

# JAVA 9 - OVERVIEW

## Advertisements

JAVA 9 (aka jdk 1.9) is a major release of JAVA programming language development. Its initial version was released on 21 Sep 2017. The main goals of Java 9 release are –

- To make JDK and Java Standard Edition platform modular based in the sense that it can be scaled down to small computing devices well.
- To improve the overall security of the JDK and Java Implementations.
- To make build process and maintainance of java code libraries and large applications easy for for JAVA SE and EE platforms.
- To design and implement a standard module system for the Java Platform which can be applied on both Platform and JDK easily.

## New Features

There are 90+ enhancements added to Java 8, the most significant ones are mentioned below –

- **Module** – A new kind of Java programing component introduced as module, which is a named, self-describing collection of code and data.
- **REPL (JShell)** – Read-Eval-Print Loop (REPL) capability added to the Java platform.
- **HTTP 2 Client** – new HTTPClient API supporting websockets and HTTP 2 streams and server push features.
- **Improved JavaDocs** – Supports HTML5 output generation. Provides a search box to generated API documentation.
- **Multirelease JAR** – Enhances the JAR format so that multiple, Java release-specific versions of class files can coexist in a single archive.
- **Collection Factory Methods** – New static factory methods for List, Set, and Map interfaces to create immutable instances of those collections.
- **Private Interface Methods** – Enhanced interfaces with private and private static methods.
- **Process API Improvements** – Improved API to control and manage operating system processes.
- **Stream API Improvements** – Enhanced security and robustness by allowing incoming streams of object-serialization data to be filtered.
- **Try With Resources improvement** – Now final variables can be used as resources in the try-with-resources statement.
- **Enhanced @Deprecated Annotation** – @Deprecated annotation revamped to provide more information about the status and intended disposition of an API.
- **Inner Class Diamond Operator** – Allow the diamond operator to be used with anonymous classes if the argument type of the inferred type can be denoted.
- **Optional Class Improvements** – New useful methods are added to java.util.Optional class.
- **Multiresolution Image API** – Supports encapsulation of a set of images with different resolutions into a single multiresolution image.
- **CompletableFuture API improvements** – The asynchronous mechanisms of the CompletableFuture class can perform an action when the process exits with ProcessHandle.onExit method.

- **Lightweight JSON** – A lightweight API introduced to consume and generating documents and data streams via json in java 9.
- **Reactive Streams API** – A new Reactive Streams API in Java SE 9 has been introduced to support reactive programming in java 9.