



HINDUSTHAN INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Innovations in Teaching Learning Process

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Subject code & Title	2CS301 – Programming for Problem solving in C
Academic year & Semester	2023-2024 I

1.Innovation Title: Create the records and attendance using files.

Objectives: Our aim is to create a Records and Attendance for college using files concept.

Uses: Storing and Displaying Information of the student like rollno,registerno,name,department etc...,make an attadance note ,getting single student data(rollno) from the user to display the student information(like name,registerno,phonno,fatherno etc...).Editing the student datas , deleting student datas.

Bloom's Taxonomy : level 6 (CREATE)

Program Outcomes :From this we can learn about the working of files accessing in c program ,loops,functions,condition functions.

Used operation in the Program:

>**FILE**:file function to store or get data in the file(fscanf(),fprintf(),fopen(),fclose()).

>**STDIO_FUNCTION**:display and get data from the user scanf(),printf(),getch(),putch().

>**LOOPS**:Execute the program repeatedly (for(),while()).

>**USER_DEFINEDFUNCTION**:created function by the user himself to execute the program efficiently (line(),writing(),delet(),space(),linew(),reading(),redname()abdisplay(),alter()).

line() -> Displaying a single line.

writing() ->Store data(information) into the file.

reading() ->Displaying the student informations in the cmd.

abdisplay() ->Display the number of student information by the rollno.

linew() ->Display the a line and student data's.

redname() ->Display the student name by the rollno.

space() ->Allocate as much space as needed to display the content efficiently in table as row and column.

alter() ->Editing the student details data's in the file.

delet() ->Delete all the student information(data) in the file.

Algorithm:

>**Step 1:**Start.

>**Step 2:**Include the headerfile for using files in program.

>**Step 3:**Declare the function and variable.

>**Step 4:**Declare the pointer variable for file to access.

>**Step 5:**Declare file for displaying data's, inserting student data into the file, deleting student information in the file, editing data's in the file, making attendance, get student information from the file etc...

>**Step 6:**Use output and input functions to display data and get data from the user to store the data in the given data from the user.

>**Step 7:**After get student information from the user and store the data's in the file using the headerfile files functions

>**Step 8:**Use control statement to get choices from the user and execute the block of statement to execute.

>**Step 9:**Loops with control statement to execute the block of code repeatedly to get student information from the user repeatedly and displaying student information repeatedly and execute the full program until the user want to exit.

>**Step 10:**End the program.

Program:

```
/*
title      :Attendance for college
Name       :Abdul gafoor suhail
department:CSE.A
*/
#include<stdio.h>
#include<string.h>
#include<conio.h>
void line(){
    int i;
    for(i=0;i<20;i++){
        printf("-");
    }
    puts("\n");
}
void writing(){
    FILE*suh;
    int roll,op,i;
    char reg[15],father[80],phone[15],name[100],buff;
    suh=fopen("suhailfile.txt","a");
    printf("How many student do you want to add :");
    scanf("%d",&op);
```

```

        for(i=0;i<op;i++){
            printf("\n\tStudent %d",i+1);
            printf("\nEnter your roll      : ");
            scanf("%d",&roll);
            printf("\nEnter your register no : ");
            scanf("%s",reg);
            printf("Enter your name          : ");
            scanf("%s",&name);
            printf("Enter your father name    : ");
            scanf("%s",&father);
            printf("Enter your phone no      : ");
            scanf("%c",&buff);
            scanf("%s",&phone);
            fprintf(suh,"%d %s %s %s %s\n",roll,reg,name,father,phone);
        }
        printf("\n\tThe data is Sucessfully updated\n");
        fclose(suh);
    }
    void delet(){
        FILE*suh;
        suh=fopen("suhailfile.txt","w");
        fclose(suh);
        printf("\n\n\tAll the Students data are erased\n");
    }

    void space(int size,char name[80]){
        int max1=0,j,num1=0;
        num1=strlen(name);

        max1=size-num1;
        printf("%s",name);
        for(j=0;j<max1;j++){
            printf(" ");
        }
        printf("|");
    }

    void linew(){
        printf("-----");
        printf("-----");
    }

    void reading(){
        FILE*suh;
        suh=fopen("suhailfile.txt","r");
        int j,age,roll,op,i,num1,max1;
        char reg[15],father[80],phone[15],name[100];
        linew();
        printf("\n|rollno |");

        space(13,"Register no");
        space(25,"Name");
        space(20,"Father Name");
        printf("%s\n","Phone no  |");
        linew();
        printf("\n");

        while(fscanf(suh,"%d %s %s %s %s\n",&roll,&reg,&name,&father,&phone)!=EOF){
            printf("|%d      |",roll);
            space(13,reg);
            space(25,name);
            space(20,father);
            printf("%s|\n",phone);
        }

        linew();

        fclose(suh);
    }

    void redname(){
        FILE*suh;
        suh=fopen("suhailfile.txt","r");
        int roll,op,i,com;
        char reg[15],father[80],phone[15],name[100];

