

## C PROJECT WORK

### Code:

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

#define Student struct Stud

void add(FILE * fp,int); //to add to list
void del(FILE * fp,int); //to delete from list
void delall(FILE * fp); //to delete the entire file
void modify(FILE * fp); //to modify a record
void displayList(FILE * fp); //display whole list
void searchRecord(FILE *fp,int); //find a particular record
void printChar(char ch,int n); //printing a character ch n times
void printHead(); //printing head line for each screen
void marks_sheet(); //to generate the masrks sheet

struct Stud
{
    char name[100];
    char branch[50];
    int roll;
    long long int contact;
    char add[100];
    int chem,elec,cs,bio,mech,maths,age;
```

}S;

```
int main()
```

 $\{$ 

```
FILE * fp;
```

Student s;

```
int option;
```

```
char another;
```

```
if((fp=fopen("c:studentInfo.txt","rb+"))==NULL)
```

 $\{$ 

```
if((fp=fopen("c:studentInfo.txt","wb+"))==NULL)
```

 $\{$ 

```
printf("can't open file");
```

```
return 0;
```

}

}

```
printHead();
```

```
printf("\n\n\t\tCREATED BY");
```

```
printf("\n\n\t\tBHARAT KUMAR NAIK");
```

```
printf("\n\n\t\tKIRAN B S");
```

```
printf("\n\n\t\tKOUSHIK P V");
```

```
printf("\n\t\tpress any key to continue");
```

```
while(1)
```

```
{ int r,n;
```

```
printHead();
```

```
printf("\n\t");
```

```
printChar('-',64);
```

```
printf("\n\n\t\t1. ADD Student");
printf("\n\n\t\t2. DELETE Student");
printf("\n\n\t\t3. MODIFY Student");
printf("\n\n\t\t4. DISPLAY Student LIST");
printf("\n\n\t\t5. Search Record");
printf("\n\n\t\t6. DELETE entire file");
printf("\n\n\t\t7. MARKS SHEET generation");
printf("\n\n\t\t0. EXIT");
```

```
printf("\n\n\t\tEnter Your Option :--> ");
scanf("%d",&option);
```

```
switch(option)
{
    case 0: return 1;
        break;

    case 1: printf("enter the no of students you wanted to enter:");
        scanf("%d",&n);
        add(fp,n);
        break;

    case 2: printf("Enter Register Number of student to be delete:");
        scanf("%d",&r);
        del(fp,r);
        break;

    case 3: modify(fp);
        break;

    case 4: displayList(fp);
        break;

    case 5: printf("Enter Register Number of student :");
        scanf("%d",&r);
```

```

        searchRecord(fp,r);
        break;
case 6:delall(fp);
        break;
case 7:marks_sheet();
        break;
default: printf("\n\t\tYou Pressed wrong key");
        printf("\n\t\tProgram terminated");
        exit(0);

    }
}
return 1;

}

```

//----printing character ch at n times -----

```

void printChar(char ch,int n)
{
    while(n--)
    {
        putchar(ch);
    }
}

```

//-----Printing Head Line of the program -----

```

void printHead()
{ system("cls");

```

```

printf("\n\n\t");
printChar('=',16);
printf("[STUDENT] [INFORMATION] [SYSTEM]");
printChar('=',16);
printf("\n");
}

```

```

// =====ADDING NEW RECORD=====

```

```

void add(FILE * fp,int n)
{
    printHead();

    int i;
    int count_lines = 1;
    char chr;
    chr = getc(fp);
    while (chr != EOF)
    {
        if (chr == '\n')
        {
            count_lines = count_lines + 1;
        }
        chr = getc(fp);
    }

    int x=(count_lines/14);
    for(i=0;i<n;i++)
    {
        x++;

        //extract character from file and store in chr
        printf("\n\n\t\tEnter Roll number \t");
    }
}

```

```

scanf("%d",&s.roll);

printf("\n\n\t\t%d rollno's reg no is :%d",s.roll,x);

fprintf(fp,"\nreg no=%d\n",x+1);

fprintf(fp,"ROLL NO=%d\n",s.roll);

printf("\n\n\t\tEnter Full Name of Student\t");

scanf("%s",s.name); //fgets takes an extra \n character as input

fprintf(fp,"NAME:%s\n",s.name);

printf("\n\n\t\tEnter Branch\t");

scanf("%s",s.branch);

fprintf(fp,"BRANCH:%s\n",s.branch);

printf("\n\n\t\tEnter the student age:");

scanf("%d",&s.age);

if(s.age>=100)

