

# Programming & Algorithm

Class 7

Lecture 3

Basic Programming

(Operators)

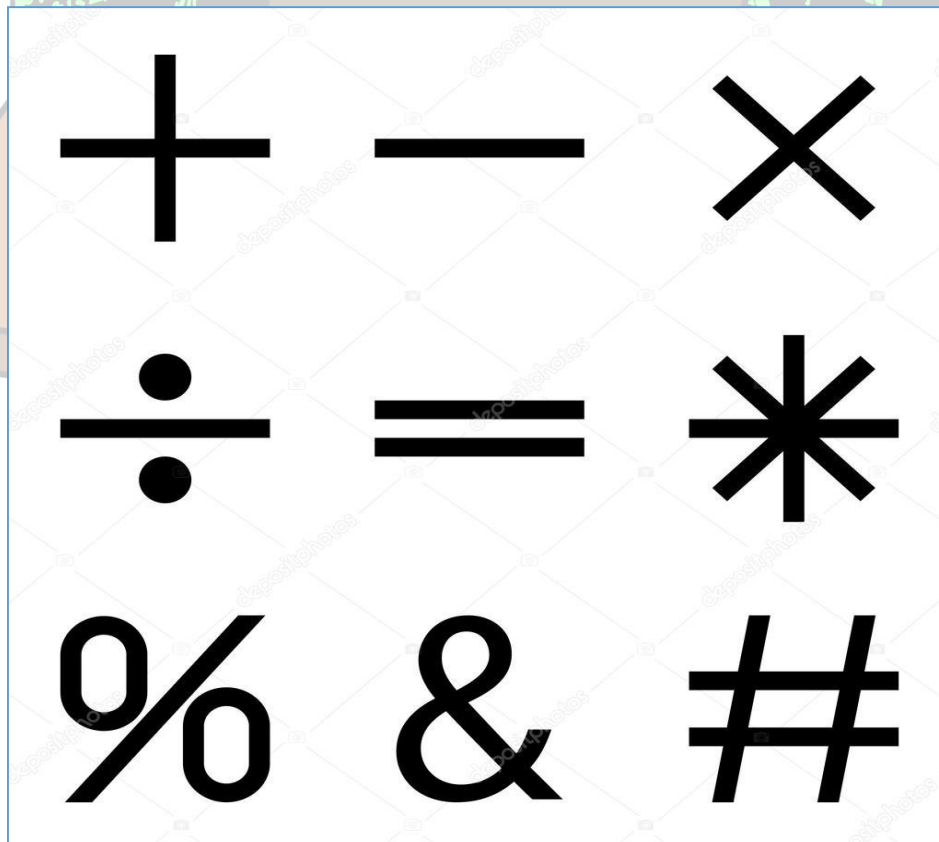
## Lab Objectives:

- What is Operator?
- Different Types of Operator.
- Different operations in programming.



