Functions / Methods

Syntax

```
returnType name () {
    // body
    return statement;
}
```

Syntax with _Parameters_

```
returnType  name (type param1, type param2) {
        // body
        return statement;
}
```

What happens in Memory?

Call by _Value_

Java always calls by value

Call by _Reference_

Find Product of a & b

a=3, b=5

Factorial _of a number, n_   n = 4

n!

Binomial Coefficient

n = 5, r = 2

$$^{n}C_{r} = \frac{n!}{r!(n-r)!}$$

Function Overloading

Multiple functions with the same name but different parameters

Function Overloading

using Parameters

Function Overloading

using Data Types

Check if a number is *Prime or not*

Prime all Primes in a Range   n = 10

Convert from *Binary to Decimal*   n = 101

Convert from _Decimal to Binary_   n = 7

Scope

Method Scope

Scope

Block Scope