    {printf("reenter the age:");

      scanf("%d",&s.age);}

fprintf(fp,"AGE=%d\n",s.age);

printf("\n\n\t\tEnter the student CONTACT NO:");

scanf("%lld",&s.contact);

if (s.contact>9999999999 || s.contact<=999999999)

    {

        printf("contact no should be 10 digit");

        scanf("%lld",&s.contact);

    }

fprintf(fp,"CONTACT NO=%lld\n",s.contact);

printf("\n\n\t\tEnter the student ADDRESS :");

scanf("%s",s.add);

fprintf(fp,"ADDRESS=%s\n",s.add);

printf("\n\n\t\tEnter the student CHEMISTRY MARKS:");

scanf("%d",&s.chem);

if(s.chem>100)

    {printf("enter proper marks:");

```

```

scanf("%d",&s.chem);}
fprintf(fp,"CHEMISTRY MARKS=%d\n",s.chem);
printf("\n\n\t\tEnter the student ELECTRONICS MARKS:");
scanf("%d",&s.elec);
if(s.elec>100)
{printf("enter proper marks:");
scanf("%d",&s.elec);}
fprintf(fp,"ELECTRONICS MARKS=%d\n",s.elec);
printf("\n\n\t\tEnter the student CS MARKS:");
scanf("%d",&s.cs);
if(s.cs>100)
{printf("enter proper marks:");
scanf("%d",&s.cs);}
fprintf(fp,"CS MARKS=%d\n",s.cs);
printf("\n\n\t\tEnter the student BIOLOGY MARKS:");
scanf("%d",&s.bio);
if(s.bio>100)
{printf("enter proper marks:");
scanf("%d",&s.bio);}
fprintf(fp,"BIOLOGY MARKS=%d\n",s.bio);
printf("\n\n\t\tEnter the student MECHANICS MARKS:");
scanf("%d",&s.mech);
if(s.mech>100)
{printf("enter proper marks:");
scanf("%d",&s.mech);}
fprintf(fp,"MECHANICS MARKS=%d\n",s.mech);
printf("\n\n\t\tEnter the student MATHS MARKS:");
scanf("%d",&s.maths);
if(s.maths>100)
{printf("enter the proper marks:");
scanf("%d",&s.maths);}

```

```

        fprintf(fp,"MATHS MARKS=%d\n",s.maths);

        printChar('-',64);
    }
}

//=====DELETING entire file =====

void delall(FILE * fp)
{FILE *fileptr2;

    fileptr2 = fopen("replica.txt", "w");
    remove("c:studentInfo.txt");
    rename("replica.txt", "c:studentInfo.txt");
    fclose(fileptr2);
    printf("file deleted");
}


//=====DELETING A RECORD FROM LIST =====

void del(FILE * fp,int r)
{int i;
for(i=0;i<=14;i++)
{
    int delete_line;

    delete_line=((r-1)*15);

    FILE *fileptr2;

    fp=fopen("c:studentInfo.txt","r");
    fileptr2 = fopen("replica.txt", "w");

    int temp=0;

    char ch;

    //open new file in write mode

    ch = getc(fp);

    while (ch != EOF)
    {

```



```

        ch = getc(fp);
        if (ch == '\n')
            temp++;
        //except the line to be deleted
        if (temp != delete_line)
        {
            //copy all lines in file replica.c
            putc(ch, fileptr2);
        }
    }
    fclose(fp);
    fclose(fileptr2);
    remove("c:studentInfo.txt");
    rename("replica.txt", "c:studentInfo.txt");
}
printf("record deleted");
}

//=====MODIFY A RECORD =====

void modify(FILE * fp)
{int r;
printf("enter the serialno of student to be modified:");
scanf("%d",&r);
del(fp,r);
add(fp,1);
}

//=====DISPLAY THE LIST =====

void displayList(FILE * fp)
{ printHead();

```

```

Student s;

int i,siz=sizeof(s);

rewind(fp);
char c=fgetc(fp);
while(c!=EOF)
{
    printf("%c",c);
    c=fgetc(fp);

