



What is it?

Recursion in Java is a process in which a method calls itself continuously.

A method in Java that calls itself is called recursive method.



How does it work?

There are two main requirements of a recursive function:

Stop Condition (base case)
the function returns a value when a certain condition is satisfied, without a further recursive call

The Recursive Call
the function calls itself with an input which is a step closer to the stop condition

RECURSION

Example

```
public class RecFactorial{  
    public static int factorial(int n){  
        if (n == 1){  
            return 1;  
        }else{  
            return(n * factorial(n-1));  
        }  
    }  
    public static void main(String[] args) {  
        System.out.println("Factorial of 4 is: "  
            +factorial(4));  
    }  
}
```

Output:

Factorial of 4 is: 24

Exertion of the program:

```
factorial(4)  
    factorial(3)  
        factorial(2)  
            factorial(1)  
                return 1  
            return 2*1 = 2  
        return 3*2 = 6  
    return 4*6 = 24
```