CS 2302 Lab 1 Report

For our lab 1 in CS 2302 we had three options, I chose option B. This option consisted of using a link to a Reddit post, placing all the comments of the post in a list, and recursively sorting the comments into either positive, neutral, or negative. The comments had to be placed in a data structure based on what type of comment it was (positive, negative, neutral). The code for rating how positive, negative, or neutral a comment was, had already been given to us. As was the code for taking the comments and placing them in a list. The methods that we had to write were ‘process\_comments’ which would recursively traverse the comments and place them into their appropriate data structures.

I attempted to solve this problem by using recursion and creating a method in which I could both traverse and sort the comment that was currently being analyzed. I succeeded in doing so the only addition to this is the fact that I had to create a for loop in my main method which would give the total number of top-level comments, would sort these comments, and would call on the recursive method process\_comments to traverse and place them in their appropriate data structure. I also created another method called ‘place\_in\_list’ to which I would send a comment and it would place it into the positive, negative, or neutral list. It did this by using the methods that were given to us which gave us a numerical value as to how positive, negative, or neutral a comment was. I saw multiple data structures in which I could place the comments but ultimately I chose to use a list as it seemed like the simpler option.

To test my program, I decided on three different test forms. Test #1 was the one given to us by the instructor, it is a post on Reddit regarding recursion with 200 comments. The link for the first test is: ‘https://www.reddit.com/r/learnprogramming/comments/5w50g5/eli5\_what\_is\_recursion/’.

When this was used as the input of the program the program outputted the three lists with all of the corresponding comments inside of it. It also printed the number of comments that each list contained. There were 11 positive, 2 negative, and 186 neutral comments. For Test #2 I decided to use a post regarding a funny image from the tv show ‘The Office’. I decided to use this post since it was trending, therefore, its number of comments would constantly change, increasing over time. There were currently 181 comments. The link for the second test is: ‘https://www.reddit.com/r/DunderMifflin/comments/9fhrok/old\_but\_gold/’.

When this was used as the input for the program, it outputted the three lists with all the corresponding comments inside of it. It also printed the number of comments that each list contained. There were 8 positive, 2 negative, and 171 neutral comments. For Test #3 I decided to use a post that was classified as controversial, it is regarding an IAmA of the CEO of Renault and Nissan. I decided to use this since it would contain more positive and negative comments than other posts. This post contained a total of 2,492 comments. The link for the third post is: ‘https://www.reddit.com/r/IAmA/comments/2s7obx/im\_the\_ceo\_of\_renault\_and\_nissan\_and\_were\_making/’.

When this was used as the input for the program, it outputted three lists with all the corresponding comments inside of it. It also printed the number of comments that each list contained. There were 64 positive, 35 negative, 2,393 neutral comments. The bar graph below is an illustration of the running times of my program under different types of inputs, to be more exact, the three previously describes test cases.

In this lab I learned how to traverse a comment section using recursion. I also learned how to better program in python.

Source Code: https://github.com/Jorge-Q/CS3-Lab1-Reddit/blob/master/SentimentAnalysis.py

“I certify that this project is entirely my own work. I wrote, debugged, and tested the code being presented, performed the experiments, and wrote the report. I also certify that I did not share my code or report or provide inappropriate assistance to any other student in the class.”