Ravishankar Singh

Oracle Certified Trainer

In order to execute a successful java program we need three parties

- 1) User (Person who writes java program)
- 2) Java Compiler (javac)
- 3) Java Virtual Machine (JVM)

Life Cycle Of a Java Program

- Test.java (Java Source File)

- Java Compiler (Javac)

- Byte code(.class file)

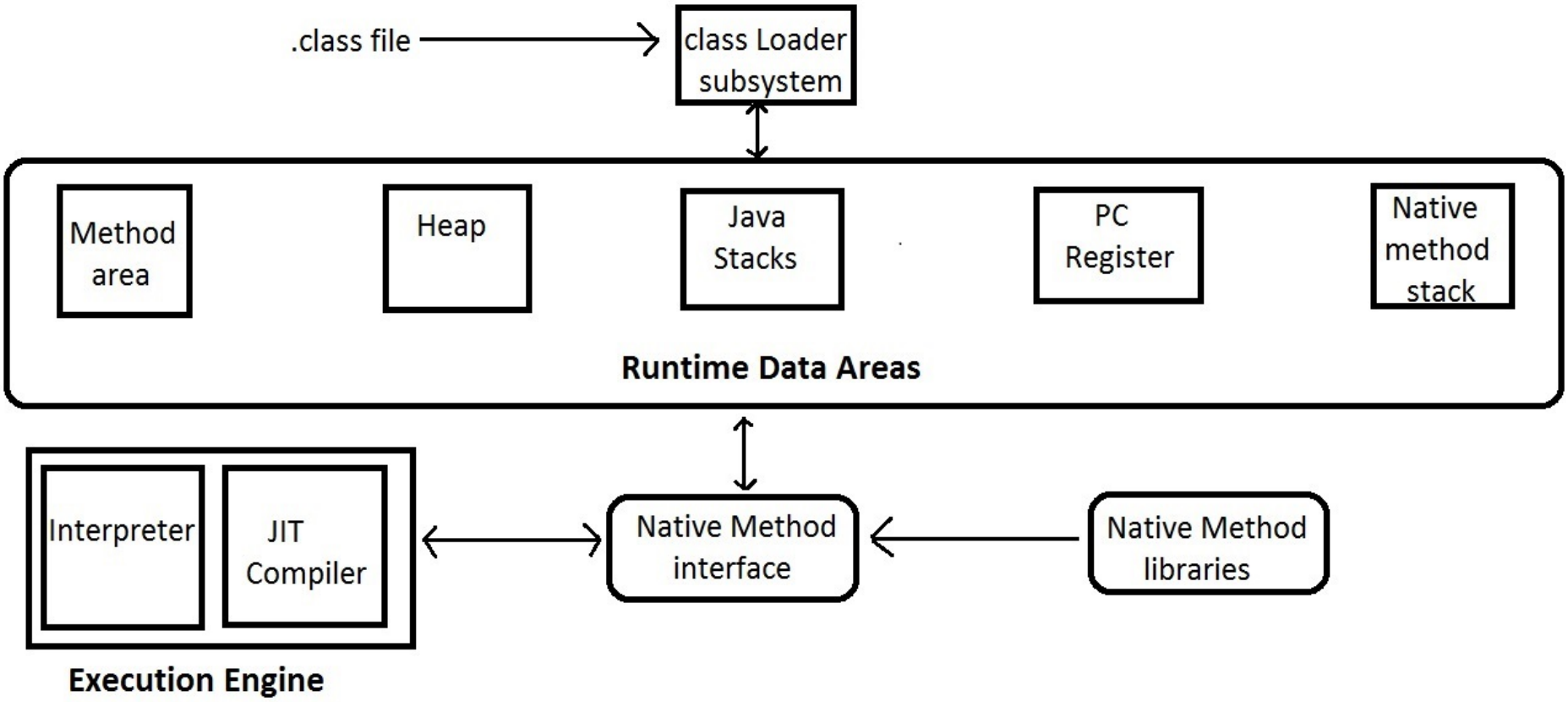
- Java Virtual Machine (JVM)

