

Java Ternary Operator with Examples

Difficulty Level : Basic Last Updated : 13 Jul, 2021

Operators constitute the basic building block to any programming language. Java too provides many types of operators which can be used according to the need to perform various calculation and functions be it logical, arithmetic, relational etc. They are classified based on the functionality they provide. Here are a few types:

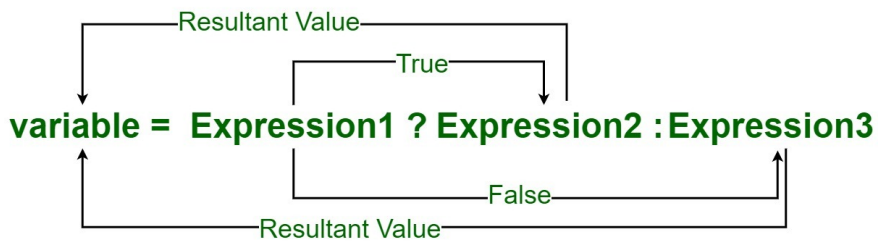
1. Arithmetic Operators
2. Unary Operators
3. Assignment Operator
4. Relational Operators
5. Logical Operators
6. Ternary Operator
7. Bitwise Operators
8. Shift Operators

This article explains all that one needs to know regarding the Ternary Operator.

Ternary Operator

Java ternary operator is the only conditional operator that takes three operands. It's a one-liner replacement for if-then-else statement and used a lot in Java programming. We can use the ternary operator in place of if-else conditions or even switch conditions using nested ternary operators. Although it follows the same algorithm as of if-else statement, the conditional operator takes less space and helps to write the if-else statements in the shortest way possible.

Conditional or Ternary Operator (?:) in Java



Syntax:

```
variable = Expression1 ? Expression2 : Expression3
```

If operates similarly to that of the if-else statement as in *Expression2* is executed if *Expression1* is true else *Expression3* is executed.

```
if(Expression1)
{
    variable = Expression2;
}
else
{
    variable = Expression3;
}
```

Example:

```
num1 = 10;
num2 = 20;

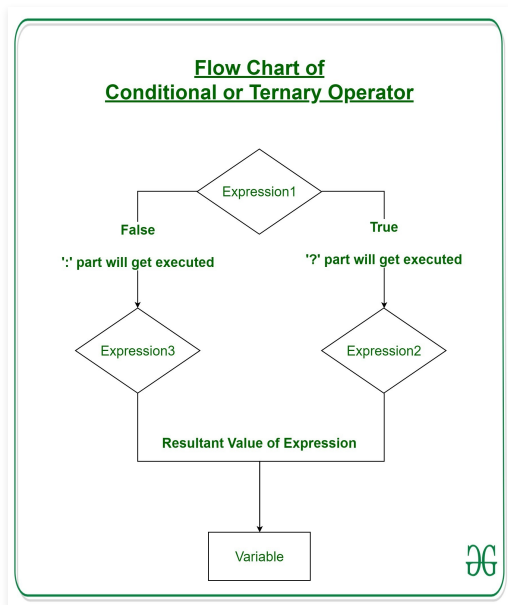
res=(num1>num2) ? (num1+num2):(num1-num2)
```

Since $num1 < num2$,

the second operation is performed

res = num1-num2 = -10

Flowchart of Ternary Operation



Example 1:

```
// Java program to find largest among two  
// numbers using ternary operator
```

```
import java.io.*;
```

```
class Ternary {  
    public static void main(String[] args)  
    {
```

```
        // variable declaration  
        int n1 = 5, n2 = 10, max;
```

```
        System.out.println("First num: " + n1);  
        System.out.println("Second num: " + n2);
```

```
        // Largest among n1 and n2  
        max = (n1 > n2) ? n1 : n2;
```

```
        // Print the largest number  
        System.out.println("Maximum is = " + max);
```

```
    }  
}
```

Output:

```
First num: 5  
Second num: 10  
Maximum is = 10
```

Example 2:

```
// Java code to illustrate ternary operator  
  
import java.io.*;  
  
class Ternary {  
    public static void main(String[] args)  
    {  
  
        // variable declaration  
        int n1 = 5, n2 = 10, res;  
  
        System.out.println("First num: " + n1);  
        System.out.println("Second num: " + n2);  
  
        // Performing ternary operation  
        res = (n1 > n2) ? (n1 + n2) : (n1 - n2);  
  
        // Print the largest number  
        System.out.println("Result = " + res);  
    }  
}
```

Output:

First num: 5

Second num: 10

Result = -5