## ***CS-242 – Fall 2020***

# Final Project – Reflective Writing

*(20 Points)*

Q1. Did Final Data Structures Programming Project advance your understanding of Data Structures? How did it further help you in polishing your logic-building skills?

For this project, my aim is to revise all the materials in class, especially the LinkedList concept. So, the music playlist is what I chose as it requires LinkedList and Queue Data Structures. Through this project, I attempted to combine the utility of Data Structures with File storing my playlists. Most of my works is inside the ModifyPlaylist.java class and I would say that my logic-building skills has improved considerably through this project, some concepts from the CS-140 class really helped me out.

Q2. What were the major challenges encountered during developing the Data Structures Final Project and how did you overcome them?

I might not remember it clearly, but the 2nd hardest thing I did in this project is when I think about the user’s playlist concept. I thought that if I give user the option to create more playlist, I have to write the code that enable user to create a whole java playlist class through the execution, which was really impossible. For example, I have one default playlist, which is Song.txt embedding in the Playlist.java class, therefore, I thought that if more playlists will be created, more classes will be necessary as well. After a while, when I was using Spotify, I changed my solution, I can just store user’s input during execution to a text file and implicitly store it as the playlists because users don’t need to view 2 or more of their playlists at the same time, if they want to modify their own playlists, only one playlist at a time and adding song from playlist to queue is one at a time as well. Therefore, I created the UserPlaylist.java class as a temporary list storage for user’s playlist during execution, all of their playlists will be stored as a text file in the project folder in this project, I provide the option to view and modify their playlists upon their choice, only one at a time, just like how I modify my playlist on the web. And when they done with one option from their own playlist, the clearContent() method will be executed to clear all data from UserPlaylist.

The hardest thing that I wasn’t able to handle is the data deletion concept. As I explained from the Report, currently, I can’t do it but I will definitely solve it in the near future.

Q3. What further enhancements could you have made in your Project?

The delete song option is what I missed in this project. Therefore, it is my top enhancement for my Project.

The shuffle playing option is what come to my head secondly as Spotify offered this option.

Q4.) What other types of problems can be solved by a similar Data Structures Programming Project?

OR

Could your Project have been developed in some other way? Please elaborate.

I don’t think using other Data Structures will be more effective in this case, Queue is “First In, First Out”, the most compatible Data Structure for song ordering. Besides, in this project, my playlist’s data are simply different strings, there is no need to modify the playlist’s element, a published song has a specific publisher, from a specific album, and has a specific duration. Thus, ArrayList is worse than LinkedList in term of my Project.