

CSC340.03

Jason Fujii, 921019525

Assignment 03

Due 10-13-2020 at 11:55 PM

Assignment 3 Report

Assignment 3 tasked me with creating the Dictionary Program that I created in Assignment 2 in C++. Additionally, instead of scrubbing the dictionary data from an enum, this time we were to scrub the data from a text file. Through this assignment, I had to scrub data from a text file using the fstream class, move it to an object, then store that object in a data structure that could easily access the data. Once that was done, I needed to create an easy to use user interface that could provide input validation as well as explain the user's mistakes in a relatively easy way.

I tackled this project by first getting familiar with C++ classes. C++ is not my language of choice and this was actually my first big project with the language, so I needed to understand the functions that were given to me. I spent a lot of time on the Cplusplus website, reading through all of the class functions and variables. Eventually I settled on using a combination of an ordered map and a vector. I created a data structure that I call a mapVector which is a map with strings for key values and a vector of Entry objects (the object I created to store the word data) for the value. The rest of the project was relatively the same as the Java project.

My biggest challenge in this project was understanding the subtle changes between Java and C++. I spent quite a while learning about pass by reference and when to do it versus when to pass by value. Another example of a subtle mistake I made was when I tried to parse the data from the text file. I'm used to the Java String class, so I thought substr(int, int) would create a substring between the two integers. I was very wrong. The first int is the start location and the second int is the length of the substring. I spent quite a while on that.

I'm not satisfied with my project. I wish I had more time to upgrade the user interface because I have problems that I did not face with Java. Unfortunately, the dictionary displays my data after two run throughs of searches. I don't know why. If I had more time, I would fix that first and foremost.