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Assignment No:- 1

Name:- Riya Manoj Wagh

Class:- SE -Computer-B (SB3)

Roll No:- 65

Subject:- OOP

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#include <iostream>

using namespace std;

class complex {

float real;

float img;

public:

complex() {

real = 0;

img = 0;

}

complex operator+(complex c2) {

complex temp;

temp.real = real + c2.real;

temp.img = img + c2.img;

return temp;

}

complex operator\*(complex c2) {

complex temp;

temp.real = (real \* c2.real) - (img \* c2.img);

temp.img = (img \* c2.real) + (real \* c2.img);

return temp;

}

friend ostream &operator<<(ostream &out, const complex &c3) {

out << c3.real << "+" << c3.img << "i" << endl;

return out;

}

friend istream &operator>>(istream &in, complex &c3) {

cout << "\nEnter real and imaginary part of complex no.: ";

in >> c3.real >> c3.img;

return in;

}

};

int main() {

int choice;

complex c0, c1, c2, c3;

do {

cout << "\n1: Read complex numbers";

cout << "\n2: Display";

cout << "\n3: Addition";

cout << "\n4: Multiplication";

cout << "\n5: Stop";

cout << "\nEnter your choice: ";

cin >> choice;

switch(choice) {

case 1:

cin >> c1;

cin >> c2;

break;

case 2:

cout << "\nFirst complex no. is " << c1;

cout << "\nSecond complex no. is " << c2;

break;

case 3:

cout << "\nAddition of complex no. is ";

c3 = c1 + c2;

cout << c3;

break;

case 4:

cout << "\nMultiplication of complex no. is ";

c3 = c1 \* c2;

cout << c3;

break;

case 5:

break;

default:

cout << "\nInvalid choice";

break;

}

} while(choice != 5);

return 0;

}

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Output:-

1: Read complex numbers

2: Display

3: Addition

4: Multiplication

5: Stop

Enter your choice: 1

Enter real and imaginary part of complex no.: 2 3

Enter real and imaginary part of complex no.: 4 5

1: Read complex numbers

2: Display

3: Addition

4: Multiplication

5: Stop

Enter your choice: 2

First complex no. is 2+3i

Second complex no. is 4+5i

1: Read complex numbers

2: Display

3: Addition

4: Multiplication

5: Stop

Enter your choice: 3

Addition of complex no. is 6+8i

1: Read complex numbers

2: Display

3: Addition

4: Multiplication

5: Stop

Enter your choice: 4

Multiplication of complex no. is -7+22i

1: Read complex numbers

2: Display

3: Addition

4: Multiplication

5: Stop

Enter your choice: 5

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