**1.ALGORITHM:**

//ComplexNumbers

//This program uses the flexiblity of calling a function

with objects as arguments.

1. Declare a class Complex with real and imaginary

variables as private.

2. Declare in public function getdata for taking real

and imaginary values, showdata to display the

complex number and add function to add the two

complex numbers.

3. In main function

a. Declare three objects of class Complex.

b. Ask for the complex number values to the

user.

c. By showdata() show both the complex

numbers.

d. By add() add both the complex numbers the

by showdata() show the addition.

**2.CODE WITH COMMENTS:**

#include<iostream>

using namespace std;

class Complex{

private :

int re,im;

public :

void getdata()

{

cout<<"Enter the first complex number :"<<endl;

cin>>re;

cin>>im;

}

void showdata()

{

cout<<re<<"+"<<im<<"i"<<endl;

}

void add(Complex c1,Complex c2)

{

re=c1.re+c2.re;

im=c1.im+c2.im;

}

}; //class comple defined to getdata(), showdata(), add()

int main()

{

Complex c1,c2,c3; //objects defined for class complex

c1.getdata();

cout<<"The first complex number is : "<<endl;

c1.showdata();

c2.getdata();

cout<<"The second complex number is : "<<endl;

c2.showdata();

c3.add(c1,c2);

cout<<"The sum of two complex numbers is :"<<endl;

c3.showdata(); // sum of both c1,c2

}

**3.SAMPLE OUTPUT AND INPUT:**

Enter the first complex number :

3

7

The first complex number is :

3+7i

Enter the first complex number :

8

9

The second complex number is :

8+9i

The sum of two complex numbers is :

11+16i

Process returned 0 (0x0) execution time : 36.288 s

Enter the first complex number :

35

36

The first complex number is :

35+36i

Enter the first complex number :

87

75

The second complex number is :

87+75i

The sum of two complex numbers is :

122+111i

Process returned 0 (0x0) execution time : 11.914 s