



JDK (Java Development Kit):

Think of JDK as a complete toolkit for Java developers. It includes everything you need to develop Java applications. JDK consists of the Java Compiler (which translates your Java code into bytecode), Java Virtual Machine (JVM), and a bunch of libraries and tools that help you write, compile, and run Java programs.

JRE (Java Runtime Environment):

JRE is like a subset of JDK. It's what you need to run Java applications on your computer. If you're not planning to develop Java programs but just want to use them, you only need the JRE. JRE includes the Java Virtual Machine (JVM) and some libraries, but it lacks the development tools found in JDK.

JVM (Java Virtual Machine):

JVM is like a virtual computer that runs Java bytecode. When you compile your Java code, it gets converted into bytecode, which is a set of instructions that the JVM can understand. JVM is responsible for executing these instructions and translating them into machine code that your computer can understand. It acts as an abstraction layer, making Java programs platform-independent, as the same bytecode can run on any device with a compatible JVM.

In summary:

- JDK is for Java developers and includes everything needed for Java development.
- JRE is for users who want to run Java applications and includes the JVM.
- JVM is the runtime environment that executes Java bytecode, making Java programs platform-independent.