

/*FILE Handling: Department maintains student's database.

The file contains roll number, name, division and address.

Write a program to create a sequential file to store and maintain student data.

It should allow the user to add, delete information of student. Display information of particular student.

If record of student does not exist an appropriate message is displayed.

If student record is found it should display the student details. */

```
#include<iostream>
#include<fstream>
#include<stdio.h>
using namespace std;
typedef struct student
{
    int roll;
    char a,name[20],add[30];
}stud;
void create();
void display();
void insert();
void search(int key);
void delete1(int key);
void modify(int key);

int main()
{int ch,x;
do
{
    cout<<"\n\t***MENU***\n1.Accept\n2.Display\n3.Insert\n4.Search\n5.Delete\n6.Modify\n7.Exi
t\nEnter your choice=";
    cin>>ch;
    switch(ch)
    {
        case 1:create();
            break;
        case 2:display();
            break;
        case 3:insert();
            break;
        case 4: cout<<"Enter roll no to search=";
            cin>>x;
            search(x);
            break;
        case 5:cout<<"Enter roll no to delete=";
            cin>>x;
            delete1(x);
            break;
        case 6:cout<<"Enter roll no to modify=";
            cin>>x;
            modify(x);
            break;
    }
}while(ch!=7);

return 0;
}
```

```
ifstream fin;
ofstream fout;
fstream fm;
int n;
char fname[20];
```

```
void create()
{ int i;
    stud s;
    cout<<"Enter name of the file=";
    cin>>fname;
    fm.open(fname,ios::out);

    cout<<"\nEnter no. of records:=";
    cin>>n;
    for(i=0;i<n;i++)
    {
        cout<<"Enter roll no=";
        cin>>s.roll;
        cout<<"Enter name=";
        cin>>s.name;
        cout<<"Enter division=";
        cin>>s.a;
        cout<<"Enter address=";
        cin>>s.add;
        fm.write((char*)&s,sizeof(s));
    }
    fm.close();
} //create
```

```
void display()
{ int i;
    stud s;
    fin.open(fname);
    cout<<"\nROLL NO\tNAME\tDIV\tADDRESS";
    // while(!fin.eof())
    for(i=0;i<n;i++)
    {
        fin.read((char*)&s,sizeof(s));
        cout<<"\n"<<s.roll<<"\t"<<s.name<<"\t"<<s.a<<"\t"<<s.add;
    }
    fin.close();
} //display
```

```
void insert()
{ stud s;
    fout.open(fname,ios::app);
    cout<<"Enter roll no=";
    cin>>s.roll;
    cout<<"Enter name=";
    cin>>s.name;
    cout<<"Enter division=";
    cin>>s.a;
    cout<<"Enter address=";
```

```

        cin>>s.add;
        fout.write((char*)&s,sizeof(s));
        n++;
    fout.close();
}

void search(int key)
{
    stud s;
    int flag=0,i;

    fin.open(fname);

    for(i=0;i<n;i++)
    {
        fin.read((char *)&s,sizeof(s));
        if(s.roll==key)
        {
            cout<<"\nRecord is present their corresponding details are:\nRoll no=";
            cout<<s.roll<<"\nName="<<s.name<<"\nDivision="<<s.a<<"\nAddress="<<s.add;
            flag=1;
        }
    }
    if(flag==0)
        cout<<"\nRoll no.= "<<key<<" is not present in the record";

    fin.close();
}

void delete1(int key)
{
    stud s;
    int flag=0,i;

    fin.open(fname);
    fout.open("temp.txt",ios::out);

    for(i=0;i<n;i++)
    {
        fin.read((char *)&s,sizeof(s));
        if(s.roll==key)
        {
            cout<<"\nRecord deleted successfully";
            flag=1;
        }
        else
        {
            fout.write((char *)&s,sizeof(s));
        }
    }
    if(flag==0)
        cout<<"\nRoll no.= "<<key<<" is not present in the record";
    else
        n--;

    fin.close();
    fout.close();

    remove(fname);
    rename("temp.txt",fname);
}

```

```

}

void modify(int key)
{
    stud s;
    int flag=0,i;

    fin.open(fname);
    fout.open("temp.txt",ios::out);

    for(i=0;i<n;i++)
    {
        fin.read((char *)&s,sizeof(s));
        if(s.roll==key)
        {
            cout<<"Enter roll no=";
            cin>>s.roll;
            cout<<"Enter name=";
            cin>>s.name;
            cout<<"Enter division=";
            cin>>s.a;
            cout<<"Enter address=";
            cin>>s.add;
            fout.write((char *)&s,sizeof(s));

            flag=1;
        }
        else
        {
            fout.write((char *)&s,sizeof(s));
        }
    }
    if(flag==0)
        cout<<"\nRoll no. = "<<key<<" is not present in the record";

    fin.close();
    fout.close();

    remove(fname);
    rename("temp.txt",fname);
}

```

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=1

Enter name of the file=Deepak

Enter no. of records:=3

Enter roll no=11

Enter name=Pallavi

Enter division=A

Enter address=Loni

Enter roll no=01

Enter name=Sakshi

Enter division=B

Enter address=Kolhar

Enter roll no=25

Enter name=Sarthak

Enter division=C

Enter address=Deolali

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=2

ROLL NO	NAME	DIV	ADDRESS
---------	------	-----	---------

11	Pallavi A	Loni	
1	Sakshi B	Kolhar	
25	Sarthak C	Deolali	

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=3

Enter roll no=23

Enter name=Ishwari

Enter division=D

Enter address=Rahuri

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=2

ROLL NO	NAME	DIV	ADDRESS
---------	------	-----	---------

11	Pallavi A	Loni	
1	Sakshi B	Kolhar	
25	Sarthak C	Deolali	
23	Ishwari D	Rahuri	

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=4

Enter roll no to search=25

Record is present their corresponding details are:

Roll no=25

Name=Sarthak

Division=C

Address=Deolali

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=5

Enter roll no to delete=23

Record deleted successfully

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=2

ROLL NO	NAME	DIV	ADDRESS
---------	------	-----	---------

11	Pallavi A	Loni	
1	Sakshi B	Kolhar	
25	Sarthak C	Deolali	

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=6

Enter roll no to modify=1

Enter roll no=11

Enter name=Mangesh

Enter division=E

Enter address=Shrirampur

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=2

ROLL NO	NAME	DIV	ADDRESS
---------	------	-----	---------

11	Pallavi A	Loni	
11	Mangesh E	Shrirampur	
25	Sarthak C	Deolali	

MENU

- 1.Accept
- 2.Display
- 3.Insert
- 4.Search
- 5.Delete
- 6.Modify
- 7.Exit

Enter your choice=7

...Program finished with exit code 0

Press ENTER to exit console.