```

```

printf("\nEnter the roll number of the student : ");
scanf("%d",&com);
while(fscanf(suh,"%d %s %s %s %s\n",&roll,&reg,&name,&father,&phone)!=EOF){
    if(roll==com){
        printf("\n _____\n|Roll_no |Name
\n| %d\t | %s\n",roll,name);
    }
}

fclose(suh);
}

void abdisplay(){
FILE*suh;
suh=fopen("suhailfile.txt","r");
int roll,op,i,com,choice,j,k;
char reg[15],father[80],phone[15],name[100];
int list1[70];
printf("How many students do you want to display : ");
scanf("%d",&choice);
for(j=0;j<choice;j++){
printf("\nEnter the roll number of the student %d: ",j+1);
scanf("%d",&list1[j]);
}
printf("\n\tToday total absent : %d\n",choice);
linev();
printf("\n|rollno |");
    space(13,"Register no");
    space(25,"Name");
    space(20,"Father Name");
    printf("%s\n","Phone no |");
    linev();
while(fscanf(suh,"%d %s %s %s %s\n",&roll,&reg,&name,&father,&phone)!=EOF){
for(k=0;k<choice;k++){
if(roll==list1[k]){
    printf("\n| %d |",roll);
    space(13,reg);
    space(25,name);
    space(20,father);
    printf("%s|",phone);
}
}
}
printf("\n");
linev();
fclose(suh);
}

void alter(){
char reg[15],father[80],phone[15],name[100],buff;
int age,roll,roll1,choice;
FILE*ptr;
FILE*ptr1;
ptr=fopen("suhailfile.txt","r");
ptr1=fopen("demo.txt","w");
printf("\nEnter the changing student roll no : ");
scanf("%d",&roll1);

while(fscanf(ptr,"%d %s %s %s %s\n",&roll,&reg,&name,&father,&phone)!=EOF){
    if(roll==roll1){
        printf("1,name\n2,roll no\n3,register no\n4,Father
name\n5,Phone number\nWhat do you want to change Enter your choice : ");
        scanf("%d",&choice);
        scanf("%c",&buff);
        if(choice==1){
            printf("Enter the changing student
name :");
            gets(name);
            fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);

```

```

        }
        else if(choice==2){
            printf("Enter the changing student roll
no    :");
            scanf("%d",roll);

            fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);
        }
        else if(choice==3){
            printf("Enter the changing student
register no :");
            gets(reg);

            fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);
        }
        else if(choice==4){
            printf("Enter the changing student
Father name :");
            gets(father);

            fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);
        }
        else if(choice==5){
            printf("Enter the changing student
gender :");
            gets(phone);

            fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);
        }
    }
    else{
        fprintf(ptr1,"%d %s %s %s %s\n",roll,reg,name,father,phone);
    }
}

fclose(ptr);
fclose(ptr1);
remove("suhailfile.txt");
rename("demo.txt","suhailfile.txt");
printf("\nYour Changes has been Successfully Updated\n");

}

int main(){
    int choice;
    char op,buff,con;
    printf("\t\tWelcome to the attendance \n");
    while(1){
        printf("\n1,Check the student list \n2,Add new student details \n3,Alter student
details\n4,Check the absent student \n5,Check the student name by roll no\n6,Delete
all the student details\n7,Exit \nEnter the choice : ");
        scanf("%d",&choice);
        if(choice==1){
            reading();
        }
        else if(choice==2){
            writing();
        }
        else if(choice==3){
            reading();
            alter();
        }
        else if(choice==6){
            scanf("%c",&buff);
            printf("Do you really want to delete\ (y/n)");
            scanf("%c",&con);
            if(con=='y' || con=='Y'){
                delet();
            }
        }
    }
}

