

Music Player

Objects

Exercise 1: Creating the Music Player

1. Define an object named `musicPlayer` that will store our songs and playlists.
2. The `musicPlayer` object should have a `songs` property that is initialized as an empty array. Each song will be an object stored in this array, with properties: `title` (a string), `artist` (a string), `duration` (a number representing the duration in seconds), and `playCount` (a number).
3. The `musicPlayer` object should also have a `playlists` property that is initialized as an empty array. Each playlist will be an object stored in this array, with properties: `name` (a string) and `songs` (an array of song titles).
4. Add a method named `addSong` to `musicPlayer`. This method should take a song title, artist, and duration as parameters and create a new song object with the given properties and a `playCount` of 0. The new song should then be added to the `songs` array.
5. Add a method named `removeSong` to `musicPlayer`. This method should take a song title as a parameter and remove the corresponding song object from the `songs` array.

Exercise 2: Adding and Removing Playlists

1. Add a method named `addPlaylist` to `musicPlayer`. This method should take a playlist name as a parameter and create a new playlist object with the given name and an empty `songs` array. The new playlist should then be added to the `playlists` array.
2. Add a method named `removePlaylist` to `musicPlayer`. This method should take a playlist name as a parameter and remove the corresponding playlist object from the `playlists` array.

Exercise 3: Adding and Removing Songs from Playlists

1. Add a method named `addSongToPlaylist` to `musicPlayer`. This method should take a song title and a playlist name as parameters. It should find the playlist with the given name in the `playlists` array and add the song title to its `songs` array.
2. Add a method named `removeSongFromPlaylist` to `musicPlayer`. This method should take a song title and a playlist name as parameters. It should find the playlist with the given

name in the `playlists` array and remove the song title from its `songs` array.

Exercise 4: Playing Songs

1. Add a method named `playSong` to `musicPlayer`. This method should take a song title as a parameter. It should find the song with the given title in the `songs` array and increase its `playCount` by 1.

Exercise 5: Displaying Playlists and Songs

1. Add a method named `displayPlaylist` to `musicPlayer`. This method should take a playlist name as a parameter. It should find the playlist with the given name in the `playlists` array and return an array of all songs in that playlist, with each song represented as a string in the format `"title - artist"`.