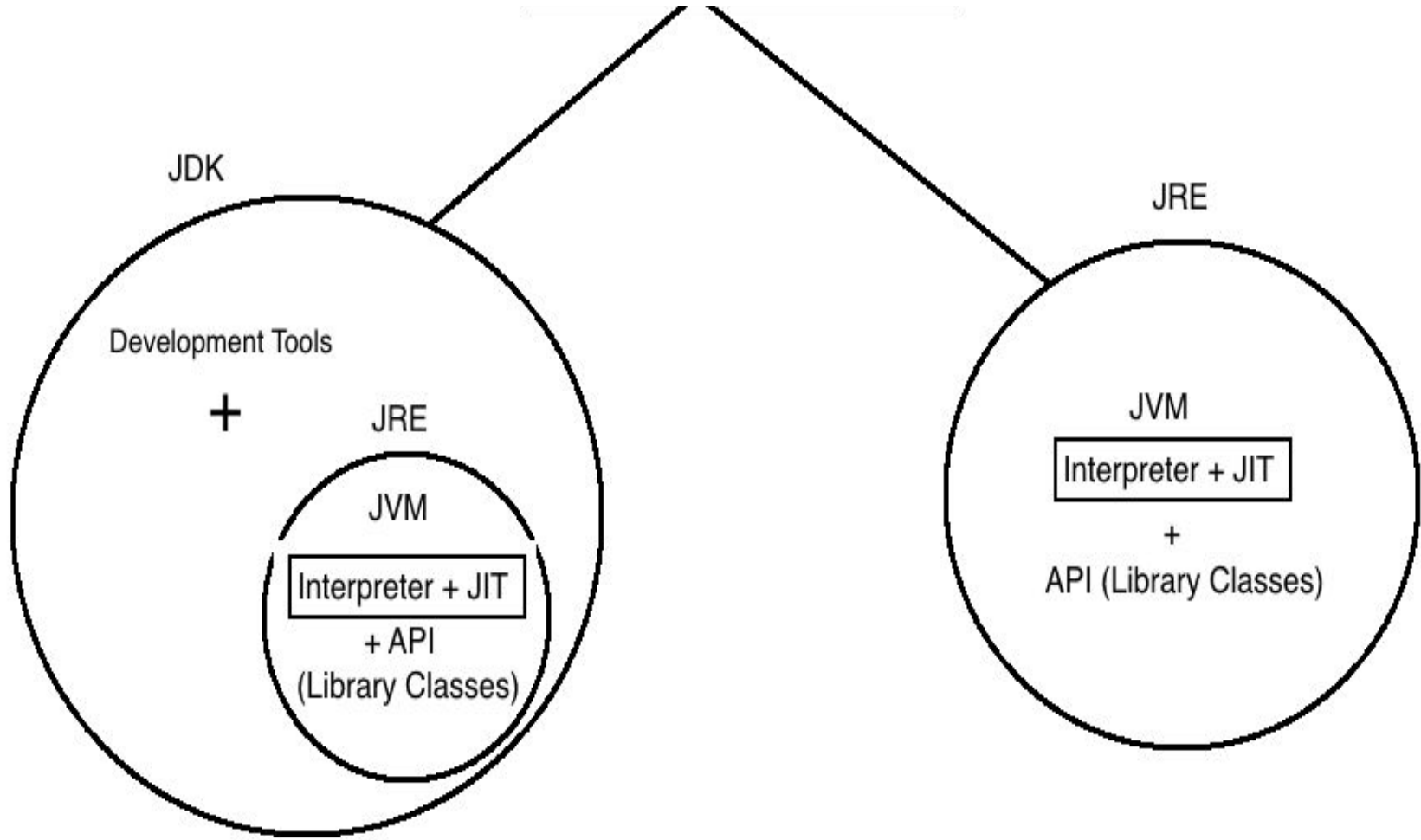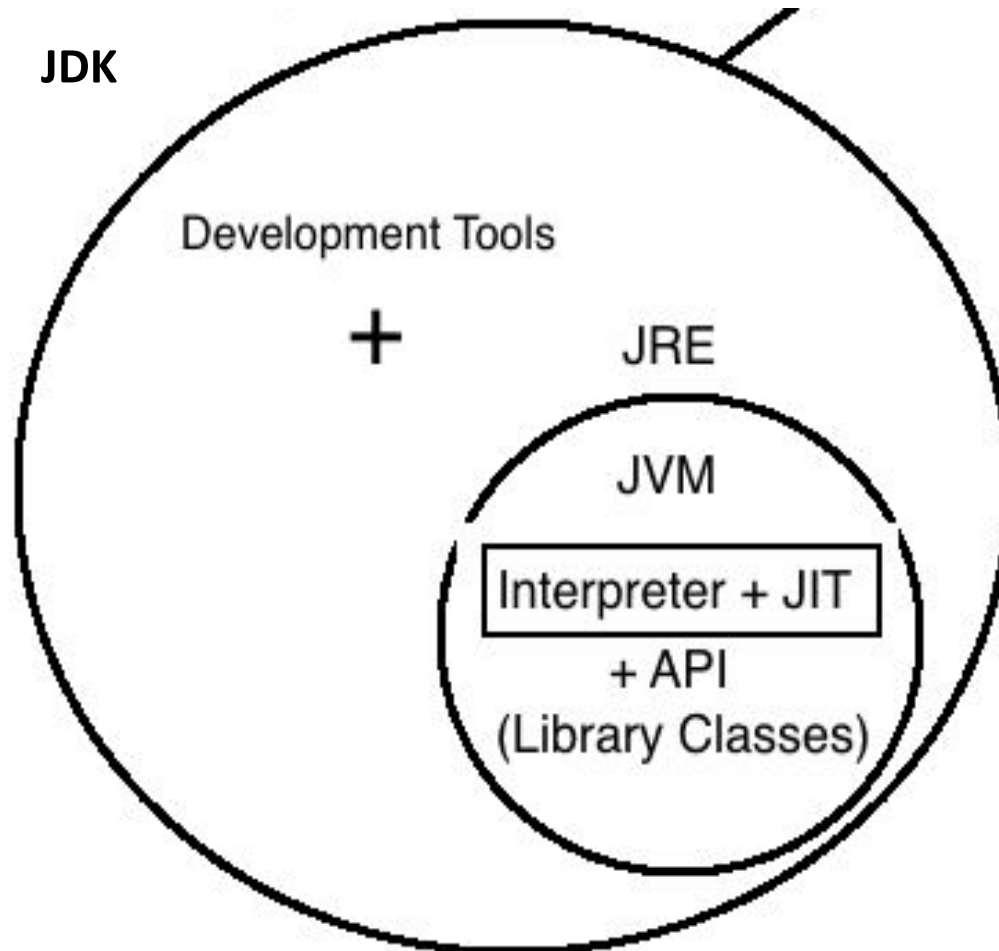# Java Language Environment

Java language Environment

Java Software

- JDK stands for Java Development Kit. JDK Provides environment to develop and run Java Application.
- We install JDK on Developer machine.

- JRE stands for Java Runtime Environment. JRE provides Environment to only run Java Application.
- We Install JRE on Client Machine

Difference between JDK, JRE, JVM, JIT

JDK

Development Tools

+

JRE

JVM

Interpreter + JIT

+ API
(Library Classes)

JDK

- **JDK** stands for **Java Development Kit**.
- It provides **Development Tools**(program preparation related small small softwares like Compiler, Decompiler, Debugging, Developing Documentation, Preparing Jar files etc) and runtime environment.
- Using JDK we can develop, compile and execute new applications and we can modify existing applications.

JRE

- **JRE** stands for Java Runtime Environment.
- JRE does not provide any development tools. It contains only JVM.
- We can only execute already developed applications.

JVM

- **JVM** stands for Java Virtual Machine.
- It is a java Platform. It provides interpreter and JIT using which we can run java byte code by converting them into machine language.
- You can run Java Program Line wise Line

JIT

- **JIT** stands for Just in Time Compiler.
- It is responsible to help Interpreter for executing java byte code fast.
- Basically it improves the performance of java program