**Method in Java: Source:** **https://www.programiz.com/java-programming/methods**

* A method is a block of code that **performs a specific tasks.**
* Dividing a complex problem into smaller chunks makes your program **easy to understand** and **reusable.**
* So by using methods we are make the program as easy to understand and reusable

**Example For Methods:**

Suppose you need to create a program to create a circle and color it. You can create two methods to solve this problem:

a method to draw the circle

a method to color the circle

In Java, there are two types of methods:

**User-defined Methods:** We can create our own method based on our requirements.

**Standard Library Methods:** These are built-in methods in Java that are available to use.

**Declaring a Java Method**

returnType methodName() {

// method body

}

Here,

returnType - It specifies what type of value a method returns For example if a method has an int return type then it returns an integer value.

If the method does not return a value, its return type is void.

methodName - It is an identifier that is used to refer to the particular method in a program.

method body - It includes the programming statements that are used to perform some tasks. The method body is enclosed inside the curly braces { }.

For example,

int addNumbers() {

// code

}

In the above example, the name of the method is adddNumbers(). And, the return type is int. We will learn more about return types later in this tutorial.

This is the simple syntax of declaring a method.

**The complete syntax of declaring a method is**

modifier static returnType nameOfMethod (parameter1, parameter2, ...) {

// method body

}

Here,

modifier - It defines access types whether the method is public, private, and so on. To learn more, visit Java Access Specifier.

static - If we use the static keyword, it can be accessed without creating objects.

For example, the sqrt() method of standard Math class is static. Hence, we can directly call Math.sqrt() without creating an instance of Math class.

parameter1/parameter2 - These are values passed to a method. We can pass any number of arguments to a method.

**Calling a Method in Java**

In the above example, we have declared a method named addNumbers(). Now, to use the method, we need to call it.

// calls the method

addNumbers();

**Java Recursion**

* Recursion is the technique of making a function call itself.
* This technique provides a way to break complicated problems down into simple problems which are easier to solve.
* The base condition acts as the breakpoint to the self-calling process.