OOP-LAB Task 3

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Qns1:

```cpp
#include<iostream>
using namespace std;


struct address{
    string city;
    string country;


};
struct contact_info{
    string name;
    long long int phone_no;
    address a1;


};


void display_contacts(contact_info c1[10]){
    for(int i=0;i<10;i++){
        cout <<"\nContact "<<(i+1)<<":\n";
        cout <<"Name: "<<c1[i].name<<endl;
        cout <<"Phone NO: "<<c1[i].phone_no<<endl;
        cout<< "City Name: "<<c1[i].a1.city<<endl;
        cout<<"Country Name: "<<c1[i].a1.country<<endl;
```

```cpp
    }
}


int main(){

    contact_info contacts[10];
    for(int i=0;i<10;i++){
        cout <<"\nEnter details for contact "<<(i+1)<<":\n";
        cout <<"Enter your name: "<<endl;
        cin>>contacts[i].name;
        cout <<"Enter your Phone Number: "<<endl;
        cin>>contacts[i].phone_no;
        cout<< "Enter Your City Name: "<<endl;
        cin>>contacts[i].a1.city;
        cout<<"Enetr your Country Name: "<<endl;
        cin>>contacts[i].a1.country;
    }
    display_contacts(contacts);
    return 0;
}
```

Output:

```
Enter details for contact 1:
Enter your name:
azan
Enter your Phone Number:
3173432526
Enter Your City Name:
karachi
Enetr your Country Name:
pakistan

Enter details for contact 2:
Enter your name:
aizaz
Enter your Phone Number:
182389109
Enter Your City Name:
peshawar
Enetr your Country Name:
pakistan

Enter details for contact 3:
Enter your name:
m.qasim
Enter your Phone Number:
023209342
Enter Your City Name:
peshawar
Enetr your Country Name:
pakistan

Enter details for contact 4:
Enter your name:
abdullah
Enter your Phone Number:
9223931083
Enter Your City Name:
washington
```

```
Contact 5:
Name: suhail
Phone NO: 92394392
City Name: riyadh
Country Name: ksa

Contact 6:
Name: salam
Phone NO: 923920493
City Name: isl
Country Name: pakistan

Contact 7:
Name: ank
Phone NO: 93202342
City Name: lahore
Country Name: pakistan

Contact 8:
Name: ghulam
Phone NO: 9302340234
City Name: khairpur
Country Name: pakistan

Contact 9:
Name: muskan
Phone NO: 2932394223
City Name: gambar
Country Name: pakistan

Contact 10:
Name: zaim
Phone NO: 9234003802
City Name: johar
Country Name: romania
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-3>
```

Qns 2:

#include <iostream>

using namespace std;

struct *address*{

   string city;

   string state;

   int pincode;

};

struct *student*{

   string name;

   int roll_no;

```cpp
    int marks[5];
    address a1;
};


student s_1 = {"Aazan Noor",706,{90,80,70,60,50},{"Karachi","Sindh",12345}};
student s_2;


int main(){
    s_2 = s_1;
    cout <<"------------------------------------------------"<<endl;
    cout<<"Student-1:\n";
    cout<<"Name: "<<s_1.name<<endl;
    cout<<"Roll NO: "<<s_1.roll_no<<endl;
    cout<<"Marks: ";
    for(int i=0;i<5;i++){
        cout<<s_1.marks[i]<<" ";
    }
    cout<<endl;
    cout<<"City Name: "<<s_1.a1.city<<endl;
    cout<<"State Name: "<<s_1.a1.state<<endl;
    cout<<"Pincode: "<<s_1.a1.pincode<<endl;
    cout <<"-----------------------------------------------"<<endl;
    cout<<"Student-2:\n";
    cout<<"Name: "<<s_2.name<<endl;
    cout<<"Roll NO: "<<s_2.roll_no<<endl;
    cout<<"Marks: ";
    for(int i=0;i<5;i++){
        cout<<s_2.marks[i]<<" ";
    }
```

```cpp
    cout<<endl;
    cout<<"City Name: "<<s_2.a1.city<<endl;
    cout<<"State Name: "<<s_2.a1.state<<endl;
    cout<<"Pincode: "<<s_2.a1.pincode<<endl;
    cout <<"---------------------------------------------"<<endl;
    cout <<"Modify student-2 marks: "<<endl;
    cout<<"Enter marks :"<<endl;
    for(int i=0;i<5;i++){
        cin>>s_2.marks[i];
    }
    s_1=s_2;
    cout <<"---------------------------------------------"<<endl;
    cout<<"student-1 details after modifying: "<<endl;
    cout<<"Name: "<<s_1.name<<endl;
    cout<<"Roll NO: "<<s_1.roll_no<<endl;
    cout<<"Marks: ";
    for(int i=0;i<5;i++){
        cout<<s_1.marks[i]<<" ";
    }
    cout <<endl;
    cout<<"City Name: "<<s_1.a1.city<<endl;
    cout<<"State Name: "<<s_1.a1.state<<endl;
    cout<<"Pincode: "<<s_1.a1.pincode<<endl;
    return 0;

}
```

Output:

```
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-3> g++ -g qns2.cpp -o ./output
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-3> ./output
---------------------------------------------------
Student-1:
Name: Aazan Noor
Roll NO: 706
Marks: 90 80 70 60 50
City Name: Karachi
State Name: Sindh
Pincode: 12345
--------------------------------------------
Student-2:
Name: Aazan Noor
Roll NO: 706
Marks: 90 80 70 60 50
City Name: Karachi
State Name: Sindh
Pincode: 12345
---------------------------------------------
Modify student-2 marks:
Enter marks :
20 17 12 94 18
---------------------------------------------
student-1 details after modifying:
Name: Aazan Noor
Roll NO: 706
Marks: 20 17 12 94 18
City Name: Karachi
State Name: Sindh
Pincode: 12345
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-3>
```