

# Operators

An operator is a symbol. Compiler identifies Operator and performs specific mathematical or logical operation. C provide following operators.

1. Arithmetic Operators
2. Increment and Decrement Operators (Unity Operator)
3. Relational Operators
4. Logical Operators
5. Cast Operators
6. Bitwise Operators
7. Assignment Operators

## 1. Arithmetic Operators

\* Multiplication

/ Division

% Reminder (Modulo)

+ Addition

- Subtraction and Unary Minus

## 2.Increment & Decrement Operator

Increment and Decrement operators are used to add or subtract 1 from the current value of operand.

**++ increment**

**-- decrement**

Increment and Decrement operators can be prefix and postfix. In the prefix style the value of operand is changed before the result of expression and in the postfix style the variable is modified after result.

For Ex.

```
a=5;
```

```
b = a++ + 5; /* a=6 b=5
```

```
a=3;
```

```
b=++a + 6; /* a=4 b=10
```

### 3.Relational Operator

== equal

!= Not equal

> < Greater than/less than

>= Greater than or equal to

### 4.Cast Operator

Cast operator are used to convert a value from one to another type.

(float)sum; convert type to float

(int)min; convert type to int



## 5.Bitwise Operator

Bitwise operators performs operation on actual bits present in each byte of a variable.Each byte contain 8 bits,each bit can store the value 0 or 1.

~ one's complement

& bitwise AND

^ bitwise XOR

| bitwise OR

>> right shift(binary divide by 2)

<< left shift (binary multiply by 2)

## 6.Logical Operator

**&&** Called logical AND operator.If both the operands are non-zero then condition becomes true.

**||** Called logical OR operator.If any of the operands are non-zero then condition becomes true.

**!** Called logical NOT operator.Use to reverse the logical state of its operand.If the condition is true then it will make the result false

## 7. Assignment Operator

= assign

+= assign with add

-= assign with subtract

\*= assign with multiply

/= assign with divide

%= assign with remainder

>>= assign with right shift

&= assign with bitwise AND

^= assign with bitwise XOR

|= assign with bitwise OR