#include<iostream>

#include<string>

#include<vector>

#include<iterator>

#include<algorithm>

using namespace std;

class student

{

string name,dob;

string phone;

public:

int r;

void read()

{

cout<<"\nEnter name of student:";

cin>>name;

cout<<"\nEnter Roll number of student:";

cin>>r;

cout<<"\nEnter Date of Birth of student:";

cin>>dob;

cout<<"\nEnter Phone number:\n";

cin>>phone;

}

void display()

{

cout<<"Name of student:"<<name<<endl;

cout<<"\nRoll number of student:"<<r<<endl;

cout<<"\nDate of birth of student:"<<dob<<endl;

cout<<"\nPhone number of student:"<<phone<<endl;

}

bool operator==(const student &s)

{

return(r==s.r);

}

};

void insert(vector<student> &v)

{

student ob;

ob.read();

v.push\_back(ob);

}

void show(vector<student> v)

{

vector <student>::iterator itr;

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

{

itr->display();

}

}

void search(vector<student> v)

{

student ob;

cout<<"Enter the Roll no of student you want to search:-";

cin>>ob.r;

vector<student>::iterator itr;

itr=find(v.begin(),v.end(),ob);

if(itr==v.end())

{

cout<<"Record Not found";

}

else

{

cout<<"Record is found";

itr->display();

}

}

void del(vector<student> &v)

{

student ob;

cout<<"Enter the roll no you want to delete";

cin>>ob.r;

vector<student>::iterator itr;

itr=find(v.begin(),v.end(),ob);

if(itr==v.end())

{

cout<<"Not found";

}

else

{

v.erase(itr);

cout<<"Information is deleted";

}

}

bool check1(student &s1,student &s2)

{

return(s1.r<s2.r);

}

void sorting(vector<student> &v)

{

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

cout<<"It is sorted...";

}

int main(){

vector<student> v;

int ch;

char choice;

do{

cout<<"1.Create\n2.Display\n3.Insert\n4.Search\n5.delete\n6.Sorting"<<endl;

cin>>ch;

switch(ch){

case 1:

int n,i;

cout<<"Enter how many students you want to enter the Data:";

cin>>n;

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

insert(v);

}

break;

case 2:

show(v);

break;

case 3:

insert(v);

break;

case 4:

search(v);

break;

case 5:

del(v);//delete

break;

case 6:

sorting(v);

break;

}

cout<<"Do you want to continue(y/n):";

cin>>choice;

}while(choice=='y');

return 0;

}