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PROJECT TITLE: Employee Record System

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ABSTRACT

This is a very simple **mini project in C Employee Record System**. In this project, you can manage employee records – add, list, modify and delete records. Understanding this project will help you learn how to add, view, change and remove data using file handling.

Here, you can list the employees' record but cannot search it like in other C projects. Try modifying this project, and write your own code to implement the search function. This project is complete and totally error-free.

This project is a console application without graphics compiled in Code::Blocks using GCC compiler. The source code for this project is short, simple and easy to understand.

Features of Employee Record System:

The main features of this project include basic file handling operations; you will learn how to add, list, modify and delete data to/from file. The source code is relatively short, so thoroughly go through the mini project, and try to analyze how things such as functions, pointers, files, and arrays are implemented.

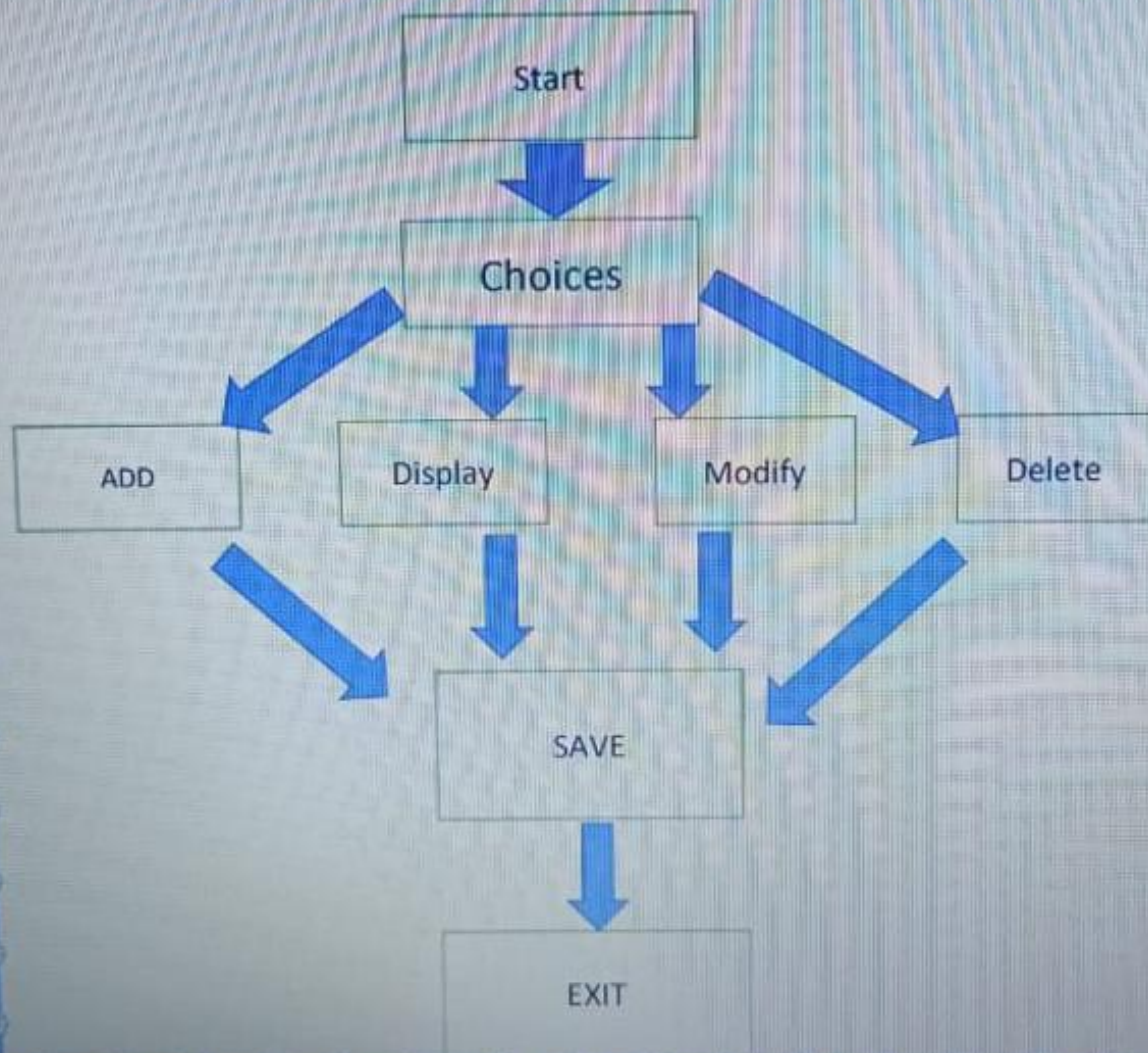
Currently, listed below are the only features that make up this project, but you can add new features as you like to make this project a better one!

