The artifact for Algorithms and data structures is the Hash Table program from Computer Science 260: Data Structures and Algorithms. The program is based around utilizing the data stored within a Microsoft Excel document to display the Bids at an auction. The program also allowed for users to remove certain bids if they had the ID on hand. Originally the program was created a little over 2 years ago.

The reason for my inclusion of this program was to heavily focus in on both algorithms and data structures. The bids within the program are created as a database with multiple parts. Each point having a reference to different information within the program whether that be the bid ID, the bid itself or the name of the associated fund. Data structures being one of the main focuses of this artifact makes the inclusion of this program to be vital. Since it is a multi-part data structure it allows me to display my depth of understanding when it comes to data structures within C++. The program also utilizes a large amount of algorithms and functions in order to get the tasks done within itself. For instance there is an algorithm that iterates through the entire bid list to output all of the values within then reports the time it took for the process to occur. When it comes to my planned objectives with this artifact’s improvement I got most of what I wanted to done. I did have a bit of difficulty while coding due to simply not being familiar with the way the program worked which was caused by the long difference in time between when it was created and now. Enhancing the artifact has been a bit of a struggle overall since the information I had back then I do not fully remember and I am trying to work with what little information I have from the files myself. However I was able to add the function I was hoping to add which allows you to add bids to the program rather than solely getting new bids via loading the data.