



FOP HACKATHON REPORT

Group Members

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```
#include <stdio.h>
#include <string.h>

#define MAX_SONGS 100
#define FILE_NAME "playlist_rec.txt"

// Define the Song structure
struct Song {
    int songID;
    char title[100];
    char artist[100];
    float duration;
};

// Function prototypes
void loadPlaylist(struct Song playlist[], int *count);
void savePlaylist(struct Song playlist[], int count);
void displaySong(struct Song playlist[], int songID);
void addSong(struct Song playlist[], int count);
void deleteSong(struct Song playlist[], int songID);
```

Task 1:

Description:

We are generating a number and star pattern using nested while loops. In the outer loop, the variable (*i*) is responsible for handling the rows, which increment with each iteration. The inner loop, nested within the outer loop, prints numeric values starting from 1 up to the current row number (*i*). Once the number of printed numeric values reaches the row count, the inner loop then begins to print stars (*) for the remaining columns in that row. This pattern continues until all rows are printed, resulting in a triangular arrangement of numbers followed by stars.

Output:

```
1*****
12*****
123*****
1234***
12345**
123456*
1234567
```

```
-----
Process exited after 8.526 seconds with return value 0
Press any key to continue . . . |
```

Task 2:

Description:

This C program simulates a game where the user is asked to input 5 digits (between 0 and 9), and the system generates a random set of 5 digits to compare against the user's input. The program uses two arrays: one for the system's randomly generated digits and another for the user's input. The program then compares each corresponding pair of digits and counts how many match. Finally, it displays both the system's generated winning digits and the player's digits, along with the count of correctly matched digits.

Output:

```
Enter 5 Digits Between 0 AND 9

Enter Your Digit No. 1: 2
Enter Your Digit No. 2: 3
Enter Your Digit No. 3: 5
Enter Your Digit No. 4: 6
Enter Your Digit No. 5: 7

Winning Digits:      9      2      8      0      7
Player:              2      3      5      6      7

Here are the Digits Matched: 1
-----
Process exited after 4.73 seconds with return value 0
Press any key to continue . . .
```

Task 3:

Description:

This C program manages a music playlist system that allows users to interact with a playlist of songs. The system provides the following features:

1. **Adding Songs:** The user can add new songs to the playlist by specifying the song's title, artist, and duration. The song is stored in a dynamic array, and the playlist is saved to a file (playlist_records.txt) after each addition.
2. **Playing Songs:** The user can play a song by specifying its ID, title, or artist. The system searches for the song in the playlist and plays it if found.
3. **Displaying the Playlist:** The user can view all the songs currently in the playlist, including their IDs, titles, artists, and durations.
4. **File Persistence:** The playlist is loaded from and saved to a file so that the data persists between program executions.

Output:

```
Enter your choice: 1
Enter Song Title: Tum ho kahan
Enter Artist Name: Burair Hassan
Enter Song Duration (in minutes): 3
Song added successfully with ID 3!
Playlist saved to file.

--- Music Playlist System ---
1. Add Song
2. Play Song
3. Display Playlist
4. Exit
Enter your choice: 3

--- Playlist ---
1. hjfuy by vvg [6.00 minutes]
2. gasolina by jk [4.00 minutes]
3. Tum ho kahan by Burair Hassan [3.00 minutes]

--- Music Playlist System ---
1. Add Song
2. Play Song
3. Display Playlist
4. Exit
Enter your choice: █
```