- Add record
- List record
- Modify record
- Delete record

The functions used in this project are simple and they basically manipulate file handling and data structures. So, I will only describe the **gotoxy** function used in this project. Try to understand how this function works as you may want to use it or find it used in many other C mini projects.

FLOW CHART

FLOW CHART



PROGRAM

```

#include <stdio.h> ///for input output functions like printf, scanf
#include <stdlib.h>
#include <conio.h>
#include <windows.h> ///for windows related functions (not important)
#include <string.h> ///string operations

/** List of Global Variable */
COORD coord = {0,0}; /// top-left corner of window

/**
function : gotoxy
@param input: x and y coordinates
@param output: moves the cursor in specified position of console
*/
void gotoxy(int x,int y)
{
    coord.X = x;
    coord.Y = y;
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE),coord);
}

/** Main function started */

int main()
{
    FILE *fp, *ft; /// file pointers
    char another, choice;

    /** structure that represent a employee */
    struct emp
    {
        char name[40]; ///name of employee
        int age; /// age of employee
        float bs; /// basic salary of employee
    };

    struct emp e; /// structure variable creation

    char empname[40]; /// string to store name of the employee

    long int recsize; /// size of each record of employee

    /** open the file in binary read and write mode
    * if the file EMP.DAT already exists then it open that file in read write mode
    * if the file doesn't exist it simply create a new copy
    */
    fp = fopen("EMP.DAT","rb+");
    if(fp == NULL)
    {
        fp = fopen("EMP.DAT","wb+");
        if(fp == NULL)
        {
            printf("Connot open file");
            exit(1);
        }
    }

```

```
}
```

```
/// size of each record i.e. size of structure variable e  
recsize = sizeof(e);
```

```
/// infinite loop continues until the break statement encounter  
while(1)
```

```
{
```

```
    system("cls"); //clear the console window  
    gotoxy(30,10); // move the cursor to position 30, 10 from top-left corner  
    printf("1. Add Record"); // option for add record  
    gotoxy(30,12);  
    printf("2. List Records"); // option for showing existing record  
    gotoxy(30,14);  
    printf("3. Modify Records"); // option for editing record  
    gotoxy(30,16);  
    printf("4. Delete Records"); // option for deleting record  
    gotoxy(30,18);  
    printf("5. Exit"); // exit from the program  
    gotoxy(30,20);  
    printf("Your Choice: "); // enter the choice 1, 2, 3, 4, 5  
    fflush(stdin); // flush the input buffer  
    choice = getche(); // get the input from keyboard  
    switch(choice)  
    {  
    case '1': // if user press 1  
        system("cls");  
        fseek(fp,0,SEEK_END); // search the file and move cursor to end of the file  
        // here 0 indicates moving 0 distance from the end of the file
```

```
        another = 'y';  
        while(another == 'y') // if user want to add another record  
        {
```

```
            printf("\nEnter name: ");  
            scanf("%s",e.name);  
            printf("\nEnter age: ");  
            scanf("%d", &e.age);  
            printf("\nEnter basic salary: ");  
            scanf("%f", &e.bs);
```

```
            fwrite(&e,recsize,1,fp); // write the record in the file
```

```
            printf("\nAdd another record(y/n) ");  
            fflush(stdin);  
            another = getche();
```

```
        }
```

```
        break;
```

```
    case '2':
```

```
        system("cls");  
        rewind(fp); //this moves file cursor to start of the file  
        while(fread(&e,recsize,1,fp)==1) // read the file and fetch the record one record per fetch  
        {  
            printf("\n%s %d %.2f",e.name,e.age,e.bs); // print the name, age and basic salary  
        }  
        getch();
```

```

break;

case '3': /// if user press 3 then do editing existing record
system("cls");
another = 'y';
while(another == 'y')
{
    printf("Enter the employee name to modify: ");
    scanf("%s", empname);
    rewind(fp);
    while(fread(&e,recsize,1,fp)==1) /// fetch all record from file
    {
        if(strcmp(e.name,empname) == 0) ///if entered name matches with that in file
        {
            printf("\nEnter new name,age and bs: ");
            scanf("%s%d%f",e.name,&e.age,&e.bs);
            fseek(fp,-recsize,SEEK_CUR); /// move the cursor 1 step back from current position
            fwrite(&e,recsize,1,fp); /// override the record
            break;
        }
    }
    printf("\nModify another record(y/n)");
    fflush(stdin);
    another = getche();
}
break;

case '4':
system("cls");
another = 'y';
while(another == 'y')
{
    printf("\nEnter name of employee to delete: ");
    scanf("%s",empname);
    ft = fopen("Temp.dat","wb"); /// create a intermediate file for temporary storage
    rewind(fp); /// move record to starting of file
    while(fread(&e,recsize,1,fp) == 1) /// read all records from file
    {
        if(strcmp(e.name,empname) != 0) /// if the entered record match
        {
            fwrite(&e,recsize,1,ft); /// move all records except the one that is to be deleted to temp file
        }
    }
    fclose(fp);
    fclose(ft);
    remove("EMP.DAT"); /// remove the orginal file
    rename("Temp.dat","EMP.DAT"); /// rename the temp file to original file name
    fp = fopen("EMP.DAT", "rb+");
    printf("Delete another record(y/n)");
    fflush(stdin);
    another = getche();
}
break;

case '5':
fclose(fp); /// close the file
exit(0); /// exit from the program

