

Final Project Proposal

User Preference Study and Song Feeding

Xingbang Liu, Matt Jones, Travis Thomas

March 10, 2018

In our final project, we are going to implement track one which is explained in instructions. Specifically, we are going to implement music feeding algorithms, which can study user performances, profile user listening preferences, and finally feed new songs to user.

There are two components of our program. The first component is datasets which includes user playlist, server-side playlist, and user preference data. User playlist the csv file which stores the songs from server-side playlist that user likes. Server-side playlist is the csv file which contains all playable songs. The second component is the java code. There will be a main class which will read the user playlist, and print the feed list at the end. There will also be a study class which will scale the like degree, and finally get a list of genre. The third class is searching class which will use searching algorithm to locate each genre. Finally there will be a feeding class which will randomly choose songs from the list, and according to like degree to sort the feed list.

Figure 1 shows the mind map.

In this program, we would use a searching algorithm to locate specific genres, a priority queue to sort the suggestion list, and a array to store playlists.

Here are some source I think can give us some hint:

1. Based on like degree and use it as priority index to sort the list.
 - Priority queue
2. These code can be used to read and write csv file. In these code, lines are handled by array or arrayList.
 - Deal with csv file
 - Read and write csv file
3. Searching required genre by using binary search.
 - Binary search
4. Sorting elements before searching.
 - Quick sort

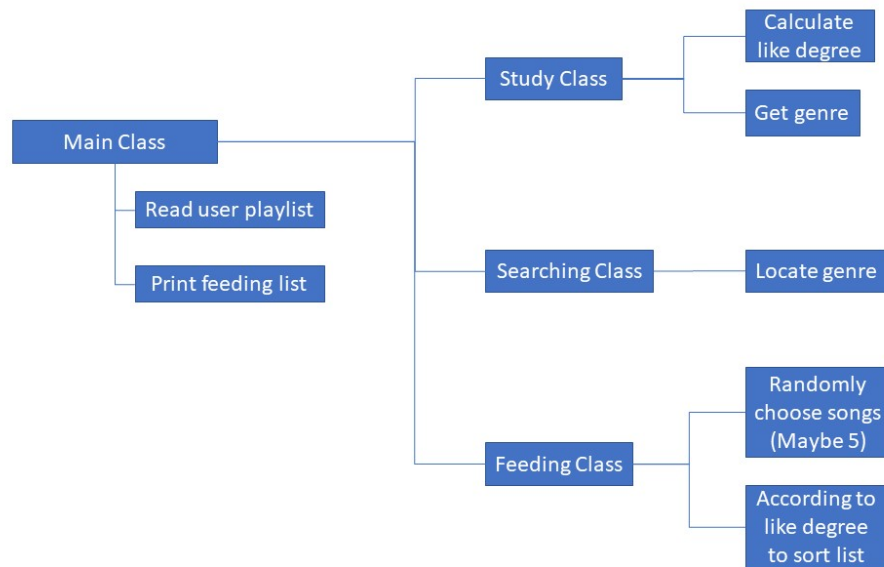


Figure 1: Mind map