Vivaan Mittal

CSE-3C

G1

2K20CSUN01124

DATABASE MANAGEMENT SYSTEM

LAB-0

Q.1 Create and display 5 records for students using file operations in C.

Solution: -

Code: -

#include<stdio.h>

#include<stdlib.h>

#include <string.h>

#define MAX_LINE_LENGTH 80

struct student{

```c
    int sno;
    char name[50];
    int marks;
}student;


void add(int n){
    FILE *ptr;
    int i;
    ptr=fopen("data1.txt","a");
    if(ptr==NULL){
        printf("Fill Can Not be Opened");
        exit(1);
    }
    for(i=0;i<n;i++){
        printf("Enter the Roll No=");
        scanf("%d",&student.sno);
        printf("Enter the Name=");
        scanf("%s",&student.name);
```

```c
        printf("Enter the Marks = ");

        scanf("%d",&student.marks);

        fprintf(ptr,"%d %s %d
\n",student.sno,student.name,student.marks);



    }

    fclose(ptr);
}



void read(){
    FILE *ptr;
    int i;
    ptr=fopen("data1.txt","r");

    char line[MAX_LINE_LENGTH] = {0};

    if(ptr==NULL){
```

```
        printf("Fill Can Not be Opened");
        exit(1);
    }


    while (fgets(line, MAX_LINE_LENGTH, ptr))
    {

        printf("%s",line);

    }
    fclose(ptr);

}

void main(){
    add(5);
    read();

}
```

Output: -

Q.2 Using file operations create, display, modify insert and delete records for employee system.

Solution: -

Code: -

#include<stdio.h>

#include<stdlib.h>

#include <string.h>

#define MAX_LINE_LENGTH 80

```c
struct employee{
    int sno;
    char name[50];
    int sal;
}employee;




void create(){
    FILE *ptr;
    int i,n;
    printf("Enter the number of record you want to enter = ");
    scanf("%d",&n);
    ptr=fopen("data1.txt","w");
    if(ptr==NULL){
        printf("Fill Can Not be Opened");
        exit(1);
```

```c
    }
    for(i=0;i<n;i++){
        printf("Enter the Roll No=");
        scanf("%d",&employee.sno);
        printf("Enter the Name=");
        scanf("%s",&employee.name);
        printf("Enter the Sal = ");
        scanf("%d",&employee.sal);
        fprintf(ptr,"%d %s %d
\n",employee.sno,employee.name,employee.sal);


    }
    fclose(ptr);
}


void add(){
```

```c
FILE *ptr;

int i,n;

printf("Enter the number of record you want to enter = ");

scanf("%d",&n);

ptr=fopen("data1.txt","a");

if(ptr==NULL){

    printf("Fill Can Not be Opened");

    exit(1);

}

for(i=0;i<n;i++){

    printf("Enter the Roll No=");

    scanf("%d",&employee.sno);

    printf("Enter the Name=");

    scanf("%s",&employee.name);

    printf("Enter the Sal = ");

    scanf("%d",&employee.sal);

    fprintf(ptr,"%d %s %d \n",employee.sno,employee.name,employee.sal);
```

```
        }
        fclose(ptr);
}




void read(){
    FILE *ptr;
    int i;
    ptr=fopen("data1.txt","r");

    char line[MAX_LINE_LENGTH] = {0};

    if(ptr==NULL){
        printf("Fill Can Not be Opened");
```

```c
        exit(1);
    }


    while (fgets(line, MAX_LINE_LENGTH, ptr))
    {


        printf("%s",line);


        //if (line[strlen(line) - 1] != '\n')
            //printf("\n");
    }
    fclose(ptr);

}
```

```c
void modify(){
    FILE *ptr;
    FILE *tptr;

    int i,found=0;
    ptr=fopen("data1.txt","r");
    tptr=fopen("temp.txt","w");
    char rno[10]={0};

    char line[MAX_LINE_LENGTH] = {0};
    char ch;
    printf("Enter the Roll No to modify = ");
    scanf("%s",&rno);
    while(fgets(line, MAX_LINE_LENGTH, ptr)){
        char fnum[10]="";
        for(i=0;i<MAX_LINE_LENGTH;i++){
            ch=line[i];
            if(ch ==' '){
```

```
            break;
        }
        strncat(fnum, &ch, 1);


    }
    if(strcmp(rno,fnum)==0){
        found=1;
        printf("Found\n");



        printf("Enter the Roll No=");
        scanf("%d",&employee.sno);
        printf("Enter the Name=");
        scanf("%s",&employee.name);
        printf("Enter the Sal = ");
        scanf("%d",&employee.sal);
```

```
        fprintf(tptr,"%d %s %d
\n",employee.sno,employee.name,employee.sal);



    }

    else{

        fprintf(tptr,"%s",line);

    }

}

if (!found){

    printf("Not found \n");

}


fclose(ptr);

fclose(tptr);



if(found==1){

    FILE *nptr;
```

```
FILE *ntptr;

nptr=fopen("data1.txt","w");
ntptr=fopen("temp.txt","r");

while (fgets(line, MAX_LINE_LENGTH, ntptr)){

    fprintf(nptr,"%s",line);

}

fclose(nptr);
fclose(ntptr);

}


}
```

```c
void delete(){
    FILE *ptr;
    FILE *tptr;

    int i,found=0;
    ptr=fopen("data1.txt","r");
    tptr=fopen("temp.txt","w");
    char rno[10]={0};

    char line[MAX_LINE_LENGTH] = {0};
    char ch;
    printf("Enter the Roll No to Delete = ");
    scanf("%s",&rno);
    while(fgets(line, MAX_LINE_LENGTH, ptr)){
        char fnum[10]="";
```

```
for(i=0;i<MAX_LINE_LENGTH;i++){
    ch=line[i];
    if(ch ==' '){
        break;
    }
    strncat(fnum, &ch, 1);


}
if(strcmp(rno,fnum)==0){
    found=1;
    printf("Found\n");


}
else{
    fprintf(tptr,"%s",line);
}
}
```

```c
if (!found){
    printf("Not found \n");
}


fclose(ptr);
fclose(tptr);



if(found==1){
    FILE *nptr;
    FILE *ntptr;


    nptr=fopen("data1.txt","w");
    ntptr=fopen("temp.txt","r");


    while (fgets(line, MAX_LINE_LENGTH, ntptr)){

        fprintf(nptr,"%s",line);
```

```c
        }


        fclose(nptr);

        fclose(ntptr);


    }




}




void main(){


    printf("Enter Your Function : -\n");

    printf("0. Create\n");

    printf("1. Add\n");

    printf("2. Display\n");
```

```c
printf("3. Modify\n");

printf("4. delete\n");

printf("5. Exit\n");


int num=10;


while(num!=5){

    printf("\n\n\n\nEnter the Number :-");

    scanf("%d",&num);



    if(num==0){

        create();

    }


    else if (num==1){

        add();

    }
```

```
    else if(num==2){

        read();

    }


    else if(num==3){

        modify();

    }


    else if(num==4){

        delete();

    }


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


}


}
```