```

```
}  
}  
return 0;
```

RESULTS

1. Add Record
2. List Record
3. Modify Record
4. Delete Record
5. Exit

Your Choice:

Enter Name: Hari

Enter Age: 42

Enter basic Salary: 12000

Add another record<y/n> y

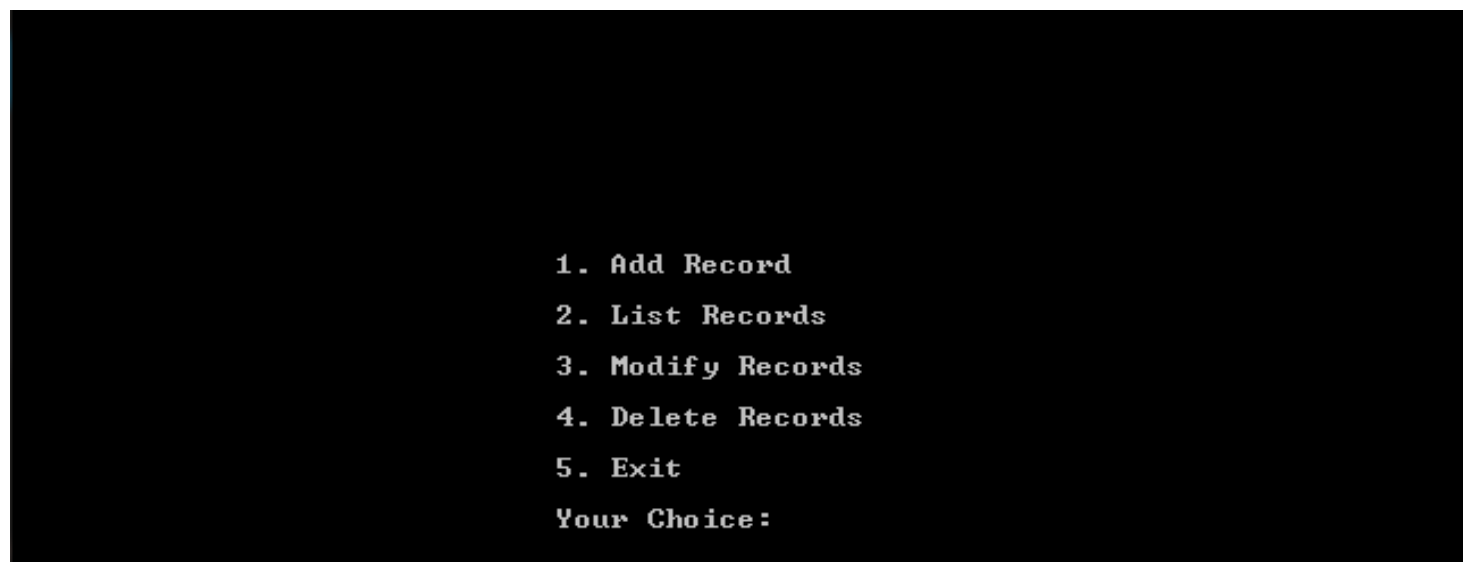
Enter name: Sam

Enter age: 32

Enter basic salary: 15000

Add another record<y/n>

SCREENSHOTS



```
1. Add Record  
2. List Records  
3. Modify Records  
4. Delete Records  
5. Exit  
Your Choice:
```

```
Enter name: Hari
Enter age: 42
Enter basic salary: 12000
Add another record(y/n) y
Enter name: Sam
Enter age: 32
Enter basic salary: 15000
Add another record(y/n)
```

DECLARATION

I thank my Sir "R.RAJKUMAR" for helping me regarding my doubts patiently. I thank Code with C website for providing me the required info regarding the project

RERERENCES

<https://www.codewithc.com/c-projects-with-source-code/>