LAB TASK 10:

Programming Fundamentals

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STUDENT TASKS:

1. ***Write a program in c++ to define a program in a structure that has thefollowing members:***

Member Name	*Data Type*
code	*int*
name	*string*
city	*string*
country	*string*

Declare the structure as defined above, input the data into it and print it onthe screen.

```
#include<iostream>
#include<string>
#include<cstring>
struct member
{
int code;
string name;
string city;
string country;
};
int main()
{
member m;
cout<<"enter your code :";
cin>>m.code;
cout<<"enter your name :";
cin>>m.name;
cout<<"enter your city :";
cin>>m.city;
cout<<"enter your country :";
cin>>m.country;
```

```
cout<<"The     name of  member is:  "<<m.name<<".And city is: "<<m.city<<". code is: "<<m.code<<". And the country is: "<<m.country<<endl;

cout<<endl;

return 0;

}
```

OUTPUT

```
Enter you name: hamdan

Enter your code: 74454563

Enter your city: rawalpindi

Enter your country: pakistan

The     name    of      the     member  is:     hamdan. And     city    is: rawalpindi. code is: 74454563. And the count
ry is: pakistan


--------------------------------
Process exited after 24.85 seconds with return value 0
Press any key to continue . . .
```

2. **Make a structure of name complex with two data members real and imaginary of type int and perform the following tasks:**
    a. **Implement a member function for taking input**
    b. **Implement a member function that displays the output**
    c. **Implement a sum function that adds two complex numbers e.g.**
    Complex c1,c2,c3;
    c1.input()

c2.input(); c3=Sum(c1,c2)
c3.display()

The output should look like this:

```
#include <iostream>
 using namespace std;
  struct Complex
{
   int real;
            int imaginary;
            void input()
 {
            cout << "Enter real : ";
            cin >> real;
            cout << "Enter imaginary: ";
            cin>>imaginary;
  }
void output()
{
 cout << "Sum: ";
cout << real << " + " << imaginary << "i" << endl;
}
Complex sum(Complex b)
 {
 Complex c;
c.real = real + b.real;
c.imaginary = imaginary + b.imaginary;
 return c;
}
};
int main()
```

```
{
 Complex c1,c2,c;
 c1.input();
c2.input();
c = c1.sum(c2);
c.output();
 return 0;
}
```

OUTPUT