- Output of Java Program

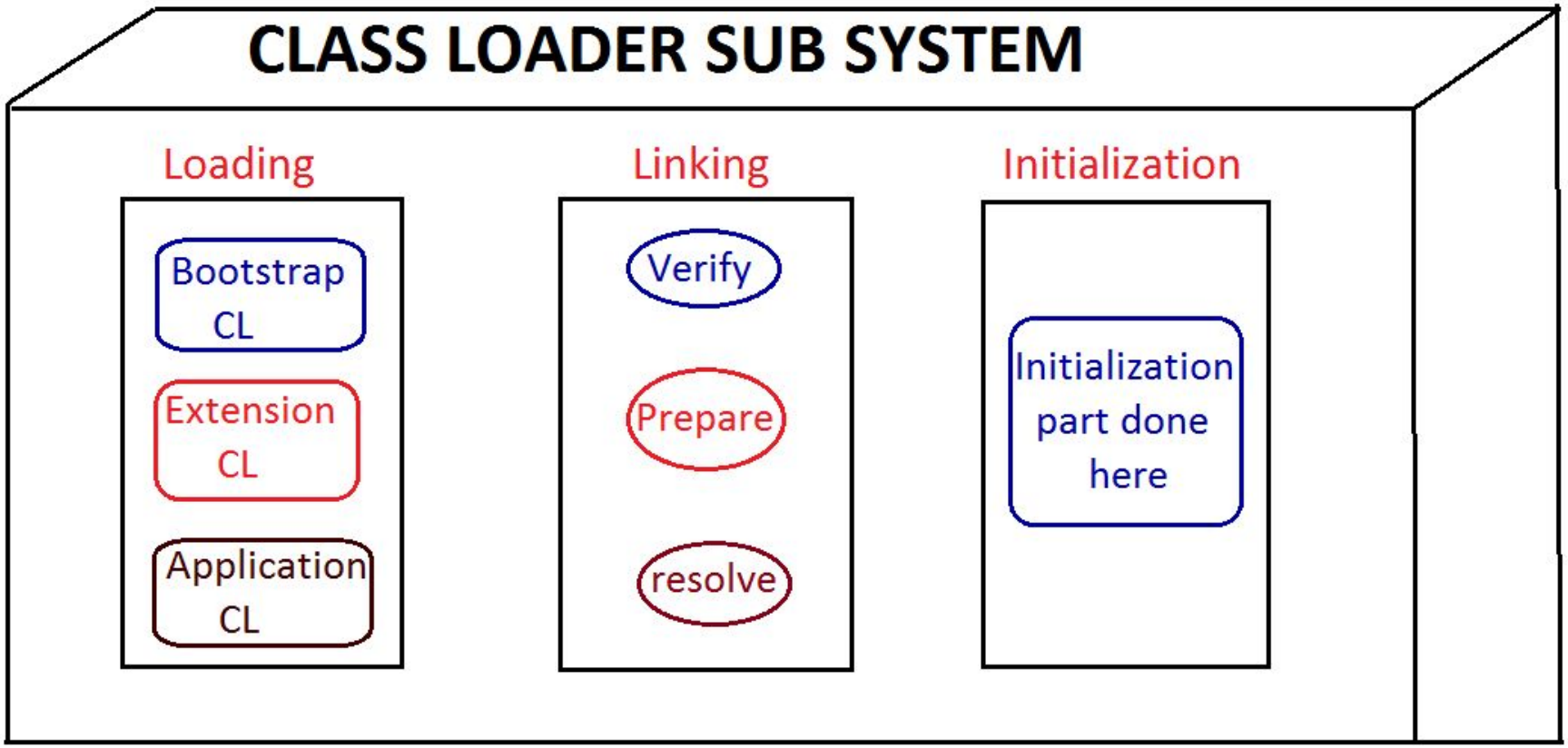
The entire JVM architecture can be divided into 3 parts

- 1) Class Loader Sub System
- 2) Runtime Data Areas (Memory areas)
- 3) Execution Engine

