

# **GITHUB MINI PROJECT**

## MUSIC VINYL MANAGEMENT SYSTEM

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SECTION: M1

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## **INTRODUCTION:**

- The main objective is to make a data management system using file input output.
- With this program we can insert and search for stored music vinyl records.
- The record details include a vinyl code, the name of the vinyl/album and the name of the music artist.
- Data structures are utilized to make the storing and retrieving of data easier.
- A .txt file is used to permanently store the data completely locally on the machine itself.
- An exit option is implemented in the code to exit it easily.

## SOURCE CODE

```
//Start of program//

//Importing header files//
#include <stdio.h>
#include <stdlib.h>

//User defined functions//
void insert();
void search();

//Creating structure for easier data management//
struct vin
{
    int vcode;
    char name[50];
    char artist[50];
};
struct vin s;
void main()
{
    int choice;
    while (choice != 3)
    {
        printf("\n\n");
        printf("\t'WELCOME TO MUSIC VINYL COLLECTION DATABASE'\n\n\n");           //Part
to be displayed to the end user//

        printf("\t\tAvailable Options\n\n");
        printf("\t\t1: Insert vinyl storage record\n");
        printf("\t\t2: Search vinyl storage record\n");
        printf("\t\t3: Exit\n\n");
        printf("\t\tEnter Your Choice : ");
        scanf("%d", &choice);
        switch (choice)                //Switch case to load the appropriate part of the program as
per the user's choice//
        {
            case 1:
                insert();
```

```

        break;
    case 2:
        search();
        break;
    case 3:
        exit(1);
        break;

    default:
        printf("\n\t\tPlease select a valid option.\n\n");
    }
}
}

```

```

void insert()    //part of the program to allow the user to enter data//
{
    FILE *fp;
    fp = fopen("vinyl.txt", "a+");
    printf("\n\n\t\tENTER NEW MUSIIC VINYL DATA");
    printf("\n\n\t\tEnter vinyl Code : ");
    scanf("%d", &s.vcode);
    fflush(stdin);
    printf("\n\t\tEnter vinyl/album Name : ");
    scanf("%s",&s.name);
    printf("\n\t\tEnter Artist Name : ");
    scanf("%s",&s.artist);
    fwrite(&s, sizeof(s), 1, fp);
    {
        printf("\n\n\tVinyl Database Recorded Successfully!\n");
    }
    fclose(fp);
    printf("\n\t\tRecord Updated!\n\n");
}

```

```

void search()    //part of the program to allow the user to search data//
{
    int code, flag = 0;
    FILE *fp;
    fp = fopen("vinyl.txt", "r");
    if (fp == NULL)
    {

```

```

    printf("\n\t\tError: file not found.");
    return;
}
printf("\n\n\tEnter vinyl code to be searched: ");
scanf("%d", &code);
while (fread(&s, sizeof(s), 1, fp) > 0 && flag == 0)
{
    if (s.vcode == code)
    {
        flag = 1;
        printf("\n\nHere are the search results:");
        printf("\nVinyl Code: %d", s.vcode);
        printf("\nName of the album: %s",s.name);
        printf("\nName of The artist: %s\n\n",s.artist);
    }
}
if (flag == 0)
{
    printf("\n\n\t\tError: No record found.\n\n");
}
fclose(fp);
}

```

//End of the program//

## OUTPUT AND SCREENSHOTS

The screenshot displays a code editor with two panes. The left pane, titled 'Mini-Project : nvim', shows the C source code for 'vinylmanagement.c'. The code includes headers, defines a 'vin' struct, and implements functions for inserting, searching, and exiting a vinyl collection database. The right pane, titled 'Mini-Project : vinylmgmt', shows the terminal output of the compiled program. It displays a welcome message, a list of available options (insert, search, exit), and a prompt for the user's choice.

```
//Start of program//
//Importing header files//
#include <stdio.h>
#include <stdlib.h>

//User defined functions//
void insert();
void search();

//Creating structure for easier data management//
struct vin
{
    int vcode;
    char name[50];
    char artist[50];
};
struct vin s;
void main()
{
    int choice;
    while (choice != 3)
    {
        printf("\n\n");
        printf("\t WELCOME TO MUSIC VINYL COLLECTION DATABASE \n\n\n"); //Part to be displayed to the end user//

        printf("\t\t Available Options\n\n");
        printf("\t\t 1: Insert vinyl storage record\n");
        printf("\t\t 2: Search vinyl storage record\n");
        printf("\t\t 3: Exit\n\n");
        printf("\t Enter Your Choice : ");
        scanf("%d", &choice);
        switch (choice) //Switch case to load the appropriate part of the program as per the user's choice//
        {
            case 1:
                insert();
                break;
            case 2:
                search();
                break;
            case 3:
                exit(1);
                break;

            default:
                printf("\n\t Please select a valid option.\n\n");
        }
    }
}

//part of the program to allow the user to enter data//
void insert()
{
    FILE *fp;
    vinylmanagement.c
```

```
Mini-Project : vinylmgmt
[side@yoga-520 Mini-Project]$ gcc vinylmanagement.c -o vinylmgmt
[side@yoga-520 Mini-Project]$ ./vinylmgmt

'WELCOME TO MUSIC VINYL COLLECTION DATABASE'

Available Options

1: Insert vinyl storage record
2: Search vinyl storage record
3: Exit

Enter Your Choice : 1
```

