

Installation

While downloading Java, download the LTS version (latest version 17) also can install version 8 and 11.

Java

Java 8 is mostly used in industries also many companies use Java 11 and 17, it differs company to company. For now Java 8 is the most stable version also you can download Java 11.

IDE

Eclipse IDE is a very good IDE for beginner and it is also used in Industries.

Another advanced IDE is IntelliJ IDEA (Community/Ultimate)

Both are the best IDE

Java Execution Process

IDE



Compiles the code to Bytecode and the file will be as file.**class**



Interpreter read's the Bytecode and interprets according to OS understandable format.



Then OS executes the code and generate Output.

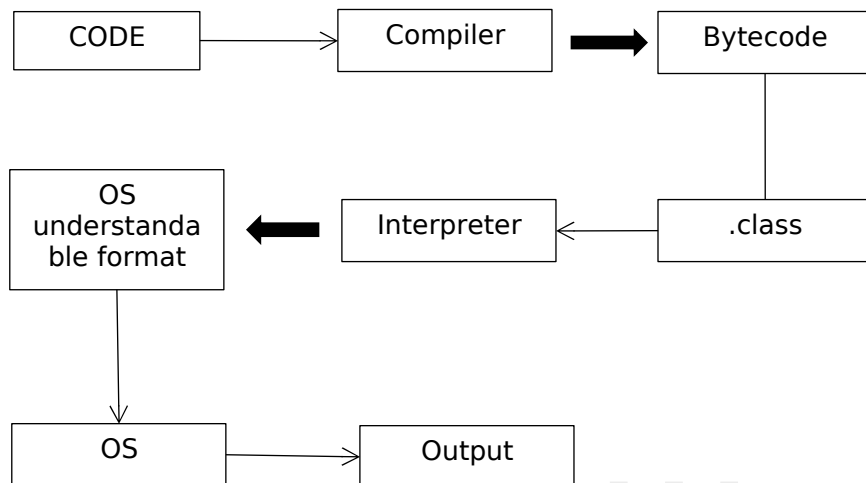


Fig 1.0 : Java Execution Process

- ◇ For compilation we need **JDK**
 - **JDK** : Java Development Kit
- ◇ For interpreter we need **JRE**
 - **JRE** : Java Runtime Environment

- ❖ **javac.exe** is responsible for **compilation**
- ❖ **java.exe** is responsible for **interpreter**

Why Java is still popular in Industries?

It is a platform independent language it is because as we know that JDK is available for all other common OS platforms.

JDK has JRE in it which reads Java's .class file and execute it, for this a module named JVM helps it.

JVM - Java Virtual Machine

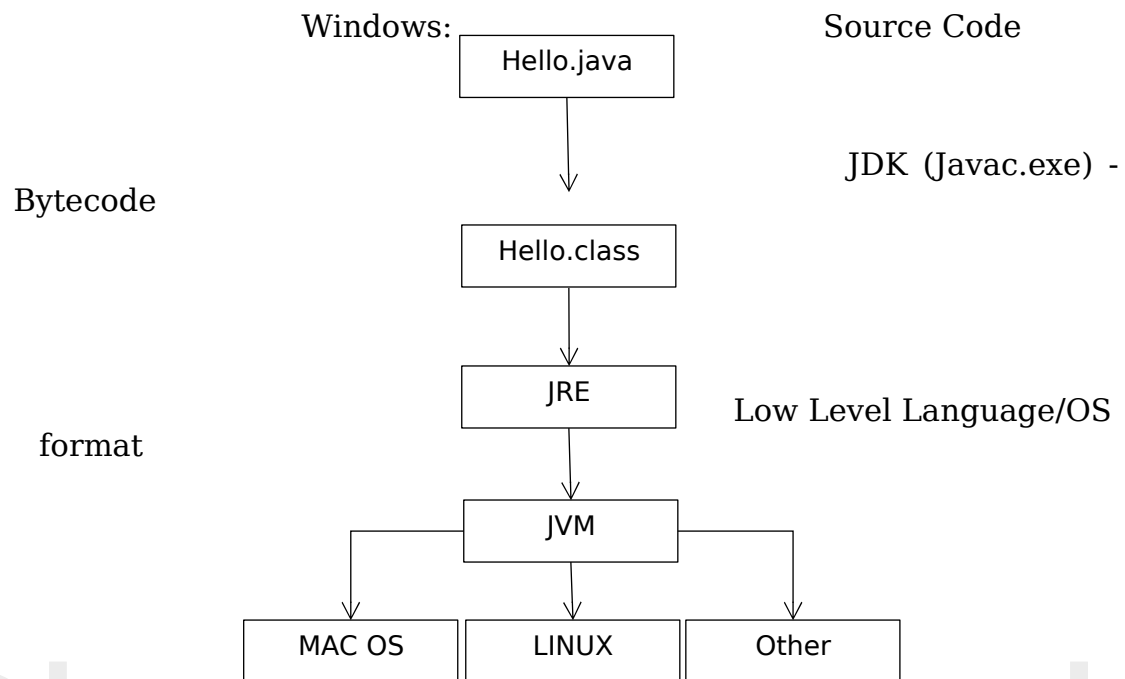


Fig 1.1 : Working with JVM

WORA - Write Once, Run Anywhere

High level language >> Medium level language >> Low level language

(Source Code)

>> (Bytecode)

>> (OS format)

Summary:

- ❖ What are different LTS versions of Java?
- ❖ How to download Java?
- ❖ Which IDE to use?
- ❖ What are the different steps of executing Java file?
- ❖ Inside Java we get JDK and JRE.
- ❖ Inside /bin/ folder we get javac.exe and java.exe.
- ❖ Javac.exe for compiler.
- ❖ Java.exe for interpreter.
- ❖ Java is platform independent (WORA).
- ❖ JVM is a Module in JRE which help in reading .class file.

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