#include<iostream>

#include<fstream>

using namespace std;

class Student

{

int rollno;

char name[30];

char div;

char add[30];

public:

void accept()

{

cout<<"\n enter roll number: ";

cin>>rollno;

cout<<"\n enter name: ";

cin>>name;

cout<<"\n enter division: ";

cin>>div;

cout<<"\n enter address: ";

cin>>add;

}

void display()

{

cout<<"\n"<<rollno<<"\t"<<name<<"\t"<<div<<"\t"<<add;

}

int getRollNo()

{

return rollno;

}

};

void addRecords()

{

int n,i;

Student s;

ofstream out("Student.txt");

cout<<"\n enter total students: ";

cin>>n;

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

{

s.accept();

out.write((char \*)&s,sizeof(s));

}

out.close();

}

void displayRecords()

{

ifstream inf("Student.txt");

Student s;

cout<<"\n Roll No\tName\tDiv\tAddress";

while(inf.read((char \*)&s,sizeof(s)))

{

s.display();

}

inf.close();

}

void addNewRecord()

{

ofstream out("Student.txt",ios::app);

Student s;

s.accept();

out.write((char \*)&s,sizeof(s));

out.close();

}

void search(int r)

{

ifstream inf("Student.txt");

int flag=0;

Student s;

while(inf.read((char \*)&s,sizeof(s)))

{

if(s.getRollNo()==r)

{

flag=1;

cout<<"\nRecord Found\n";

cout<<"\n Roll No\tName\tDiv\tAddress";

s.display();

break;

}

}

if(flag==0)

{

cout<<"\n Record not found.";

}

inf.close();

}

void update(int r)

{

ifstream inf("Student.txt");

ofstream out("temp.txt");

int flag=0;

Student s;

while(inf.read((char \*)&s,sizeof(s)))

{

if(s.getRollNo()==r)

{

flag=1;

s.accept();

out.write((char \*)&s,sizeof(s));

cout<<"\n Record updated";

}

else

{

out.write((char \*)&s,sizeof(s));

}

}

if(flag==0)

{

cout<<"Record not found to update";

}

out.close();

inf.close();

remove("Student.txt");

rename("temp.txt","Student.txt");

}

void deleteRecord(int r)

{

ifstream inf("Student.txt");

ofstream out("temp.txt");

int flag=0;

Student s;

while(inf.read((char \*)&s,sizeof(s)))

{

if(s.getRollNo()==r)

{

flag=1;

cout<<"\n Record deleted....";

continue;

}

else

{

out.write((char \*)&s,sizeof(s));

}

}

if(flag==0)

{

cout<<"Record not found to delete";

}

out.close();

inf.close();

remove("Student.txt");

rename("temp.txt","Student.txt");

}

int main()

{

int ch,r;

do

{

cout<<"\n 1. Add records";

cout<<"\n 2. Display all records";

cout<<"\n 3. Add new record";

cout<<"\n 4. Search a record";

cout<<"\n 5. Update a record";

cout<<"\n 6. Delete a record";

cout<<"\n 7. Exit";

cout<<"\nEnter your choice: ";

cin>>ch;

switch(ch)

{

case 1:

addRecords();

cout<<"\n Added all records successfully....";

break;

case 2:

displayRecords();

break;

case 3:

addNewRecord();

cout<<"\n Added new record successfully....";

break;

case 4:

cout<<"\n enter roll number to search: ";

cin>>r;

search(r);

break;

case 5:

cout<<"\n enter roll number to update: ";

cin>>r;

update(r);

break;

case 6:

cout<<"\n enter roll number to delete: ";

cin>>r;

deleteRecord(r);

break;

}

}while(ch!=7);

return 0;

}

OUTPUT:

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 1

enter total students: 4

enter roll number: 34

enter name: Khushi\_Lohiya

enter division: B

enter address: Kolhapur

enter roll number: 35

enter name: Anjali\_Mande

enter division: B

enter address: Baramati

enter roll number: 38

enter name: Vaishnavi\_Mohite

enter division: B

enter address: Pune

enter roll number: 16

enter name: Samruddhi\_Dombe

enter division: B

enter address: Pune

Added all records successfully....

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 2

Roll No Name Div Address

34 Khushi\_Lohiya B Kolhapur

35 Anjali\_Mande B Baramati

38 Vaishnavi\_Mohite B Pune

16 Samruddhi\_Dombe B Pune

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 3

enter roll number: 45

enter name: Pallavi\_Pawar

enter division: B

enter address: Satara

Added new record successfully....

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 4

enter roll number to search: 38

Record Found

Roll No Name Div Address

38 Vaishnavi\_Mohite B Pune

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 5

enter roll number to update: 34

enter roll number: 36

enter name: siddhika\_Markad

enter division: B

enter address: Mumbai

Record updated

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 6

enter roll number to delete: 36

Record deleted....

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit

Enter your choice: 2

Roll No Name Div Address

35 Anjali\_Mande B Baramati

38 Vaishnavi\_Mohite B Pune

16 Samruddhi\_Dombe B Pune

45 Pallavi\_Pawar B Satara

1. Add records

2. Display all records

3. Add new record

4. Search a record

5. Update a record

6. Delete a record

7. Exit