## What is Operator?

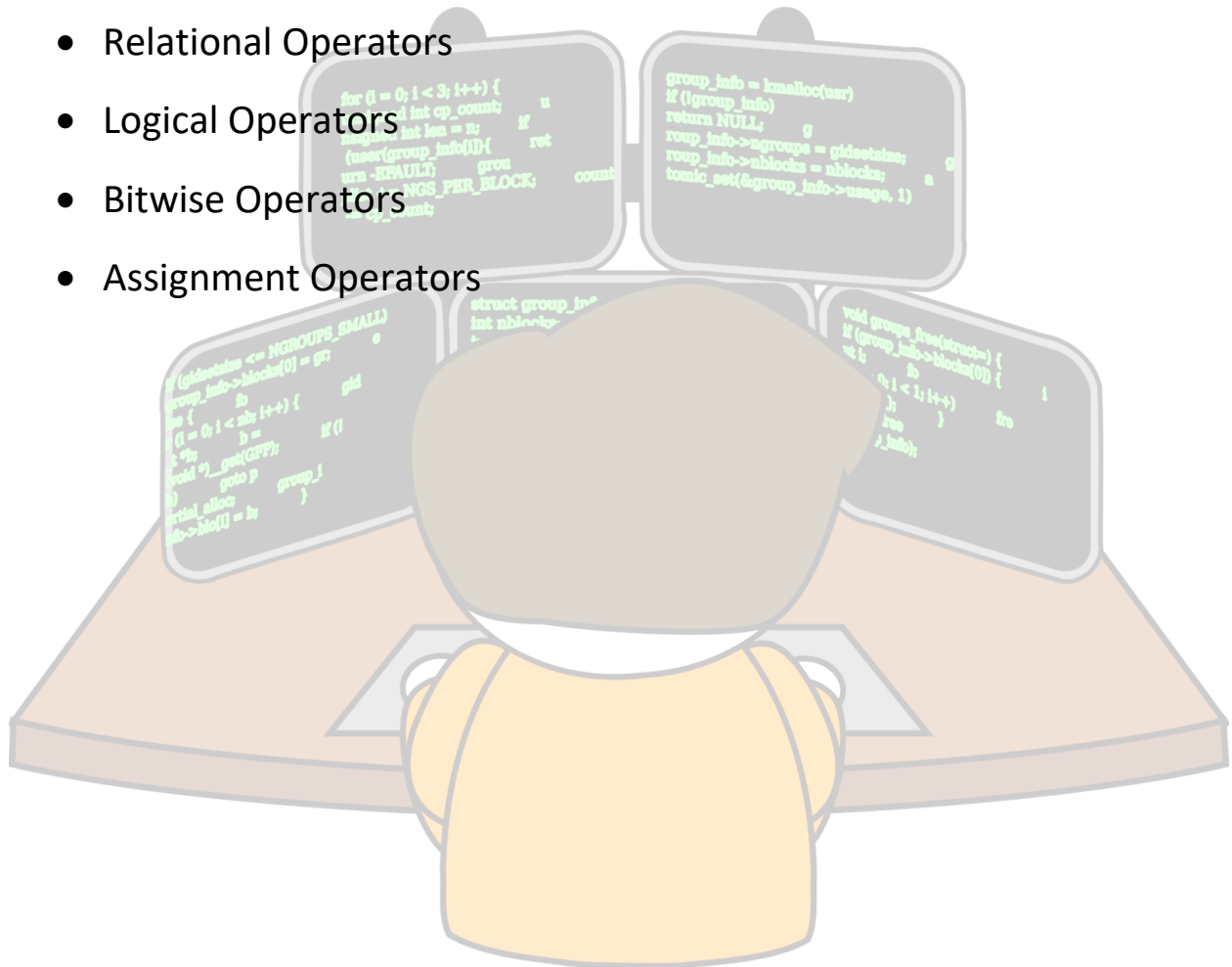
An operator is a symbol that tells the compiler to perform specific mathematical or logical functions. Such as +, -, /



# Types of Operators

Some type of operators is:

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



## i. Arithmetic Operators

The following table shows all the arithmetic operators.

**Let    A = 10 and B = 20**

Operator	Description	Example
+	Adds two operands.	$A + B = 30$
-	Subtracts second operand from the first.	$A - B = -10$
*	Multiplies both operands.	$A * B = 200$
/	Divides numerator by de-numerator.	$B / A = 2$
%	Modulus Operator and remainder of after an integer division.	$B \% A = 0$
++	Increment operator increases the integer value by one.	$A++ = 11$
--	Decrement operator decreases the integer value by one.	$A-- = 9$

## ii. Relational Operators

The following table shows all the relational operators.

**Let    A = 10 and B = 20**

Operator	Description	Example
==	Checks if the values of two operands are equal or not. If yes, then the condition becomes true.	(A == B) is not true.
!=	Checks if the values of two operands are equal or not. If the values are not equal, then the condition becomes true.	(A != B) is true.
>	Checks if the value of left operand is greater than the value of right operand. If yes, then the condition becomes true.	(A > B) is not true.
<	Checks if the value of left operand is less than the value of right operand. If yes, then the condition becomes true.	(A < B) is true.
>=	Checks if the value of left operand is greater than or equal to the value of right operand. If yes, then the condition becomes true.	(A >= B) is not true.
<=	Checks if the value of left operand is less than or equal to the value of right operand. If yes, then the condition becomes true.	(A <= B) is true.

### iii. Logical Operators

The following table shows all the logical operators.

Let **A = 10** and **B = 20**

Operator	Description	Example
&&	Called Logical AND operator. If both the operands are non-zero, then the condition becomes true.	(A && B) is false.
	Called Logical OR Operator. If any of the two operands is non-zero, then the condition becomes true.	(A    B) is true.
!	Called Logical NOT Operator. It is used to reverse the logical state of its operand. If a condition is true, then Logical NOT operator will make it false.	!(A && B) is true.

You'll learn bitwise and assignment operators in higher class