# New Features in Java
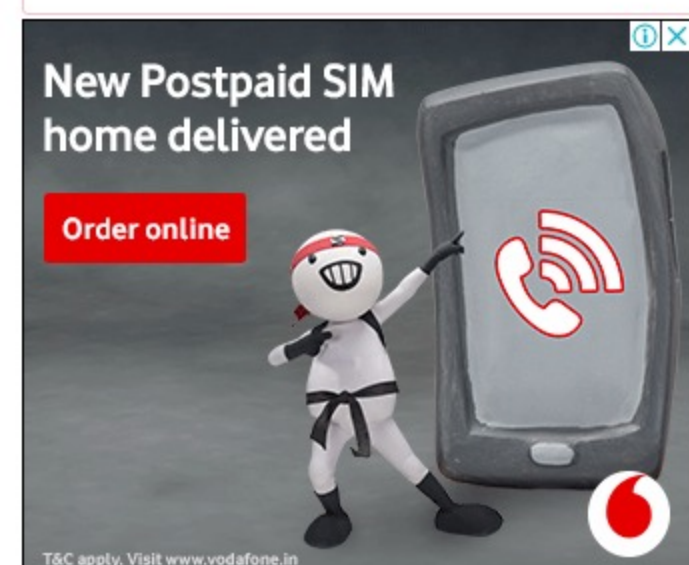
There are many new features that have been added in java. There are major enhancement made in Java5, Java6, Java7 and Java8 like **auto-boxing**, **generics**, **var-args**, **java annotations**, **enum**, **premain method** , **lambda expressions**, **functional interface**, **method references** etc.

Most of the interviewers ask questions from this chapter.

### Do You Know?

1. How to create generic class and generic method in java ?
2. What is annotation and how to create custom annotation ?
3. What is the advantage of assertion and where we should not use it ?
4. What is variable argument and what rules are defined for variable argument ?
5. What is the difference between import and static import ?
6. How autoboxing is applied in method overloading. Which concept beats autoboxing ?
7. What is enum type and how to specify specific value to the enum constants ?

## JavaSE 8 Features

The important features of JavaSE 8 are lambda expressions, methods references, default methods, functional interface, java 8 date/time, stream classes etc.

- Java 8 Date/Time API (Java 8)
- Lambda Expressions (Java 8)
- Method References (Java 8)
- Functional Interfaces (Java 8)
- Stream (Java 8)
- Base64 Encode Decode (Java 8)
- Default Methods (Java 8)
- forEach method(Java 8)
- Collectors(Java 8)
- StringJoiner(Java 8)
- Optional class (Java 8)
- Nashorn JavaScript (Java 8)
- Parallel Array Sorting (Java 8)
- Type Inference (Java 8)
- Method Parameter Reflection (Java 8)
- Type annotations and repeating annotations (Java 8)
- Java JDBC Improvements (Java 8)
- Java IO Improvement (Java 8)
- Java Concurrency Improvement (Java 8)

## JavaSE 7 Features

The important features of JavaSE 7 are try with resource, catching multiple exceptions etc.

- String in switch statement (Java 7)
- Binary Literals (Java 7)
- The try-with-resources (Java 7)
- Caching Multiple Exceptions by single catch (Java 7)
- Underscores in Numeric Literals (Java 7)

## JavaSE 6 Features

The important feature of JavaSE 6 is premain method (also known as instrumentation).

- Instrumentation (premain method) (Java 6)

## J2SE 5 Features

The important features of J2SE 5 are generics and assertions. Others are auto-boxing, enum, var-args, static import, for-each loop (enhanced for loop etc.

- For-each loop (Java 5)
- Varargs (Java 5)
- Static Import (Java 5)
- Autoboxing and Unboxing (Java 5)
- Enum (Java 5)
- Covariant Return Type (Java 5)
- Annotation (Java 5)
- Generics (Java 5)

## J2SE 4 Features

The important feature of J2SE 4 is assertions. It is used for testing.

- Assertion (Java 4)