}
fclose(fp);
printf("\n\n\n\t");
printChar('*',65);
printf("\n\n\t");
system("pause");
}
//=====search record=====

void searchRecord(FILE *fp,int r)
{
    int delete_line,i;
for(i=0;i<15;i++)
{
    if(r== 1)
        delete_line=r;
    else
        delete_line=((r-1)*15);
    delete_line=delete_line+i;
    int temp=0;
    char ch;

    //open new file in write mode
    fp=fopen("c:studentInfo.txt","r");
    ch = getc(fp);

```

```

while (ch != EOF)
{
    ch = getc(fp);
    if (ch == '\n')
        temp++;

    //except the line to be deleted
    if (temp == delete_line)
    {
        //copy all lines in file replica.c
        printf("%c",ch);
    }
}

}

//=====MARKs SHEET =====

void marks_sheet()
{ FILE *fg;

    fg=fopen("marksSheet.txt","w");

    printf("\n\n\t\tEnter Roll number \t");
    scanf("%d",&s.roll);

    printf("\n\n\t\tEnter Full Name of Student\t");
    scanf("%s",s.name); //fgets takes an extra \n character as input
    printf("\n\n\t\tEnter Branch\t");
    scanf("%s",s.branch);

    printf("\n\n\t\tEnter the student CHEMISTRY MARKS:");
    scanf("%d",&s.chem);

    if(s.chem>100)
    {printf("enter proper marks:");
      scanf("%d",&s.chem);}

    printf("\n\n\t\tEnter the student ELECTRONICS MARKS:");

```

```
scanf("%d",&s.elec);

if(s.elec>100)

    {printf("enter proper marks:");

    scanf("%d",&s.elec);}

printf("\n\n\t\tEnter the student CS MARKS:");

scanf("%d",&s.cs);

if(s.cs>100)

    {printf("enter proper marks:");

    scanf("%d",&s.cs);}

printf("\n\n\t\tEnter the student BIOLOGY MARKS:");

scanf("%d",&s.bio);

if(s.bio>100)

    {printf("enter proper marks:");

    scanf("%d",&s.bio);}

printf("\n\n\t\tEnter the student MECHANICS MARKS:");

scanf("%d",&s.mech);

if(s.mech>100)

    {printf("enter proper marks:");

    scanf("%d",&s.mech);}

printf("\n\n\t\tEnter the student MATHS MARKS:");

scanf("%d",&s.maths);

if(s.maths>100)

    {printf("enter proper marks:");

    scanf("%d",&s.maths);}

printChar('*',64);

printf("=====\n");

printf("MARKSHEET OF COLLEGE:PES UNIVERSITY\n");

printf("=====\n");

printf("Roll No.: %d Student Name: %s\n", s.roll, s.name);

printf("-----\n");

printf("SUBJECT\t\t\tMARKS\n");
```

```

printf("-----\n");
printf("MATHS\t\t\t %d \n", s.maths);
printf("MECHANICS\t\t %d \n", s.mech);
printf("BIOLOGY\t\t\t %d \n", s.bio);
printf("ELECTRONICS\t\t %d \n", s.elec);
printf("COMPUTER SCIENCE\t %d \n", s.cs);
printf("CHEMISTRY\t\t %d \n", s.chem);
printf("-----\n");
printf("Total Marks:\t\t%d\n", s.maths+s.mech+s.bio+s.elec+s.cs+s.chem);
printf("-----\n");
printf("=====\n");
fprintf(fg,"=====\n");
fprintf(fg,"MARKSHEET OF COLLEGE:PES UNIVERSITY\n");
fprintf(fg,"=====\n");
fprintf(fg,"Roll No.: %d Student Name: %s\n", s.roll, s.name);
fprintf(fg,"-----\n");
fprintf(fg,"SUBJECT\t\t\tMARKS\n");
fprintf(fg,"MATHS\t\t\t %d \n", s.maths);
fprintf(fg,"MECHANICS\t\t %d \n", s.mech);
fprintf(fg,"BIOLOGY\t\t\t %d \n", s.bio);
fprintf(fg,"ELECTRONICS\t\t %d \n", s.elec);
fprintf(fg,"COMPUTER SCIENCE %d \n", s.cs);
fprintf(fg,"CHEMISTRY\t\t %d \n", s.chem);
fprintf(fg,"-----\n");
fprintf(fg,"Total Marks:\t\t%d\n", s.maths+s.mech+s.bio+s.elec+s.cs+s.chem);
fprintf(fg,"-----\n");
fprintf(fg,"=====\n");
fclose(fg);

```

