// Yousef Zoumot Ken Wakaba

// main.cpp

// Coen70Lab2

//

// Created by Yousef Zoumot & Ken Wakaba on 1/12/16.

// Copyright (c) 2016 Yousef Zoumot. All rights reserved.

//

#include <iostream>

using namespace std;

class Complex{

private:

double a;

double b;

char imaginary='i';

public:

double real(){return a;};

double imagine(){return b;};

void setReal(double x){a=x;};

void setImaginary(double y){b=y;};

Complex(double n1, double n2);

Complex();

friend istream& operator >>(istream& ins, Complex& og1);

friend ostream& operator <<(ostream& ins, Complex og1);

};

Complex::Complex(double n1, double n2){

a=n1;

b=n2;

}

Complex::Complex(){

a=0;

b=0;

}

Complex operator +(Complex og1, Complex og2){

Complex temp;

temp.setReal( (og1.real()+og2.real()) );

temp.setImaginary( (og1.imagine()+og2.imagine()) );

return temp;

}

Complex operator \*(Complex og1, Complex og2){

Complex temp;

temp.setReal( (og1.real()\*og2.real()) - (og1.imagine()\*og2.imagine()) );

temp.setImaginary( (og1.real()\*og2.imagine())+ (og1.imagine()\*og2.real()) );

return temp;

}

ostream& operator <<(ostream& ins, Complex og1){

ins<<og1.real()<<" + "<<og1.imagine()<<"i\n";

return ins;

}

istream& operator >>(istream& ins, Complex& og1){

double real, imagine;

cout<<"Please enter real number \n";

ins>>real;

og1.setReal(real);

cout<<"Please enter imaginary number \n";

ins>>imagine;

og1.setImaginary(imagine);

return ins;

}

int main(int argc, const char \* argv[]) {

// insert code here...

Complex c1;

Complex c2(1.0, 2.0);

c1.setReal((3.0));

cout<<c1;

//cin>>c2;

cout<<c2;

Complex c3= c1+c2;

cout<<c3;

Complex c4= c1\*c2;

cout<<c4;

std::cout << "Hello, World!\n";

return 0;

}