databases learning how to use SQL and Linux with the help of Codio. It really showed me how similar yet different they are compared to writing code in Java or Python, using a command interface instead of writing the code out then activating it (although this can be done as well, sort of). I also have a better understanding of classes, methods, and functions of coding through my time here, it did take some practice to get used to what is what though. There is also a big benefit to put a specific method into its own class, specially if that method code will get a little big, it will help save space and clutter from your main method, much like I did here for my Stock Market project, I put the different methods in their own class then just called them in my main function when I needed them, this saved clutter from my main function and helped keep my code organized.

The Stock Market program I created is based off my final project for my CS340 class, the purpose of the code was to show off the CRUD methods for MongoDB, with a few other methods there as well. My time here I have tried different coding languages such as Python, Java and C++, being able to convert a program from one to the other helps show my knowledge of both programming languages and my ability to find information if I forget them. The original project from CS340 was done in Python, I chose this mostly because I had not done Python in a very long time, but also Python requires less coding than Javascript (the other language choice in the class), plus I had not done anything in Javascript before either. I chose to change it to Java for my enhancement because that was the language used most in my time here at SNHU and I figured that was more common, but also C++ is very similar to Java, plus I had just done C++ in the class before CS340, so it had been a little bit since I had done Java.

I utilized a menu while loop in my program in which the user can input their desired choice, and from there they can either input the first input to show other inputs if required, or they can go back by typing the correct input. What the program is looking for is called in the input dialog. I use if-else statements for the different menu selections then sometimes within the menu selections. I have my mongo set up in each of the method classes, no mongodb stuff is actually done in the main method. I also convert all my string/integer inputs to Document format which is required for the mongodb functions. All my artifacts fit together as a whole program, I chose the CS340 class because it uses all three areas that this class covers, and conversion of one language to another is a big task, specially when you include mongodb interactions. There is a big difference between python and java mongodb interactions. I also chose to enhance my project even more by separating the individual methods that are called within the main into their own classes instead of having them in the same class as the main. This helped organize my code even more, and it is good practice to do if the method is not needed in the main class. I also put necessary comments in my coding, and organizing code that are related. Once a section of code is unrelated I put a comment before it to let the viewer know what its supposed to do. I also utilized white space making it easier to scan through without the window being too cluttered with code.

This program required some set up such as putting the contents of the stocks.json file into the Market database and the stocks collection, that I had to do using my Command Directory on my computer, I also had to set up so Mongo would look for this database and collection that are located in my class folder. When I first did this in CS340, I used Codio which had all this set up, getting this set up on my own personal machine so I can get it working was interesting and took a few hours of searching of how exactly it has to get done. If I am stuck somewhere I utilize my resources at hand to help find my answers, such as using Google, Slack, StackOverflow, as well as my instructor.

Here is my ePortfolio GitHub link:

<https://github.com/Dragohnz/Dragohnz.github.io>