

Computing Summer task

TCSTunes is an online music streaming service that allows a user to stream music from its song library. TCSTunes collects and stores data about the users and their listening preferences. You are required to write a program to manage the data about the user and their music preferences.



TCSTunes has a song library* which contains details about each song. No songs have the same song title. The library stores the following details about each song:

- Song title
- Artist
- Genre
- Song length.

The system allows a user to create playlists (a valid playlist must contain at least one song). The system stores each playlist and the user can select a saved playlist to view.

When users sign up to TCSTunes they create an account and must enter their:

- Name
- Date of birth
- Favourite artist
- Favourite genre.

Analyse the requirements for this system and design, develop, test and evaluate a program that:

1. allows a user to create an account, and then input and store their details.
2. allows a user to edit their favourite artist and favourite genre.
3. allows a user to display an alphabetical list of the song titles in the song library, including the artist and track length for each song title.
4. allows a user to create, save and view playlists**. The play list should contain the Song title, Artist and Song length.
5. automatically generates new playlists for the user using the following criteria:
 - a. the user inputs a time limit (e.g. 10 minutes) and it generates a playlist that does not last longer than this time.
 - b. the user inputs a genre (e.g. Pop) and it generates a playlist that contains up to five songs for that genre.
6. allows the user to enter an artist's name and save all of the songs in the song library by that artist to a text file.
7. allows the creators of TCSTunes to display a list of each of the genres within the song library and the average length of all tracks for that genre.

