CSCE 240 Project 6

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For this project, we were meant to provide the final combined project for our chatbot. Throughout this project/semester, I have learned quite a bit about how chatbots work, pointers, objects and how to consistently error check while guessing what errors the user may use at anytime.

To accomplish this project, we were supposed to combine all of the 5 projects we have done all semester and combine them into one project. For me, this was not very complicated as I would extend on each of the projects throughout the semester without having to completely start over. I decided in the beginning to use c++ as my programming language because I wanted to challenge myself to learn a completely new class that I was not familiar with at all. Over all, I would say I was successful as my program works well and is quite functional for a chatbot. For the concepts of what my program is able to do, my program hits a lot of categories. My program is able to take in a document, separate the categories of the district manage, speak to clients as they wish to communicate, provide information about the documents, and provide information about the summary of the chats.

Some difficulties I have ran into that required extensive research included being able to know when to stop the program, predict what the user was trying to say, not use as many for and if loops by separating it into classes, and keeping the code clean. I was able to get through all of these issues by  continuing testing every possible input I could think of and thinking about what I would like to see if I was a client. All in all, I would say I quite enjoyed this project and class itself and hope to continue the knowledge I have began to learn.

For future work, if I was to extend the project with additional time, I would make it so it would remember entries from the user directly allowing it to predict what the user would ask prior to starting the questions process. An example would be to immediately tell the user quick facts about the rep depending on what was asked and saved previously without having to initiate the conversation.

## Extra Credit/ Reusable Code

### P2

All in all, I have learned quite a bit about regex and c++ functions. The most important takeaway for me would be to study how to make headers easier, so I can avoid having over 700 lines of code in one section. I would say this project was a success, but I have quite a ways to go before I am an expert. I used Ayden Owens' Regex patterns and he used my structure for printing.

### P3

During this project, I used Ayden Owen's class structure and regex functions for my Contact class. I found that he was able to produce a much better code and was way more organized one for calling the specific data. Ayden Owens used my toLower method as it helped fixed many of his input issues and my use of if statements for printing entire sections.

### P4

My classmate, Ayden Owens, used my Counter Class to help him with the percentage counting and string comparison. I used Ayden Owen's regex pattern to be able to divide the text file easier as well.

## P5

For this program, I used Ayden Owen's method for reading a file to make sure I would get the right number of values when breaking up the user and cpu variables. Ayden used my methods for saving date and time in his project so he would be able to consistently make new files with the right time and dates.

## P6

For this program (P6), I used Ayden Owen's method for reading a file to make sure I would get the right number of values when breaking up the user and cpu variables. Ayden used my methods for saving date and time in his project so he would be able to consistently make new files with the right time and dates as well. Additionally, I was able to use Ayden's predictor to answer the questions and he was able to use my vector printer to help sort through the csv file.