Midterm Project

11/5/2021

Attempt 1

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10/16/2021

Details

You have three weeks to complete this project. (It was two weeks, but the date has been changed to Nov 5.) Therefore, it is due now by the end of Module 11.

This project is to be completed by writing a program in Python 3. A folder for the project is to be created called "music_analyzer" and the main module (program file) is to be called "music_analyzer.py". You are to submit a zip file of the "music_analyzer" folder containing the program you wrote.

The following data files contain sample playlist exports from the Apple Music app and iTunes app on macOS. If you want to analyze your own data from Apple Music, select "Songs" under "Library" from the left menu in the Music app and then choose File > Library > Export Playlist...

Music.txt is the export from Apple Music and iTunes_Music.txt is the export from iTunes. These are two different playlists. They do not contain the same data. Your Python program is to work with both provided data files.

Music.txt (https://umsystem.instructure.com/courses/42117/files/6302031?wrap=1)

iTunes_Music.txt (https://umsystem.instructure.com/courses/42117/files/6302035?wrap=1)

Your program is to be able to handle any data file that is formatted like the data from an Apple Music or iTunes playlist export. You are to include the provided data files in the "music_analyzer" folder.

Write a program that meets the following requirements.

Prompt the user for a playlist data file from Apple Music or iTunes to analyze. After the analysis and display of the report for one file, the user is to be prompted if they want to do another file.

The playlist data is formatted like the provided data files. The columns of data are labeled in the first row. You need to determine the data element separator and appropriately handle it. You need to handle that there are labels in the first row. E.g. you must handle the data file as provided.

(https://umsystem.instructure.com/courses/42117/modules/items/3383721)

Assignment (https://umsystem.instruc

2. The number of songs that were released each year in the playlist.
3. The song by Name and Artist for the longest song (based on Time) in the playlist. Display all if there is more than one longest with the same time.
4. The song by Name and Artist for the shortest song (based on Time) in the playlist. Display all if there is more than one shortest with the same time.
5. For each genre, provide: the number of songs, the longest song by Name and Artist (list multiple if more than one), the shortest song by Name and Artist (list multiple if more than one).
6. The number of songs that have been played.
7. The number of songs that have not been played.

The above summary values are to be presented to the user in a nicely formatted, easy to read manner.

Evaluation rubric:

10 pts - loads and parses data

10 pts - determines total number of songs in the playlist

10 pts - determines the number of songs that were released each year in the playlist

10 pts - determines the song by Name and Artist for the shortest song in the playlist

10 pts - determines the song by Name and Artist for the shortest song in the playlist

10 pts - determines for each genre the number of songs, the longest song by Name and Artist, and the shortest song by Name and Artist

10 pts - determines the number of songs that have been played

10 pts - determines the number of songs that have not been played

10 pts - generates nicely formatted report and provides well designed user interactions

10 pts - well structured and formatted code

Total: 100 pts

If you provide a solution from Chegg, you will receive a 0 and will be reported as having cheated. This is also the case for any copying of work or providing work that is not your own. You are to create the program for this project yourself using Python documentation. We, faculty, have been informed that all instances of suspected cheating must be submitted to campus for handling.

View Rubric

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