CS499 Capstone

4-2 Milestone Three

May Carson

Algorithms and Data Structures

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

My artifact is an ArrayList, which is used in the Contact Management System as CS320 project. This is apart of CRUD operations, the data structure that creates the system storage.

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 algorithms and data structure? How was the artifact improved?**

I wanted a way for my contacts to be validated and handled while maintaining structure and managing any duplicate data. It shows my ability to implement an algorithm to handle errors and load information from a database. I implemented a limit capacity to minimize duplicate data and prevent errors.

1. **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?**

I met my planned outcome. I wanted to improve on the Array List, which is the best way to handle this type of algorithm, as it handles errors better than the previous HashMap. I still need to reconnect the database. I am having a hard time as advice in open communities aren’t helping much, so I plan to retrace my steps so I have a functional project.

1. **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?**

I learned there’s a wide range of improvements to an ArrayList, including using Swing for a better user interface. I did find it difficult to find what worked for my skill level and time frame. Some suggestions were too advanced for and it was frustrating.