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CS 499: Computer Science Capstone

Enhancement Two/Narrative

*Data Structures/Algorithms*

For this artifact, I would like to display of what I know about Data Structures and Algorithms. For the first half of this course, I learned about the importance of data structures as well as a variety of methods that utilizes the ability of how data can be constructed. Moreover, the programming language I used in this course is C++. Some of the methods I learned from the data structure aspect is the pros and cons of single and doubly linked-lists, hash tables and trees. The second half of the course consists of Algorithms. Algorithms are also an important piece to utilize especially when becoming a software developer. I learned about the concept of algorithms and how its pretty straightforward as far as figuring out how to display certain items in the order that the programmer/user wants. There are various amounts of algorithms to sort such as merge sort, insertion sort, vector sort and bubble sort just to name a few.

The following code is from one of the assignments in CS260: Data Structure and Algorithms. The assignment was to create linked lists that will hold from a collection of bids from the CSV file. I have made little enhancements as to how the code was develop and made sure each section of code is clean and well written by placing indexing on each section of code. Moreover, the reason why I chose this artifact specifically is because I wanted to not only show my skills using the program language C++, but also show my problem-solving while at the same time, learn from my previous mishaps.

*Reflections:*

Data Structures and Algorithms help shape the way of how we live our lives because every day we try to solve problems in any given situation. From what I learned from this course is that whenever any problem or project arises, there must be a blueprint or plan to come up with the solution. Now that I have a more intellectual understanding on data structures and algorithms, I can use from what I learned from this course and implement it not only from my future career in the tech industry, but in my daily life as well. As I reflect on the process of this enhancement is that during my own assessment, I realize that some portion of my code certain codes was a bit long. Utilizing of what I learned later on in my journey, I modify my code to be not only simpler but also more effective as to what the code is trying to function. One challenge that was a bit challenging was not the code itself, but rather trying to re-learn what my code was implementing as well as the programming language C++. The reason is because of the number of studies and programming languages I learned after this course, and dealing with time management and managing life, I tried to invest my time to C++ to my liking. I want to learn as much as I can learning C++. Now that I am at the end of my scholastic journey, I can invest more time into learning the programming languages.