
Core Java Tutorial: Java Methods & Constructors



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Java Method & Constructor

- A **method** in Java exhibits certain **behaviour / operation** of a class. According to OOP principle (founded by Grady Booch), the fields of a class should be accessed by its methods only to ensure data hiding.
- A Java method can be of two types— **instance method** (i.e. non-static method) and **class method** (i.e. static method). Instance methods are the members of a class object; while, the class methods are the members of the class only.
- A **constructor** in Java is basically used to perform automatic initialization of an object. It has the same name as the name of the class to which it belongs.
- The Constructor's syntax **does not include a return type** (**not even void**), since constructors never return a value.

Difference between Constructor & Method

There are many differences between constructors and methods in Java. They are given below.

Constructor	Method
1) A constructor is used to initialize the state of an object.	1) A method is used to present the behavior of an object.
2) A constructor cannot have a return type.	2) A method may have a return type.
3) A constructor is invoked implicitly.	3) A method is invoked explicitly.
4) Java compiler provides a default constructor if we don't have any.	4) Method is not provided by the compiler in any case.
5) Constructor name must be same as the class name.	5) Method name may or may not be same as the class name.

References

■ Book Resources:

- Herbert Schildt. *Java: The complete Reference*. Tata McGraw Hill (TMH), 9th Edition.
- Cay S. Horstmann, Gary Cornell. *Core Java Volume-I and Volume-II*. Pearson Education, 8th Edition.
- Kathy Sierra, Bert Bates. *Head First Java*. O'Reilly Media, 2nd Edition.
- E. Balagurusamy, *Programming with Java A Primer*. TMH, 3rd Edition.

■ URL Resources:

- <https://docs.oracle.com/javase/tutorial/java/package/index.html>
- <https://www.w3schools.com/java/default.asp>