Project 1 Milestone Report

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I have run into multiple issues when implementing my project. I have been out of coding practice for a while and have not used the C++ language in a lengthy period of time.

I originally started this project by using a 2d array. I was having issues because I was saving the string as a char array, and basically adding additional steps that I did not need to implement the project. I did not remember how to use pointers, and have forgotten that strings are basically char arrays to begin with. I had to review pointers and how to use them, and eventually just saved each getline() as a string, and implementing shifting and sorting with my pointer array to the strings.

I completed this project 1 milestone by working with one input line before taking in a whole text file with multiple lines. I start off by implementing and testing each step before continuing to the next step. In project 1 milestone, the steps consisted of: getline() > shift and save into pointer array > insertion sort pointer array > find last column/last sentence string > find index of original string > count clusters in last sentence string.

Most of my issues were coming from my 2d array I had created originally, and what I have learned from the 2d array, I applied to using pointers. For example, I was having issues with shifting, and at one point when I shifted characters, I was getting junk outputs like '?' and foreign characters. I was able to resolve by making sure I was saving the character to length -1, and not length.

The insertion sort wasn’t too different from the insertion algorithm displayed in lecture.

I studied the algorithm and implemented originally with numbers in a different file. Once I was comfortable with understanding the while statement, I implemented it using strings, and used the compare() method within the while loop parameters.

The step that took me the longest was counting characters in last string. I was trying to figure out a way to count and display the next letter without creating more than one loop. I ended up deciding on creating a while loop within a for loop. I made count = 1, each time the for loop incremented to make sure that ‘1’ gets printed out if we don’t go into the while loop since it means the letter appears at least once. But another issue that I was encountering was that even though count was working by setting it to one at the beginning the for loop, and count++ each time element == element+1 in the while loop. It was doing this for each element. So I was counting from each element no matter if they were the same. I had to make sure that my for loop remembered when the last similar letter was, so I can start from there, and count a different letter. I had to put my i++ in the while loop, and every time each element was the same, count and I incrementing by 1. Once exiting the while loop, my I remembered the last index, and incremented once from the last index of the while loop, therefore, remembering the last similar element, and starting the count of another letter from there.

My print statement was also integrated in this same loop.

I did not have social interactions with classmates in this time, but I did compare my output to the ones posted in piazza.

I have used stackoverflow.com and youtube to relearn the concept of pointers and pointer arrays, and to understand functions like getline() and .compare(). All other issues were resolved by trial and error, and creating print statements for me to understand what was happening at each step, and fixing the issues before continuing to the next.