

OPERATORS

- Operators are predefined symbols which is used to perform specific task on the given data.
- The data given as a input to the operator is known as' 'operand'.
- Based on the number of operands,operators are further classified into the following:
 - 1)Unary operator
 - 2) Binary operator
 - 3)Ternary operator

Unary operator:- The operator which can accept only one operand is known as
Unary operator.

Binary operator:- The operator which can accept two operands is known as
Binary operand.

Ternary operator:- The operator which can accept three operands is known as
Ternary operator.

CLASSIFICATION OF OPERATORS

The operators can also be classified based on the task.

- 1) Arithmetic operator
- 2) Assignment operator
- 3) Relational operator
- 4) Logical operator
- 5) Increment/Decrement operator
- 6) Conditional operator
- 7) Miscellaneous

ARITHMETIC OPERATOR

OPERATORS	OPERATIONS
+	Addition
-	Subtraction
*	Multiplication
/	Division(quotient)
%	Modulus(remainder)

<u>INPUT</u>	<u>OPERATIONS</u>	<u>INPUT</u>	<u>RESULT</u>
byte	<input type="text"/>	byte	----> int
short	<input type="text"/>	short	-----> int
int	<input type="text"/>	int	-----> int
long	<input type="text"/>	long	-----> long
float	<input type="text"/>	float	-----> float
double	<input type="text"/>	double	-----> double
char	<input type="text"/>	char	-----> int

ASSIGNMENT OPERATOR

OPERATOR	EXAMPLE	EQUIVALENT TO
=	a=10	Assign the value
+=	a+=b	a=a+b
-=	a-=b	a=a-b
=	a=b	a=a*b
/=	a/=b	a=a/b
%=	a%=b	a=a%b

RELATIONAL OPERATOR

OPERATOR	OPERATION
==	Is equal to
!=	Not equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to

LOGICAL OPERATOR

<u>OPERATOR</u>	<u>OPERATIONS</u>
&& (logical AND)	If all the expression returns true then this operator will return.
 (logical OR)	If any one of the expression return true , then this operator will return true.
! (logical NOT)	If the result is true then it will return false and vice versa.

&& (AND)

Operand 1	Operand 2	Operand 3
T	T	T
T	F	F
F	T	F
F	F	F

|| (OR)

Operand 1	Operand 2	Operand 3
T	T	T
T	F	T
F	T	T
F	F	F

! (NOT)

OPERAND	RESULT
TRUE	FALSE
FALSE	TRUE

CONDITIONAL OPERATOR

- It is a ternary operator.
- It works on three operands

Syntax to create conditional operator

Operand1? Operand 2 : Operand 3;

Or

Condition? Statement 1:Statement 2;

Operation of conditional operator

- The return type of operand 1 must be boolean.
- If the condition is true, statement 1 will get executed else statement 2 will get executed.

INCREMENT/DECREMENT OPERATOR

<u>OPERATOR</u>	<u>TYPES</u>	<u>OPERATIONS</u>
++ (INCREMENT)	++i (pre-increment)	<ul style="list-style-type: none">• Increases the value by 1 and update• Substitute the updated value• Use the substituted value
	i++ (post increment)	<ul style="list-style-type: none">• Substitute• Increase the value by 1 and update• Use the substituted value

<u>OPERATOR</u>	<u>TYPES</u>	<u>OPERATION</u>
– (Decrement)	–i (pre decrement)	<ul style="list-style-type: none"> • Decrease the value by 1 and update • Substitute the updated value • Use the substituted value
	i– (post decrement)	<ul style="list-style-type: none"> • Substitute • Decrease the value by 1 and update • use the substituted value.