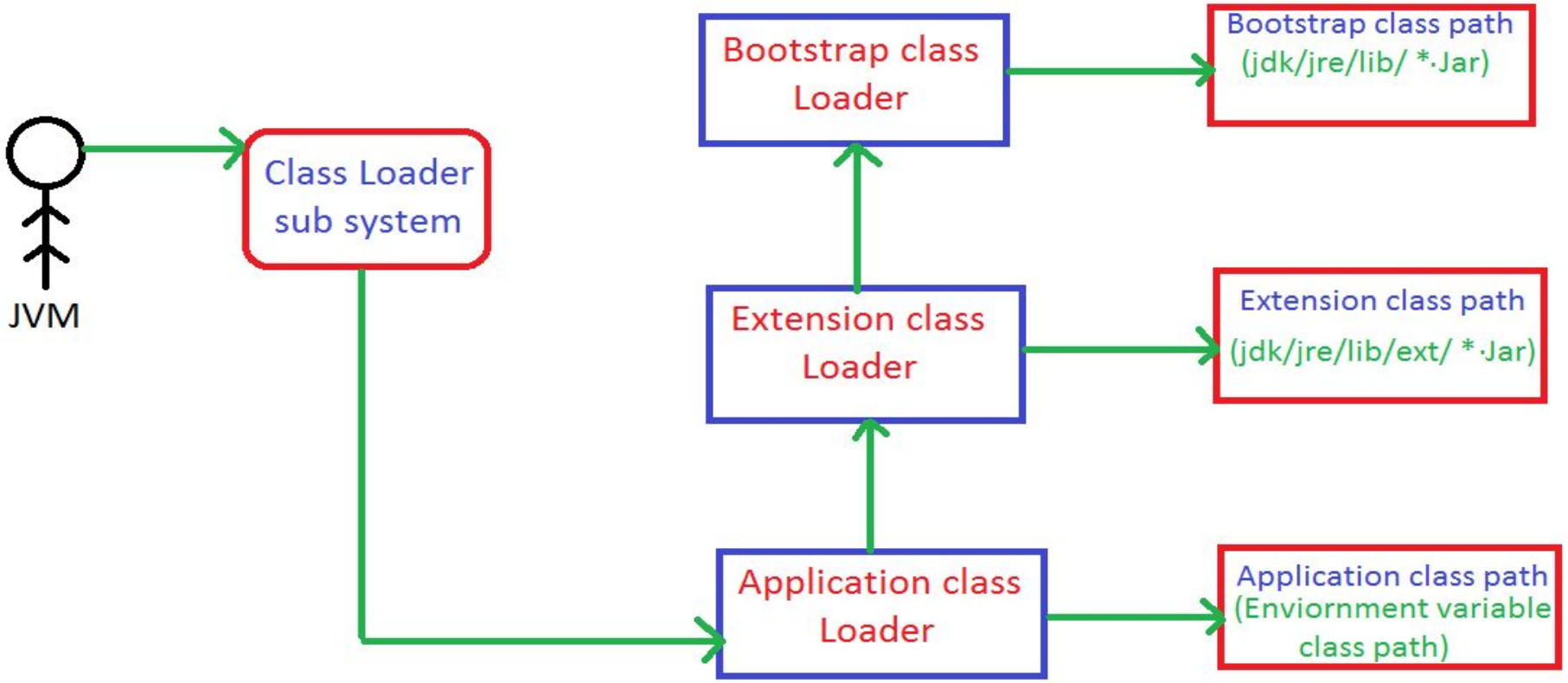
Components in JVM Architecture



1) Class loader Sub System is used to load and execute the .class file



The class loader sub system follows Delegation Hierarchy Algorithm



2) Runtime Data Areas

A. Method Area (To hold Class data)

B. Heap Area (To hold Object data)

C. Stack Area (To hold Thread data)

D. PC Register (To hold address of current executing instructions of Methods)

E. Native Method Stack (To hold Native Method Stack Information)

3) Execution Engine

A. Interpreter

B. JIT Compiler