

Program – 3.1

AIM: Write C++ program to overload Unary and Binary operator in member function.

PROGRAM:

```
#include<iostream>

using namespace std;

class unary
{
    int x,y,z;

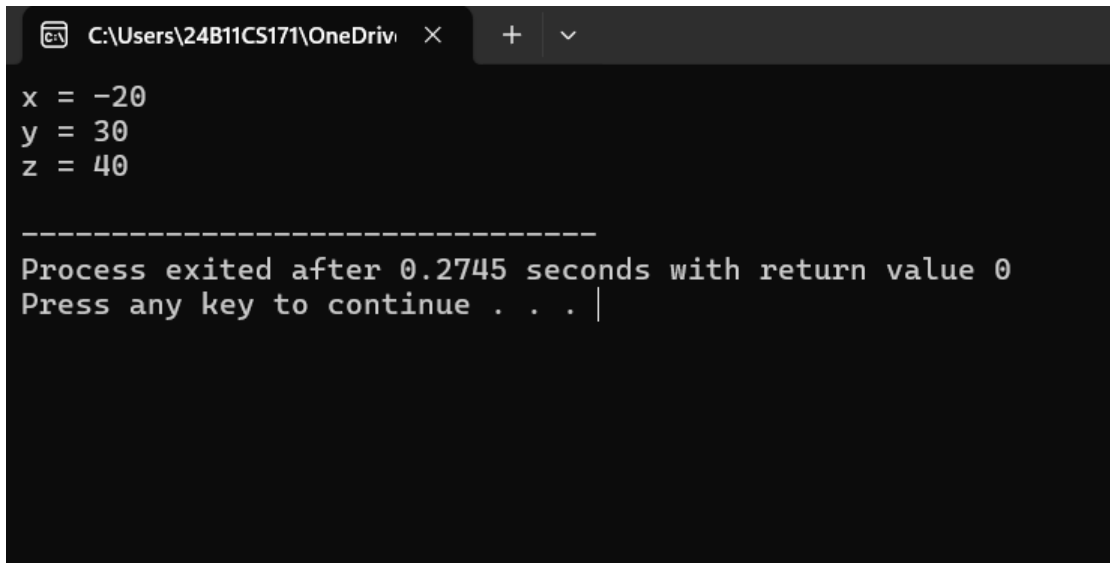
    public:
        void get()
        {
            x=20;
            y=-30;
            z=-40;
        }

        void show()
        {
            cout<<"x="<<x<<endl;
            cout<<"y="<<y<<endl;
            cout<<"z="<<z;
        }

        void operator -()
        {
            x=-x;
            y=-y;
            z=-z;
```

```
    }  
};  
  
int main()  
{  
    unary u;  
  
    u.get();  
  
    -u;  
  
    u.show();  
  
    return 0;  
}
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows the file explorer icon, the path 'C:\Users\24B11CS171\OneDrive', and window control buttons. The command prompt displays the following output:

```
x = -20  
y = 30  
z = 40  
  
-----  
Process exited after 0.2745 seconds with return value 0  
Press any key to continue . . . |
```

AIM: Write C++ program to overload Unary and Binary operator in member function.

PROGRAM:

```
#include<iostream>

using namespace std;

class complex
{
    int real,imag;

    public:
        void data()
        {
            cout<<"enter real,imag values";
            cin>>real>>imag;
        }
        void operator+(complex c2)
        {
            cout<<real+c2.real<<"+"<<imag+c2.imag<<"i";
        }
};

int main()
{
    complex c1,c2;

    c1.data();
    c2.data();
    c1+c2;

    return 0;
}
```

OUTPUT:

```
C:\Users\24B11CS171\OneDrive  X  +  v
Enter real and imaginary values: 10 20
Enter real and imaginary values: 30 40
Result = 40 + 60i

-----
Process exited after 8.588 seconds with return value 0
Press any key to continue . . . |
```

Program – 3.2

AIM: Write C++ program to overload Unary and Binary operators in friend function.

PROGRAM:

```
#include<iostream>

using namespace std;

class unary
{
    int x,y,z;

    public:
        void get()
        {
            x=20;
            y=-30;
            z=-40;
        }

        void show()
        {
            cout<<"x="<<x<<endl;
            cout<<"y="<<y<<endl;
            cout<<"z="<<z;
        }
}

friend void operator -(unary &u);

void operator -(unary &u)
{
    u.x=-u.x;
```

```
        u.y=-u.y;

        u.z=-u.z;

    }

int main()
{

    unary u;

    u.get();

