

**Static Methods in Java**

Student's Name

Department, Institutional Affiliation

Course Number and Name

Instructor's Name

Due Date

## **Static Methods in Java**

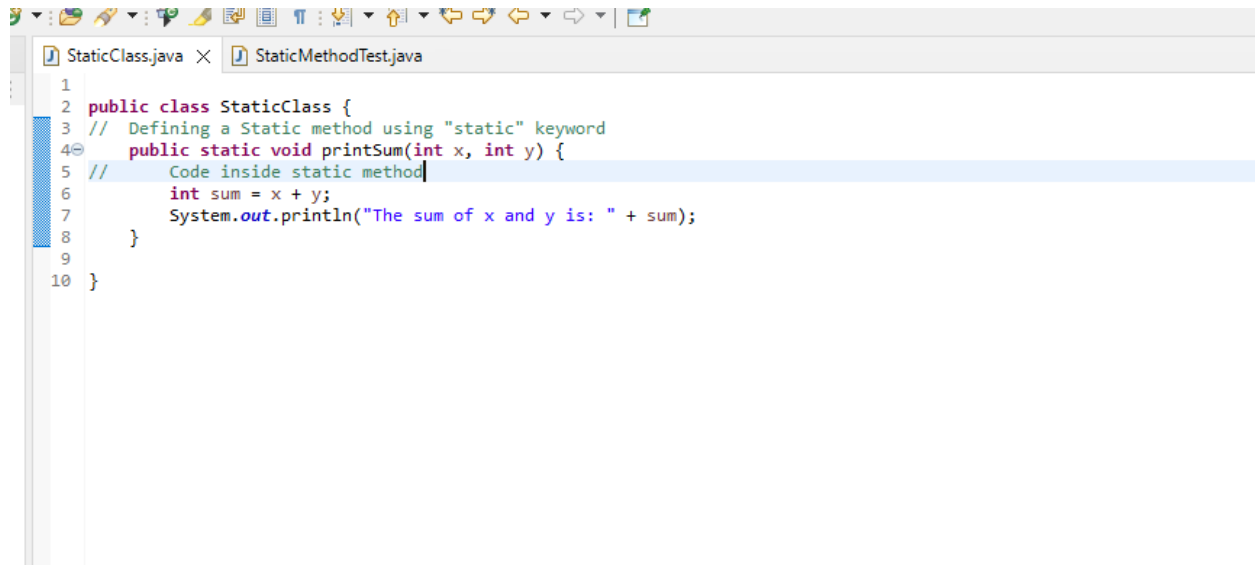
Static methods in Java are methods that belong to a Java class rather than an instance of the main class. These methods are accessed by all instances of the class. If a method is defined in an instance of a Java class, it is only accessible by objects of the class. As a result, static methods are called using their respective class name without initiating the class or creating an object of the class first.

Static methods are used to access static data methods, such as variables. According to Rabelo 2021, a static method in Java can be called simply by the class name accompanied by a period and the method name. To declare a static method in Java, the “static” keyword is used. It is called inside another static method. Therefore, it can only call static data members.

The entry point of a Java program is usually a static method. When a Java program runs for the first time, there is no instance created yet, thus the main method is usually a static method. In it, other static methods may be called directly using their respective class names without necessarily creating instances of the classes. Static methods are distinguished from non-static methods by the signature of the “static” keyword in static methods that are not found in non-static methods (Edureka, 2020). As a result, it is easy to distinguish static methods from non-static methods by just looking at the definition of the method.

