Operator Overloading

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Agenda

- Operator Overloading.
- Operator cannot overloaded.
- Binary operator.
- Unary operator.

Operator Overloading

- **Operator overloading is define new meaning of the operator, Now one operator symbol has more than one meaning depending an type of data used by the operator.**
- **Which interpretation of operator has to be considered is resolved at compile time on the basis of operands of the operator.**
- **There fore it is compile time Polymorphism.**

Operator that cannot be overloaded

- :: Scope resolution
- sizeof() Size of
- ? : Conditional operator
- . Member access
- .* pointer to member

- Only those operators can be overloaded in C++ which one valid operators in C Language

Overloading of Binary operator

c3 = c1+c2;

- **Always left operand is caller object in the case of overloading of binary operator.**

```
Complex operator+(Complex c)
{
    Complex temp;
    temp.real = real + c.real;
    temp.img = img + c.img;
    return temp;
}
```

c3 = c1.operator+(c2);

c3 = c1+c2;

Operator call

Overloading of Unary operator

- Overload unary (–) operator for complex

```
Complex operator-()
{
    Complex temp;
    temp.real = -real;
    temp.img = -img;
    return temp;
}
```

c3 = -c1;
c3 = c1.operator-();