SRM

INSTITUTE OF SCIENCE & TECHNOLOGY

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PROJECT TITLE

EMPLOYEE RECORD SYSTEM

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SUBMITTED TO

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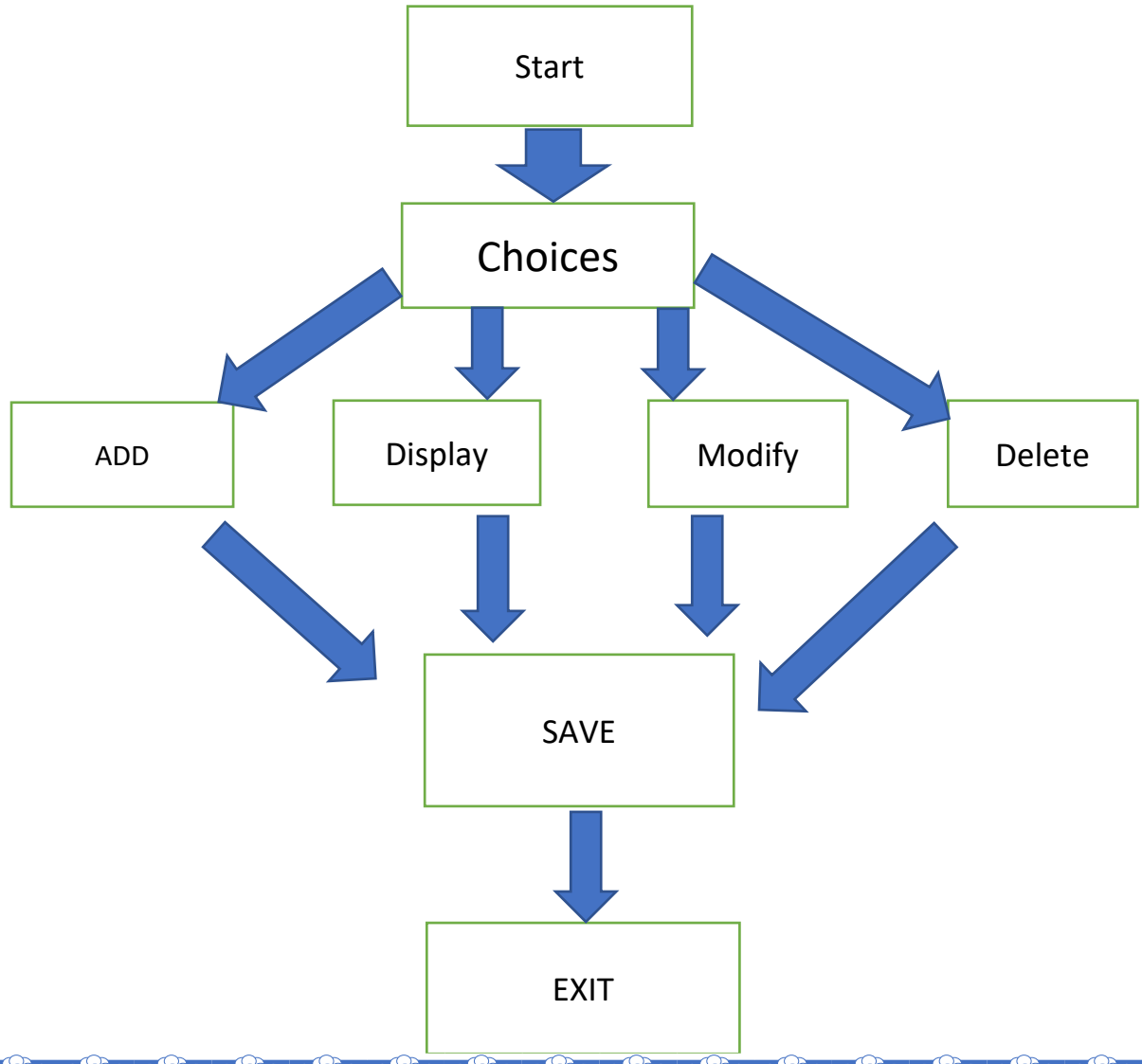
ABSRACT

Employee record system is an application that stores all the record of employees for an institution. The record of the added employees can also be accessed through the employee record system. This application can be used by all institutions such as schools, colleges, companies, etc to store their employees' details. The employee record system has many options such as, add details, display the entered details, modify the records, Delete the records, And an option the exit from the program. After adding an employee record the applications gives the user an option to add more by giving the option "yes" or "no" The add option has the following features: - Enter name, age, and basic salary. The modify option allows the user to modify a record by replacing it. The delete option allows the user to enter the name of the employee he/she wants to delete from the system. The platform used here is c language. We use the "**Windows.h**" header file which contains declarations for all the functions in the Windows API. In this application there is also the use of gotoxy () function. The gotoxy is a function which will locate the text cursor to x and y positions on the screen. Any outputs to the screen will start at the cursor x, y positions, and the cursor is updated accordingly. This employee record system is useful than keeping physical records of employees as it will save time while searching for the record, we can speed up the process, the records can also be retrieved quickly and there will reduced of paper and files. This system was most useful for many companies during lockdown. Employers could access and store/update their employee records while staying at home. The data is stored in another file called as "**.Dat file**". Dat file is a generic data file that can store the list of records entered and can also be opened with notepad, etc.

