**EXPERIMENT 15**

**Aim:** Write a programme to implement multiplication of two complex no using function overloading.

**code:**

#include<iostream>

#include<cmath>

using namespace std;

//class definition for complex number

class complex{

private:

float real; //stores the real part

float img; //stores the complex part

public:

void getdata(); //takes user input

void display(); //display the complex number

//constructor for initialization

complex()

{

real=img=0;

}

//function declarations(prototypes)

complex operator\* (complex c1);

};

void complex::display()

{

cout<<"("<<real<<")"<<"+"<<"("<<img<<")"<<"i";

}

void complex::getdata()

{

cout<<"Enter the real and img of complex no.\n";

cout<<"Real : ";

cin>>real;

cout<<"Img : ";

cin>>img;

}

complex complex::operator\* (complex c1)

{

complex mul;

mul.real = ((real\*c1.real)-(img\*c1.img));

mul.img = ((real\*c1.img)+(c1.real\*img));

return(mul);

}

//start of main function

int main()

{

complex a,b,c; //creation of objects

int opt,opt1=1;

while(opt1==1)

{

a.getdata(); //taking data from user

b.getdata();

c = a\*b;

cout<<"\n\n";

a.display();

cout<<" \* ";

b.display();

cout<<" = ";

c.display();

break;

cout<<"\n\n\nDo you wish to continue(Press 1 to continue)";

cin>>opt1;

}

return 0;

}