Output: -

```
vivaan@DESKTOP-9CK33MB: ~/data/3rdsem/dbms/lab1
vivaan@DESKTOP-9CK33MB:~/data/3rdsem/dbms/lab1$ nano 2.c
vivaan@DESKTOP-9CK33MB:~/data/3rdsem/dbms/lab1$ gcc -o tree 2.c
2.c: In function 'create':
2.c:30:17: warning: format '%s' expects argument of type 'char *', but argument 2 has type 'char (*)[50]' [-Wformat=]
   30 |         scanf("%s",&employee.name);
      |               ~^   ~~~~~~~~~~~~~~~
      |                |        |
      |                |        char (*)[50]
      |                char *
2.c: In function 'add':
2.c:56:17: warning: format '%s' expects argument of type 'char *', but argument 2 has type 'char (*)[50]' [-Wformat=]
   56 |         scanf("%s",&employee.name);
      |               ~^   ~~~~~~~~~~~~~~~
      |                |        |
      |                |        char (*)[50]
      |                char *
2.c: In function 'modify':
2.c:111:13: warning: format '%s' expects argument of type 'char *', but argument 2 has type 'char (*)[10]' [-Wformat=]
  111 |     scanf("%s",&rno);
      |           ~^   ~~~~~
      |            |     |
      |            |     char (*)[10]
      |            char *
2.c:132:21: warning: format '%s' expects argument of type 'char *', but argument 2 has type 'char (*)[50]' [-Wformat=]
  132 |             scanf("%s",&employee.name);
      |                   ~^   ~~~~~~~~~~~~~~~
      |                    |        |
      |                    |        char (*)[50]
      |                    char *
2.c: In function 'delete':
2.c:188:13: warning: format '%s' expects argument of type 'char *', but argument 2 has type 'char (*)[10]' [-Wformat=]
  188 |     scanf("%s",&rno);
      |           ~^   ~~~~~
      |            |     |
      |            |     char (*)[10]
      |            char *
vivaan@DESKTOP-9CK33MB:~/data/3rdsem/dbms/lab1$ ./tree
Enter Your Function : -
0. Create
1. Add
2. Display
3. Modify
4. delete
5. Exit
```

```
vivaan@DESKTOP-9CK33MB: ~/data/3rdsem/dbms/lab1

Enter the Number :-0
Enter the number of record you want to enter = 3
Enter the Emp No=1
Enter the Name=Vivaan1
Enter the Sal = 2
Enter the Emp No=2
Enter the Name=Vivaan2
Enter the Sal = 1
Enter the Emp No=3
Enter the Name=Vivaan3
Enter the Sal = 3




Enter the Number :-1
Enter the number of record you want to enter = 1
Enter the Emp No=4
Enter the Name=Vivaan4
Enter the Sal = 4




Enter the Number :-3
Enter the Roll No to modify = 3
Found
Enter the Emp No=12
Enter the Name=Vivaan12
Enter the Sal = 2




Enter the Number :-2
1 Vivaan1 2
```

```
vivaan@DESKTOP-9CK33MB: ~/data/3rdsem/dbms/lab1

Enter the Number :-2
1 Vivaan1 2
2 Vivaan2 1
12 Vivaan12 2
4 Vivaan4 4




Enter the Number :-4
Enter the Roll No to Delete = 12
Found




Enter the Number :-2
1 Vivaan1 2
2 Vivaan2 1
4 Vivaan4 4




Enter the Number :-5


vivaan@DESKTOP-9CK33MB:~/data/3rdsem/dbms/lab1$
```