#include <iostream>

#include <algorithm>

#include <vector>

using namespace std;

class Student

{

public:

int roll;

char name[10];

char dob[10];

long int telephone;

void getdata()

{

cout<<"\n Enter Roll No. : ";

cin>>roll;

cout<<"\nEnter Telephone No. : ";

cin>>telephone;

cout<<"\nEnter Name : ";

cin>>name;

cout<<"\nEnter DOB : ";

cin>>dob;

}

bool operator==(const Student &s1)

{

return (roll==s1.roll);

}

void putdata()

{

cout<<roll<<"\t"<<name<<"\t"<<dob<<"\t"<<telephone<<endl;

}

};

vector<Student> create()

{

Student s;

vector<Student> temp;

int n,i;

cout<<"\n How many Students you want do store : ";

cin>>n;

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

{

s.getdata();

temp.push\_back(s);

}

return temp;

}

void display(vector<Student> &temp)

{

cout<<"\n Data of Students : ";

cout<<"\n Roll No. \t name\t Date of Birth \t Telephone No ";

vector<Student>::iterator itr;

for(itr=temp.begin();itr!=temp.end();itr++)

{

itr->putdata();

}

}

void search(vector<Student> &temp)

{

Student s;

cout<<"\nEnter Roll No. of Student to search : ";

cin>>s.roll;

vector<Student>::iterator itr;

itr=find(temp.begin(),temp.end(),s);

if(itr==temp.end())

{

cout<<"\n Not found!!!";

}

else

{

cout<<"\nRecord Found!!!";

cout<<itr->roll<<"\t"<<itr->name<<"\t"<<itr->dob<<"\t"<<itr->telephone;

}

}

bool check1(const Student &s1, const Student &s2)

{

return (s1.roll<s2.roll);

}

void sor(vector<Student> &temp)

{

sort(temp.begin(),temp.end(),check1);

display(temp);

}

void delet(vector<Student> &temp)

{

Student s;

cout<<"\nEnter Roll No .of Student to delete : ";

cin>>s.roll;

vector<Student>::iterator itr;

itr=find(temp.begin(),temp.end(),s);

if(itr==temp.end())

{

cout<<"\nNot found!!!";

}

else

{

temp.erase(itr);

cout<<"\nRecord Deleted!!!";

display(temp);

}

}

void insert(vector<Student> &temp)

{

Student s;

s.getdata();

temp.push\_back(s);

cout<<"\n Record Inserted Successfully";

display(temp);

}

int main()

{

char choice;

int ch;

vector<Student> v;

do

{

cout<<"\n 1.Create \n 2.Display\n 3.sreach \n 4.sort \n 5.delete \n 6.insert";

cout<<"\n Enter your choice";

cin>>ch;

switch(ch)

{

case 1:

v=create();

break;

case 2:

display(v);

break;

case 3:

search(v);

case 4:

sor(v);

break;

case 5:

delet(v);

break;

case 6:

insert(v);

break;

default : cout<<"\n Invalid Choice";

}

cout<<"\n Dou you want to continue?(y/n) : ";

cin>>choice;

}while(choice=='y');

return 0;

}