

JAVA JVM

Topics : [JAVA](#)

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JVM is called as Java Virtual Machine or an abstract machine. It is called a virtual machine because it doesn't physically exist. It is a specification that provides a runtime environment in which Java bytecode can be executed.

A Java virtual machine is a virtual machine that enables a computer to run Java programs as well as programs written in other languages that are also compiled to Java bytecode.

Java applications are called Write Once Run Anywhere. This means a programmer can develop Java code on one system and can expect it to run on any other Java-enabled system without any adjustment. This is all possible because of JVM.

JVM architecture

JVM architecture in Java contains classloader, memory area, execution engine etc as belows.

1. **ClassLoader**
2. **Method Area**
3. **Heap**
4. **JVM language Stacks**
5. **PC Registers**
6. **Native Method Stacks**
7. **Execution Engine**
8. **Native Method interface**
9. **Native Method Libraries**

Software Code Compilation & Execution process

We need the following to write and execute a software program.

1. **Editor**
2. **Compiler**
3. **Linker**
4. **Loader**
5. **Execution**