

Programming Project / C++ – Playlist Management & Interaction System

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I. Task Description

Student 1 is responsible for playlist management:

- Create, delete, and list playlists.
- Save/load playlists to/from playlists.txt.
- Sort playlists by average rating.

Student 2 is responsible for playlist interactions:

- Add/remove songs (as strings) from playlists.
- Rate playlists (1.0–5.0).

II. Data Structures Used by the Team

The following class will be used:

- Playlist: string name, vector<Song> songs, vector<float> ratings
- Song: string title, string artist, float duration

III. File Structure

The following file will be used:

playlists.txt

A file where details about the playlists will be stored in the form:

```
<playlist name>
<song 1>|<artist>|<duration>
<song 2>|<artist>|<duration>
Ratings:<rating 1, rating2...>
...
```

IV. Interacting with Executables

Application 1 will offer the following options:

```
./playlist_manager create_playlist <name>
To create a playlist.
```

`./playlist_manager delete_playlist <name>`
To delete a playlist.

`./playlist_manager list_playlists`
To view all the playlists.

`./playlist_manager help`
To display all manager commands.

Application 2 will offer the following options:

`./playlist_interact add_song <playlist> "<song>"`
To add a song to a playlist.

`./playlist_interact remove_song <playlist> <song_index>`
To remove the n-th song from a playlist.

`./playlist_interact rate_playlist <playlist> <rating>`
To rate a playlist.

`./playlist_interact help`
To display all interact commands .