The image shows a code editor with two panes. The left pane, titled 'Mini-Project: nvim', displays the C source code for a vinyl collection database. The code includes functions for inserting and searching records. The right pane, titled 'Mini-Project: vinylmgmt', shows the output of the compiled program. The output displays a welcome message, available options (insert, search, exit), and the user's choice to insert a record. The program then prompts for the vinyl code, album name, and artist name, and finally displays the updated database.

```
break;
case 1:
    exit(1);
    break;
default:
    printf("\n\t\tPlease select a valid option.\n\n");
}
}

void insert() //part of the program to allow the user to enter data//
{
    FILE *fp;
    fp = fopen("vinyl.txt", "a+");
    printf("\n\t\tENTER NEW MUSIC VINYL DATA");
    printf("\n\t\tEnter vinyl Code : ");
    scanf("%d", &s.vcode);
    fflush(stdin);
    printf("\n\t\tEnter vinyl/album Name : ");
    scanf("%s", &s.name);
    printf("\n\t\tEnter Artist Name : ");
    scanf("%s", &s.artist);
    fwrite(&s, sizeof(s), 1, fp);
    {
        printf("\n\n\tVinyl Database Recorded Successfully\n\n");
    }
    fclose(fp);
    printf("\n\t\tRecord Updated\n\n");
}

void search() //part of the program to allow the user to search data//
{
    int code, flag = 0;
    FILE *fp;
    fp = fopen("vinyl.txt", "r");
    if (fp == NULL)
    {
        printf("\n\t\tError: file not found.");
        return;
    }
    printf("\n\n\tEnter vinyl code to be searched: ");
    scanf("%d", &code);
    while (fread(&s, sizeof(s), 1, fp) > 0 && flag == 0)
    {
        if (s.vcode == code)
        {
            flag = 1;
            printf("\n\n\tHere are the search results:");
            printf("\n\tVinyl Code: %d", s.vcode);
            printf("\n\tName of the album: %s", s.name);
            printf("\n\tName of The artist: %s\n\n", s.artist);
        }
    }
}
```

vinylmanagement.c

92,1 81

29 Jun 2022 | 9:12 PM

Mini-Project: vinylmgmt - Konsole

Copy Paste Find

Mini-Project: vinylmgmt

[sidayoga-520 Mini-Project] gcc vinylmanagement.c -o vinylmgmt

[sidayoga-520 Mini-Project] ./vinylmgmt

'WELCOME TO MUSIC VINYL COLLECTION DATABASE'

Available Options

1: Insert vinyl storage record

2: Search vinyl storage record

3: Exit

Enter Your Choice : 1

ENTER NEW MUSIC VINYL DATA

Enter vinyl Code : 101

Enter vinyl/album Name : WheneverYouNeedSomebody

Enter Artist Name : RickAstley

Vinyl Database Recorded Successfully!

Record Updated!

'WELCOME TO MUSIC VINYL COLLECTION DATABASE'