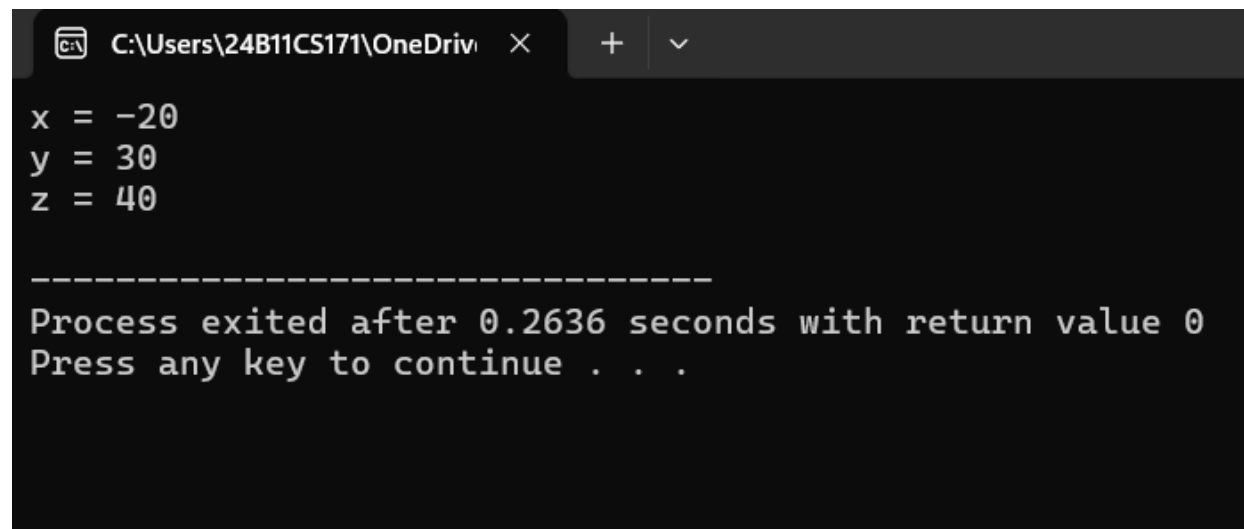
    -u;

    u.show();

    return 0;

}
```

OUTPUT:



```
C:\Users\24B11CS171\OneDrive >

x = -20
y = 30
z = 40

-----
Process exited after 0.2636 seconds with return value 0
Press any key to continue . . .
```

AIM: Write C++ program to overload Unary and Binary operators in friend function.

PROGRAM:

```
#include<iostream>

using namespace std;

class complex
{
    int real,imag;

    public:
        void data()
        {
            cout<<"enter real,imag values";
            cin>>real>>imag;
        }

        friend void operator +(complex &c1,complex
        &c2);

};

void operator +(complex &c1,complex &c2)
{
    cout<<c1.real+c2.real<<"+"<<c1.imag+c2.imag<<"i";
}

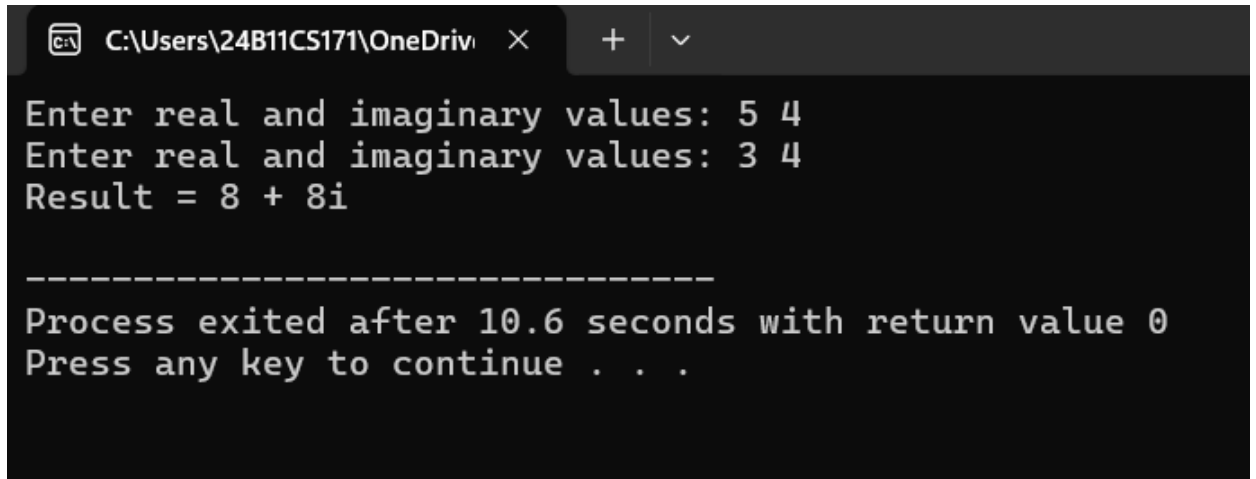
int main()
{
    complex c1,c2;

    c1.data();
    c2.data();

    c1+c2;
```

```
return 0;  
}
```

OUTPUT:



```
C:\Users\24B11CS171\OneDrive × + v  
Enter real and imaginary values: 5 4  
Enter real and imaginary values: 3 4  
Result = 8 + 8i  
  
-----  
Process exited after 10.6 seconds with return value 0  
Press any key to continue . . .
```