The first artifact is the first of two final projects from Computer Science 410 Reverse Software Engineering. In this artifact we initially converted a binary file to assembly then from there we created C++ code that could function. The initial program is simply an investment company with 5 clients that you have a few base functions that can be utilized. The first is to a short login sequence, the second is to display client list, and the final is to modify a client’s service choice there is also an option to exit the program. This program was originally made back in February of this year.  
My reason for including this artifact is because it serves as a good way to show how I can build upon a program. The initial program I described above is very bare bones in my opinion. However due to the process we had to do in order to get an idea what the binary code became it made sense at the time since it would be hard to break down large amounts of binary by hand. I met the objectives I had hoped to while working on the enhancement for this program. However I ran into 2 issues I have yet to be able to figure out. Looking at the process of updating the program it caused a bit of confusion when I noticed the program was running fine before enhancements but once I expanded beyond the basics it started to break down. I learned that I had to convert a variable in order to get some of the functions to work properly as well as to allow the usage of my newly added functions as part of the enhancement. The initial work goes appropriately but the conversion at a later point has an issue when you access the changing a client’s choice function. However the rest of the program works fine from what I can tell. The main additions were the adding of two new functions which allow for the addition or removal of new or existing clients. During my enhancements I also fixed security issues within the program to make it significantly harder to access the data.