Logic

Operator

C++ has four main groups of Operators :

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Bitwise Operators

Arithmetic Operators

Used to perform arithmetic operations

Symbol	Meaning	Example
*	Multiplication	4 * 2 = 8
/	Division	64 / 4 = 16
%	Modulus (remainder)	11 % 3 = 2
+	Addition	12 + 9 = 21
-	Substraction	80 - 15 = 65

Note that division when both number is an integer will result in a whole number and not show the decimal place.

Relational Operators

Operator	Meaning
>	Greater than
>=	Greater than or equal to
<	Less than
<=	Less than or equal to
==	Equal to
!=	Not equal to

Logical Operators

&& - AND
|| - OR

Bitwise Operators

C++ has six Bitwise Operators :

- One's Complement, or Bitwise Negation: ~
- Bitwise AND: &
- Bitwise OR: |
- Bitwise EXCLUSIVE OR: ^
- Left Shift: <<
- Right Shift: >>

Operator Types

Operator	Type
() []	Group
! ~ ++ --	Unary
* / %	Multiplicative
+ -	Additive
<< >>	Shift
< > <= >=	Relational
== !=	Equality
1.	Bitwise
2.	Logical
= += -= x= /=	Assignment

1. & ^ |
2. && ||

Unary operators require only one operand.
C++ has special unary operators:

```
y++; // increments the variable y by 1
i--; // decrease the variable i by 1
```