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 exit 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);
    }
}

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

/// infinite loop continues untile the break statement encounter
while(1)
{
    system("cls"); ///clear the console window
    gotoxy(30,10); /// move the cursor to postion 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 (Text)

1) 1. Add Record

2. List Records

3. Modify Records

4. Delete Records

5. Exit

Your Choice: 4

Enter name of employee to delete: Rohit
Delete another record(y/n) n

2)

1. Add Record

2. List Records

3. Modify Records

4. Delete Records

5. Exit

Your Choice: 1

Enter name: Mathew

Enter age: 28

Enter basic salary: 100000

Add another record(y/n) n

3)

1. Add Record

2. List Records

3. Modify Records

4. Delete Records

5. Exit

Your Choice: 2

Surya 30 400000.00

Amit 27 30000.00

4)

1. Add Record

2. List Records

3. Modify Records

4. Delete Records

5. Exit

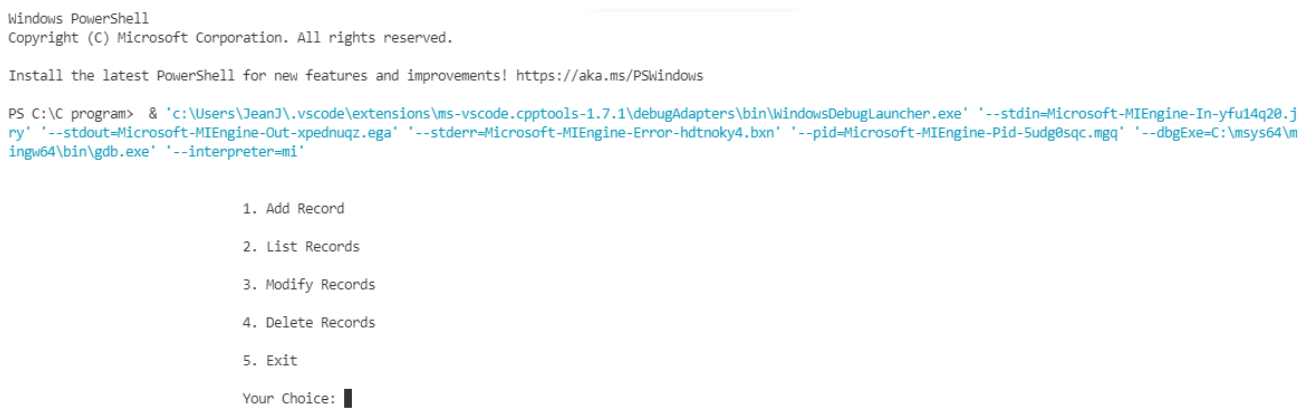
Your Choice: 3

Enter the employee's name to modify: Amit

Enter new name, age and bs: Sanjay,33 and 70000

Modify another record(y/n) n

SCREENSHOTS



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\C program>  & 'c:\Users\JeanJ\.vscode\extensions\ms-vscode.cpptools-1.7.1\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-yfu14q20.j
ry' '--stdout=Microsoft-MIEngine-Out-xpednuqz.ega' '--stderr=Microsoft-MIEngine-Error-hdtnoky4.bxn' '--pid=Microsoft-MIEngine-Pid-5udg0sqc.mgq' '--dbgExe=C:\msys64\m
ingw64\bin\gdb.exe' '--interpreter=mi'


                            1. Add Record

                            2. List Records

                            3. Modify Records

                            4. Delete Records

                            5. Exit

                            Your Choice: 1

Enter name: AMIT

Enter age: 25

Enter basic salary: 30000

Add another record(y/n) N
```

```
                            1. Add Record

                            2. List Records

                            3. Modify Records

                            4. Delete Records

                            5. Exit

                            Your Choice: 2

Surya 30 400000.00
Amit 27 30000.00

                                  1. Add Record

                                  2. List Records

                                  3. Modify Records

                                  4. Delete Records

                                  5. Exit

                                  Your Choice: 3
                                                Enter the employee name to modify: Amit

Enter new name,age and bs: Rohit,26 and 50000

Modify another record(y/n)n


                                  1. Add Record

                                  2. List Records

                                  3. Modify Records

                                  4. Delete Records

                                  5. Exit

                                  Your Choice: 4

Enter name of employee to delete: Rohit
Delete another record(y/n)n
```

DECLARATION

I hereby declare that the project entitled "EMPLOYEE RECORD SYSTEM" which is being submitted as a Mini Project of 1st semester in Mechanical Engineering to SRM INSTITUTE OF SCIENCE AND TECHNOLOGY is an authentic work done under the guidance of Prof. DR. R. RAJKUMAR, SCHOOL OF COMPUTING, SRMIST. I would also like to thank the professors, friends and family members who have supported me during the project duration.

Date: 08/01/2022

Name: Jean John Jooni

Reg No: RA2111002010018

REREFENCES

The following websites were used as references: -

1. https://www.codewithc.com/mini-project-in-c-employee-record-system/