**Software Design/Engineering Narrative**

This artifact is taken from my CS 260 class Data Structures and Algorithms that I took in March of 2018. In this class we had several assignments that required us to write code in C++ in order to manipulate a csv file that contained bids using different searching methods. I decided to take the assignment that required us to create a linked list and port that to java.

I selected this particular item because I feel that being able to create a linked list is an important skill to have especially when you are starting out in the programming field. Being able to take a code written in C++ and port it into Java shows that I am capable of producing code across different languages. Showing that you can program the same concept in different languages shows that you not only have that ability but also the ability to not only learn new languages but use them correctly. Some of the things that I did to improve this artifact included using my own csv parser, making sure that when the user input an id it was unique, creating appropriate functions when needed to be called multiple times, using a recursive function, and making sure it was commented throughout since it wasn’t so much on the original.

I feel that I was able to meet the course objectives for this enhancement which included demonstrating the ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals. I was able to take code written in C++ and not only port it to Java but clean it up so that it had better performance than it did originally.

I must admit I thought it was going to be easier than it actually was. There were certain parts that I got stuck on for a while, especially the ability to search. Since I am still a beginner, when I got stuck I had to look up several things and the Java API website became a very close friend of mine. Sometimes I would make the code harder than it was and then realize the simplest solution only consisted of one line of code. For example, I thought I needed to return two items which is not looked good upon in Java. After thinking about it and doing some research, I realized that all I needed was a simple global variable and that ended up solving that problem perfectly. Most importantly I didn’t give up especially when I was on the brink of frustration because I couldn’t understand why the code wasn’t working. I found that walking away for a bit and coming back actually helped clear my mind so that I could think better and come up with the solution that did allow the code to work.