



Java Class Methods



Class Methods

- In Java, a method is nothing but a block of code/statement that is declared within the class and can perform different actions when someone calls it
- Some methods can be called directly with their name (i.e. without creating the class object) while some methods require instance/object of the class (i.e. must be invoked with the object of the class)



Class Methods

- The methods that can be called directly are referred as a **class or static methods**
- The methods that need an object of the class to be invoked are referred as **instance or non-static methods**.



AddNumbers.java x

Source History

```
5 public class AddNumbers {
6
7     public static int addition(int num1, int num2) {
8         int add = num1 + num2;
9         return add;
10    }
11
12    public static void main(String[] args) {
13
14        int number1, number2, sum;
15        Scanner scan = new Scanner(System.in);
16        System.out.print("Enter 1st number: ");
17        number1 = scan.nextInt();
18        System.out.print("Enter 2nd number: ");
19        number2 = scan.nextInt();
20
21        sum = addition(number1, number2);
22        System.out.println("Sum = " + sum);
23    }
```

Static Method

Taking Input Form User

Calling the "addition" Method Directly

Output - AddNumbers (run) x

```
run:
Enter 1st number: 12
Enter 2nd number: 72
Sum = 84
BUILD SUCCESSFUL (total time: 8 seconds)
```



The screenshot shows an IDE with two tabs: `MyFunctions.java` and `AddNumbers.java`. The `AddNumbers.java` tab is active, displaying the following code:

```
5 public class AddNumbers {
6
7     public static void main(String[] args) {
8
9         int number1, number2, sum;
10        Scanner scan = new Scanner(System.in);
11        System.out.print("Enter 1st number: ");
12        number1 = scan.nextInt();
13        System.out.print("Enter 2nd number: ");
14        number2 = scan.nextInt();
15        MyFunctions obj = new MyFunctions();
16        sum = obj.addition(number1, number2);
17        System.out.println("Sum = " + sum);
18    }
19
20 }
21
```

Annotations in the code:

- A green arrow points to line 15 (`MyFunctions obj = new MyFunctions();`) with the label "Object Creation".
- A red arrow points to line 16 (`sum = obj.addition(number1, number2);`) with the label "Method Calling".

The IDE's output window at the bottom shows the following output:

```
run:
Enter 1st number: 15
Enter 2nd number: 12
Sum = 27
BUILD SUCCESSFUL (total time: 6 seconds)
```

Annotations in the output:

- A red arrow points to the input lines (`Enter 1st number: 15` and `Enter 2nd number: 12`) with the label "Output".