

Operators of VB.NET

An operator is a symbol that instruct computer to perform certain kind of operation on its operands.

Following are the various types of operators supported by VB.NET:

- (1) Arithmetic Operator
- (2) Comparison Operator
- (3) String Concatenation Operator
- (4) Logical Operator
- (5) Assignment Operator

(1) Arithmetic Operator:

Following are the list of Arithmetic operators supported by VB.NET: Suppose we declare three variables:

```
Dim a as integer, b as integer, c as integer
```

```
a = 5
```

```
b = 2
```

+ It performs arithmetic addition of two operands and returns the result. $c = a + b$

It returns 7

- It performs arithmetic subtraction of two operands and returns the result. $c = a - b$

It returns 3

* It performs arithmetic multiplication of two operands and returns the result. $c = a * b$

It returns 10

/ It performs arithmetic division of two operands and returns the result. $c = a / b$

It returns 2.5

`\` It performs arithmetic division of two operands and returns the result as an integer. It means it will ignore the result after the decimal point. $c = a \setminus b$
It returns 2

`^` It raises one operand with another operand and returns the result. It means find the exponent value of one operand with respect to another operand. $c = a \wedge b$
It returns 32

`Mod` It performs arithmetic division of two operands and returns the remainder of the division as result. $C = A \text{ Mod } B$
It returns 1

(2) Comparison Operator

Following are the list of Comparison operators supported by VB.NET:
Suppose we declare two variables:

```
Dim a as integer, b as integer
```

```
a = 5
```

```
b = 2
```

`=` It compares two operands and returns TRUE if both operands are equal otherwise it returns FALSE. $A = B$

It returns FALSE

`<>` It compares two operands and returns TRUE if both operands are not equal otherwise it returns FALSE. $A \lt\> B$

It returns TRUE

`<` It compares two operands and returns TRUE if Operand1 is less than Operand2 otherwise it returns FALSE. $A < B$

It returns FALSE

> It compares two operands and returns TRUE if Operand1 is greater than Operand2 otherwise it returns FALSE. A > B

It returns TRUE

<= It compares two operands and returns TRUE if Operand1 is less than or equal to Operand2 otherwise it returns FALSE. A <= B

It returns FALSE

>= It compares two operands and returns TRUE if Operand1 is greater than or equal to Operand2 otherwise it returns FALSE. A >= B

It returns TRUE

Like Like operator works for string operands. It is used to determine whether string match with particular pattern or not. Pattern can be defined using following characters:

* 0 or more occurrence of any characters

? single character

single digit

[Character List] single character in the range.

[! CharacterList] single character not in the range. Dim a as string="Hello"

a Like "H*" returns true.

a Like "H?" returns false.

(3)String Concatenation Operator

Following are the list of concatenation operators supported by VB.NET.

Consider Following Example:

Dim a as string, b as string, c as string

Dim d as integer, e as integer, f as integer

a = "Hello"

b = "How Are You"

d = 2

e = 3

Operator	Meaning	Example
&	It Concates two operands or string.	c = a & b

It returns

Hello How Are You

f = d + e

It returns 23

+ It Concates two operands or string.

If both the operand are numeric then instead of concating them it will produce addition of operands. c = a + b

It returns

Hello How Are You

f = d + e

It returns 5

(4) Logical Operator

Following are the list of Logical Operators supported by VB.NET:

Consider Following Example:

```
Dim a as Boolean, b as Boolean, c as Boolean
```

```
a = true
```

```
b = false
```

And It accepts Boolean value or condition as operands and returns TRUE if both

operands are TRUE otherwise it returns FALSE.

$c = a \text{ And } b$

It returns false

Or It accepts Boolean value or condition as operands and returns TRUE if any of the operand is TRUE otherwise it returns FALSE.

$c = a \text{ Or } b$

It returns false

Not It reverses the logical state of its operand or condition. If operand or condition is true then it returns false. If operand or condition is false then it returns true.

$c = \text{Not } (a$

And b)

It returns true

Xor It accepts Boolean value or condition as operands and returns FALSE if both operands are same otherwise it returns TRUE.

$c = a \text{ Xor } b$

It return true.

AndAlso It works same as AND operator but It will not evaluate second operand if first operand is FALSE.

$c = a \text{ AndAlso } b$

It returns false.

OrElse It works same as OR operator but It will not evaluate second operand if first operand is TRUE.

$c = a \text{ OrElse } b$

It returns true.

(5) Assignment Operator

Following are the list of Assignment Operators supported by VB.NET:

= Assign value from the right side operand or expression to the operand on left side.
 $c = a * b$

`+=` Add right operand to left operand and assign result to left operand. $a = a + b$
can be written as
 $a+=b$

`-=` Subtract right operand from left operand and assign result to left operand. a
 $= a - b$
can be written as
 $a-=b$

`*=` Multiply right operand with left operand and assign result to left operand. a
 $= a * b$
can be written as
 $a*=b$

`/=` Divide left operand by right operand and assign result to left operand. a
 $= a / b$
can be written as
 $a/=b$

`\=` Divide left operand by right operand and assign result to left operand. a
 $= a \setminus b$
can be written as
 $a\setminus b$

`^=` Raise left operand to the power of right operand and assign result to left
operand. $a = a ^ b$
can be written as
 $a^=b$

`&=` Concatenate left operand with right operand and assign result to left operand. a
 $= a \& b$
can be written as

a&=b