A1 ]/\*Implement a class Complex which represents the Complex Number data type.

Implement link\*\*\* https://www.programiz.com/online-compiler/21ULr0i3AR2ou

the following operations:

1. Constructor (including a default constructor which creates the complex number 0+0i).
2. Overloaded operator+ to add two complex numbers.
3. Overloaded operator\* to multiply two complex numbers.
4. Overloaded << and >> to print and read Complex Numbers.\*/

#include<iostream>

using namespace std;

class complex {

float x;

float y;

public:

complex() {

x = 0;

y = 0;

}

complex operator+(complex);

complex operator\*(complex);

friend istream &operator>>(istream &, complex &t) {

cout << "Enter the real part";

cin >> t.x;

cout << "Enter the imaginary part";

cin >> t.y;

return cin;

}

friend ostream &operator<<(ostream &, complex &t) {

cout << t.x << "+" << t.y << "i\n";

return cout;

}

};

complex complex::operator+(complex c) {

complex temp;

temp.x = x + c.x;

temp.y = y + c.y;

return temp;

}

complex complex::operator\*(complex c) {

complex temp2;

temp2.x = (x \* c.x) - (y \* c.y);

temp2.y = (y \* c.x) + (x \* c.y);

return temp2;

}

int main() {

complex c1, c2, c3, c4;

cout << "Default constructor value=\n";

cout << c1;

cout << "\nEnter the 1st number\n";

cin >> c1;

cout << "\nEnter the 2nd number\n";

cin >> c2;

c3 = c1 + c2;

c4 = c1 \* c2;

cout << "\nThe first number is ";

cout << c1;

cout << "\nThe second number is ";

cout << c2;

cout << "\nThe addition is ";

cout << c3;

cout << "\nThe multiplication is ";

cout << c4;

return 0;

}