Available Options

1: Insert vinyl storage record

2: Search vinyl storage record

3: Exit

Enter Your Choice : 1

```

29 Jun 2022 | 9:12 PM
Mini-Project : bash - Konsole

Mini-Project : nvim
}
void insert() //part of the program to allow the user to enter data//
{
    FILE *fp;
    fp = fopen("vinyl.txt", "a+");
    printf("\n\n\t\tENTER NEW MUSIIC VINYL DATA");
    printf("\n\n\t\tEnter vinyl Code : ");
    scanf("%d", &s.vcode);
    fflush(stdin);
    printf("\n\n\t\tEnter vinyl/album Name : ");
    scanf("%s", &s.name);
    printf("\n\n\t\tEnter Artist Name : ");
    scanf("%s", &s.artist);
    fwrite(&s, sizeof(s), 1, fp);
    {
        printf("\n\n\tVinyl Database Recorded Successfully!\n");
    }
    fclose(fp);
    printf("\n\n\tRecord Updated!\n\n");
}

void search() //part of the program to allow the user to search data//
{
    int code, flag = 0;
    FILE *fp;
    fp = fopen("vinyl.txt", "r");
    if (fp == NULL)
    {
        printf("\n\n\t\tError: file not found.");
        return;
    }
    printf("\n\n\tEnter vinyl code to be searched: ");
    scanf("%d", &code);
    while (fread(&s, sizeof(s), 1, fp) > 0 && flag == 0)
    {
        if (s.vcode == code)
        {
            flag = 1;
            printf("\n\n\t\tHere are the search results:");
            printf("\n\n\t\tVinyl Code: %d", s.vcode);
            printf("\n\n\t\tName of the album: %s", s.name);
            printf("\n\n\t\tName of The artist: %s\n\n", s.artist);
        }
    }
    if (flag == 0)
    {
        printf("\n\n\t\tError: No record found.\n\n");
    }
    fclose(fp);
}

//End of the program//
vinylmanagement.c 101,1 Bot

Mini-Project : bash
1: Insert vinyl storage record
2: Search vinyl storage record
3: Exit

Enter Your Choice : 1

ENTER NEW MUSIIC VINYL DATA

Enter vinyl Code : 101

Enter vinyl/album Name : WheneverYouNeedSomebody

Enter Artist Name : RickAstley

Vinyl Database Recorded Successfully!

Record Updated!

'WELCOME TO MUSIC VINYL COLLECTION DATABASE'

Available Options

1: Insert vinyl storage record
2: Search vinyl storage record
3: Exit

Enter Your Choice : 2

Enter vinyl code to be searched: 101

Here are the search results:
Vinyl Code: 101
Name of the album: WheneverYouNeedSomebody
Name of The artist: RickAstley

'WELCOME TO MUSIC VINYL COLLECTION DATABASE'

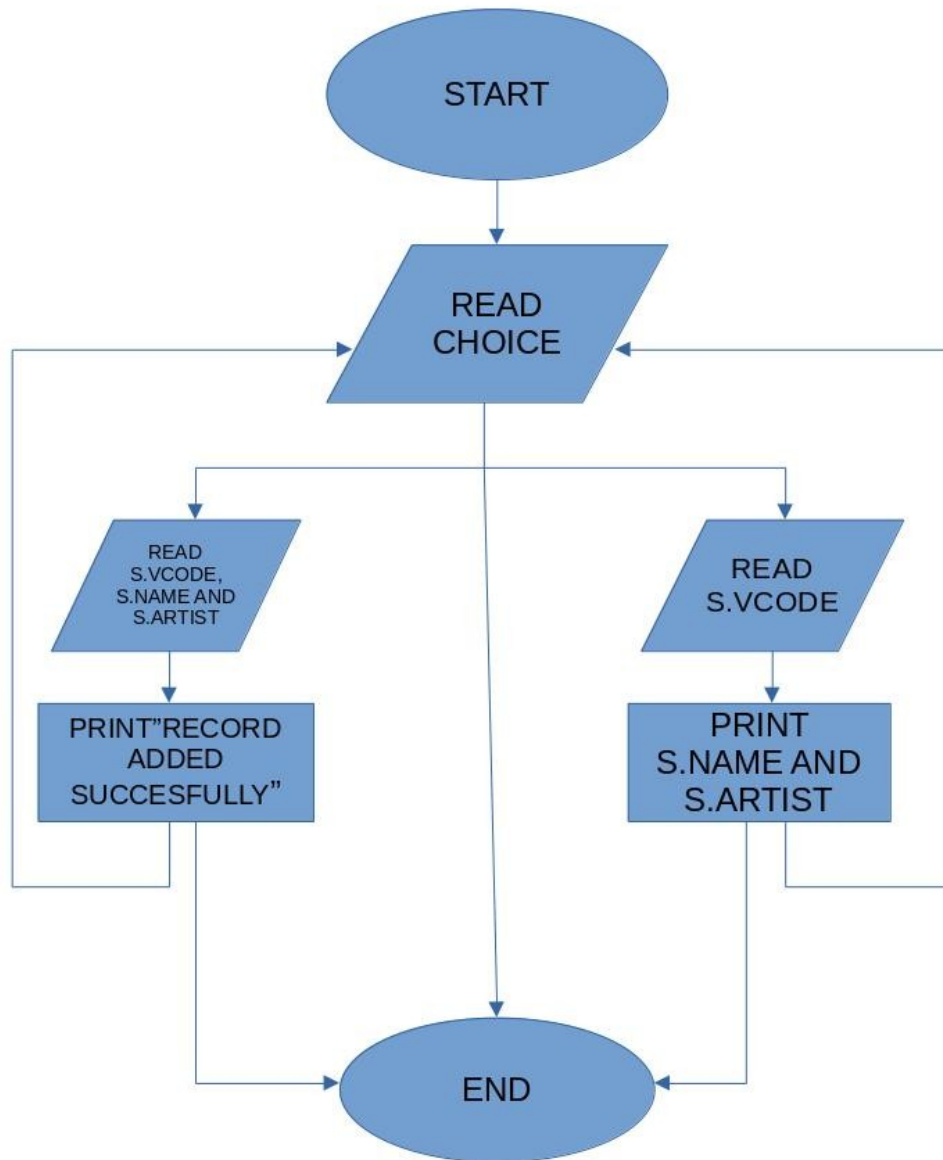
Available Options

1: Insert vinyl storage record
2: Search vinyl storage record
3: Exit

Enter Your Choice : 3

[sidayoga-520 Mini-Project]$
```

## FLOWCHART





**Project link:** <https://github.com/sr6865/Mini-Project>