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**02/08/2021**

**CS 499**

**6-3 Professional Self-Assessment**

**IV. Professional Self-Assessment:**

**Include the following in your professional self-assessment:**

1. **Discuss how completing your coursework throughout the program and developing the ePortfolio has helped showcased your strengths and shape your professional goals and values and prepared you to either enter or become more employable in the computer science field.**

As I end my studies at Southern New Hampshire University, I have a lot to be thankful for. Creating an ePortfolio is an amazing takeaway which will help showcase my newly formed skills and achievements. The ePortfolio helps promote my strengths in a well-rounded atmosphere and helps me become more employable in the computer science field because I can simply show my employer examples of my work and what I am capable of. This ePorfolio is an honest example of my skills. I still have a long way to go to be considered an expert in my new field, but the ePortfolio is a great example showing my limits and that I have potential to learn and grow. Now that I have the GitHub webpage up and running, I will always be able to add more content at any time.

In August of 2019 for my CS 250 class, I needed to create a Retrospective report. I took on different roles involved in developing an application in a team environment. Even though I played the part of Scrum Master to a programmer, it was an excellent example of how to work in an environment involving many moving parts. It had to cover planning, to resolving conflict, each part essential to one another to be successful in a team setting.

Another previous semester which I had the pleasure of taking IT 226, Communication with STEM Professions, taught me skills when dealing with scenarios involving communication to stakeholders and employees. This project involved creating a PowerPoint presentation which entails a newly developed application, the major elements of the application along with areas of conflict with the team working on developing the applications and a recommendation plan, detailing ways to help litigate the conflicts and help with output and project schedules.

So far, I have presented examples of my work that entails working in a team environment and communicating with stakeholders, now I would like to talk about what I have included in the ePortfolio that will show my understanding regarding data structures and algorithms, software engineering and database. I proudly attached a copy of the application I created called the Airgead Banking application. This artifact was created September 2020 for my CS 210 class. It will allow the user to enter an Initial Investment Amount, Monthly Deposit, Annual Interest, and Number of Years their investment will grow. It will then display the information for the user to see. I enhanced the application by adding to the design areas that will detect errors within inputting the information. The application asks specific information and will notify the user if the information inputted was not correct. I have also added to the application the function to give the user more information other than calculating their interest. I will extend the program to ask the user first what percentage of their salary they would like to save; it will then ask how much their salary is annually. The application will then calculate and show the user how much they can save per month. Once that part is completed, it will then allow the user to use that information in the other part of the program so the user then can see how much they can save over an extended amount of time. With the added features of detecting errors, it shows my understanding of computer programming best practices, along with software engineering and data structures. The enchantment involving coding to help calculate how much the user can save per month, shows the understanding of algorithms.

The final area I touch on is about databases. I have chosen to enhance an assignment from DAD 220, Advanced Querying and Creating Full-Text Indexes. This assignment shows the use of the mongoimport tool. I will list the step-by-step instructions to retrieve the information requested from the individual questions. I will also supply screenshots to show my steps and the actual results of my inquiries. I feel the chosen assignment shows an excellent understanding of databases and how to use and retrieve information. This assignment, including the enhancements showcases my understanding how to manage a database. I have selected this item because in the real world I will be given tasks like what I have demonstrated, a database is a house for information and creating an inquiry is a way to retrieve the information. Showing how to create a database and an index is a great way to improve the original artifact.

The last piece to the ePortfolio is a code review. I went over in depth over the functions of the two projects, The Airgead Banking application and Advanced Querying and Creating Full-Text Indexes. I first start with the Airgead Banking application, going almost line by line explaining what each part of the code does and why I have it. The last part of the code review I go over my assignment Advanced Querying and Creating Full-Text Indexes, again explaining the code and the why behind it. This is a great video which show my understanding of completing a code review and shows my understanding of the code I created.

1. **Summarize/introduce how your artifacts fit together and inform the portfolio as a whole; this will help demonstrate the full range of your computer science talents and abilities?**

The following areas have been included in my portfolio, data structures and algorithms, software engineering and database. Over the years I have created many artifacts which demonstrate the areas listed above, some better than others as I developed my skills; however, I have chosen which I feel showcase my abilities to the fullest. The first two areas, data structures along with algorithms, and software engineering use the same program. In the moment of creating the program it might not have been the most enjoyable time because of the stress of getting things created for a deadline, but overall, I enjoyed creating the program. Later being able to enhance the program was much more enjoyable because I was making something which I though was already good and made it better. The program itself is a great addition to my portfolio because it shows a detailed program in which I utilized data structures, algorithms, and software engineering. This program titled Airgead Banking demonstrates a full range of my computer science talents. It is well organized, utilized in line notes, and demonstrated my ability to use different type of programming skills, like loops, and if/else statements. Some of them might be basic techniques, but the foundation skills are there and only need to be refined with confidence and experience.

Databases is the last section of my portfolio. This section is quite different from the other areas shown because is does not involve actual programming but involved using logic to create queries to locate and create information in a database. The great thing about the skills used in the demonstration is they can be applied in a wide range of scenarios because the basic concepts are the same no matter which database you are using, for the most part, there are exceptions to every rule. The skills showcased in the database section range from basic techniques, like creating a database and inputting information into the database, to more advances techniques, like creating indexes and advances queries, to the MongoDB tool and creating a RESTful API using a Java or python web service framework. This portfolio will showcase the main concepts learned thought my years at Southern New Hampshire University.