**Planning Document – Franklyn Gonzalez P4 Program: Predict**

**Planning Phase**

I will start off my program by taking in a certain number of lines for the input. The command number will determine whether I want to add a phrase that will predict a letter, identifying whether it is a word that is saved in the program or not. As well as adding a word with the amount of times it will be entered into the trie. After this, I will free the dictionary and end the program.

**Assistance Received**

I used the lecture on Tries by Guha around the timestamp 1:25:00 to understand frequencies during insertion.

**Debugging Phase**

During the debugging phase, I remember having some trouble properly implementing the max child node property when trying to use the parent node to calculate it. With general IO, I was using an external function for obtaining it but then changed it to shorten the amount of code, which took me some time over the weekend.

I had some trouble shortening the code in the insert function so that I wouldn't have any repeating lines.

**Testing Phase**

After building the project on codeblocks, my testcase ran input…

15

1 cap 15

2 ca

2 cap

2 pen

1 cat 20

2 ca

2 c

1 act 10

1 able 10

2 a

1 ace 2

2 a

2 ab

2 ac

2 ace

And printed as expected on the sample output.