### **Demonstration of Static Methods in Java**

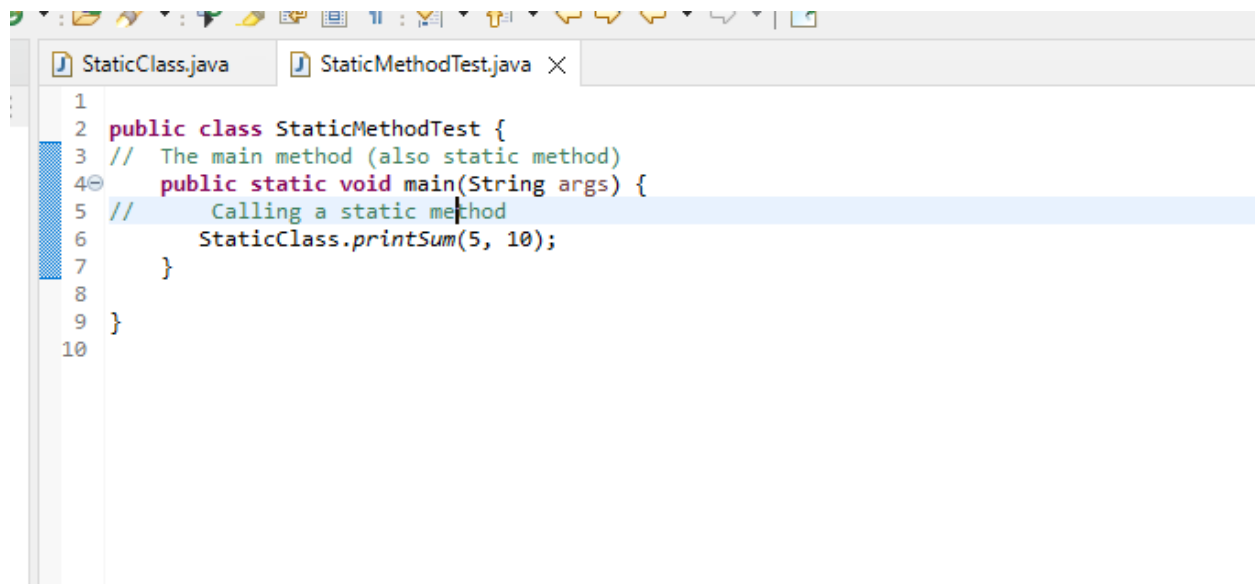
#### ***Defining a Static Method in Java***



```
1
2 public class StaticClass {
3 // Defining a Static method using "static" keyword
4 public static void printSum(int x, int y) {
5 // Code inside static method
6 int sum = x + y;
7 System.out.println("The sum of x and y is: " + sum);
8 }
9
10 }
```

Figure 1 Creating a static method in Java

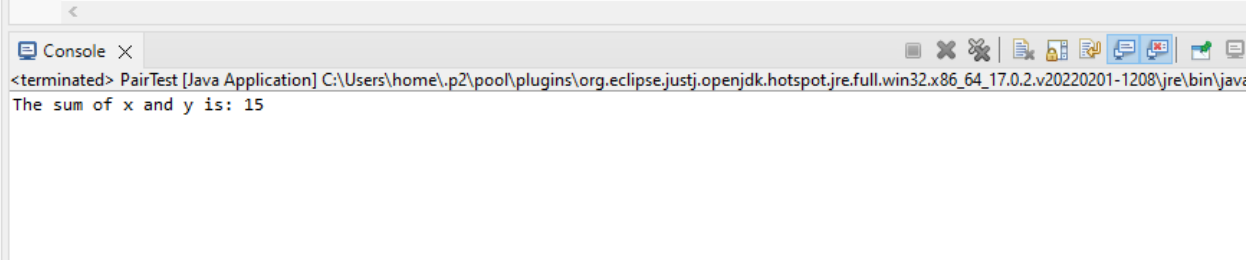
### ***Calling a Static Method from Another Static Method of a Different Class***



```
1
2 public class StaticMethodTest {
3 // The main method (also static method)
4 public static void main(String args) {
5 // Calling a static method
6 StaticClass.printSum(5, 10);
7 }
8
9 }
10
```

Figure 2 Calling a static method

### ***The Output After Calling the Static Method***



The screenshot shows a console window titled "Console X" with a close button. The window contains the following text: "<terminated> PairTest [Java Application] C:\Users\home\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_17.0.2.v20220201-1208\jre\bin\java.exe" and "The sum of x and y is: 15". The console window has a standard toolbar with icons for copy, paste, and other actions.

```
<terminated> PairTest [Java Application] C:\Users\home\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20220201-1208\jre\bin\java.exe
The sum of x and y is: 15
```

*Figure 3 Output after calling the static method*

## References

Edureka. (2020, November 25). *Java static method | Static keyword in Java |*

*Edureka.* <https://www.edureka.co/blog/java-static-method/>

Rabelo, J. (2021, January 15). *What is a static method? - Definition from Techopedia.*

Techopedia.com. <https://www.techopedia.com/definition/24034/static-method-java>