```

```

else if(choice==5){
    redname();
}
else if(choice==7){
    break;
}
else if(choice==4){
    abdisplay();
}
else{
    continue;
}

}
getch();
return 0;
}

```

OUTPUT:

Initial page: user need to enter the choice

```

C:\Users\syedal\Desktop\New folder\projectattadance1 (1).exe
Welcome to the attendance

1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice :

```

now the user enter the choice 1 to display the information in the file but initially there is no data in the file

```

C:\Users\syedal\Desktop\New folder\projectattadance1 (1).exe
Welcome to the attendance

1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice : 1

-----
|rollno |Register no |Name                |Father Name        |Phone no |
|-----|-----|-----|-----|-----|
-----

1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice :

```

Now the user enter the choice 2 to adding the student data by entering the data in keyboard and store

```
C:\Users\syedal\Desktop\New folder\projectattadance1 (1).exe
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice : 2
How many student do you want to add : 4

    Student 1
Enter your roll      : 1

Enter your register no : 720823103001
Enter your name       : AASHIL.C.T.K
Enter your father name : null
Enter your phone no   : 9946634025

    Student 2
Enter your roll      : 2

Enter your register no : 720823103002
Enter your name       : AATHISH.K
Enter your father name : null
Enter your phone no   : 8220211262

    Student 3
Enter your roll      : 3

Enter your register no : 720823103003
Enter your name       : ABDUL_GAFOOR_SUHAIL.S
Enter your father name : Syed_Ali.A
Enter your phone no   : 9092875741

    Student 4
Enter your roll      : 4

Enter your register no : 720823103004
Enter your name       : ABDULMAJID.A
Enter your father name : null
Enter your phone no   : 9787145107

    The data is Sucessfully updated
```

After adding the details the user enter choice 1 to display the all data in the files

```
C:\Users\syedal\Desktop\New folder\projectattadance1 (1).exe
Enter your phone no : 9787145107

    The data is Sucessfully updated

1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice : 1
-----
|rollno|Register no|Name                |Father Name|Phone no|
-----
|1     |720823103001|AASHIL.C.T.K       |null      |9946634025|
|2     |720823103002|AATHISH.K          |null      |8220211262|
|3     |720823103003|ABDUL_GAFOOR_SUHAIL.S|Syed_Ali.A|9092875741|
|4     |720823103004|ABDULMAJID.A       |null      |9787145107|
-----
1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice :
```

Now the user enter the choice 4 to alter the a data father name of rollno 1

```
C:\Users\syedal\Desktop\New folder\projectattendance1 (1).exe
4 | 720823103004 | ABDULMAJID.A | null | 9787145107 |
-----
1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice : 3
-----
|rollno |Register no |Name |Father Name |Phone no |
-----
|1 |720823103001 |AASHIL.C.T.K |null |9946634025 |
|2 |720823103002 |AATHISH.K |null |8220211262 |
|3 |720823103003 |ABDUL_GAFOOR_SUHAIL.S |Syed_Ali.A |9092875741 |
|4 |720823103004 |ABDULMAJID.A |null |9787145107 |
-----
Enter the changing student roll no : 1
1,name
2,roll no
3,register no
4,Father name
5,Phone number
What do you want to change Enter your choice : 4
Enter the changing student Father name :joseph

Your Changes has been Successfully Updated

1,Check the student list
2,Add new student details
3,Alter student details
4,Check the absent student
5,Check the student name by roll no
6,Delete all the student details
7,Exit
Enter the choice :
```

Now the user enter the choice 7 to Exit the program.

CONCLUSION:

Successfully the data is inserted and displayed and deleted into the file by program.