**Java Recursion**

In this tutorial, you will learn about Java recursive function, its advantages and disadvantages.

In Java, a [method](https://www.programiz.com/java-programming/methods) that calls itself is known as a recursive method. And, this process is known as recursion.

A physical world example would be to place two parallel mirrors facing each other. Any object in between them would be reflected recursively.

## Example: Factorial of a Number Using Recursion

class Factorial {

static int factorial( int n ) {

if (n != 0) // termination condition

return n \* factorial(n-1); // recursive call

else

return 1;

}

public static void main(String[] args) {

int number = 4, result;

result = factorial(number);

System.out.println(number + " factorial = " + result);

}

}

**Output**:

4 factorial = 24

In the above example, we have a method named factorial(). The factorial() is called from the main() method. with the number variable passed as an argument.

Here, notice the statement,

return n \* factorial(n-1);

The factorial() method is calling itself. Initially, the value of n is 4 inside factorial(). During the next recursive call, 3 is passed to the factorial() method. This process continues until n is equal to 0.

When n is equal to 0, the if statement returns false hence 1 is returned. Finally, the accumulated

result is passed to the main() method

