JDK JVM JRE and JIT

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What is JDK......?

- JDK stand for java development kit

- It is used to build and develop the java program

- It internally contains JRE

- It contains the compiler and debugger

- It contains all the related set of libraries and files to build and compile the java program

- Without JDK we cant build any java program

What is JRE.....?

- JRE stands for Java Runtime environment

- JRE is the responsible unit to run the java program

- Without JRE we cant run java program (JDK is used to build java program, where as JRE is used to run java program. Such that without JDK , I mean with only JRE we can run the java program even without JDK)

- JRE contains JVM

- JRE contains all the inbuilt packages and library files (lang , io , util etc all packages are present in JRE)

What is JVM…..?

- JVM stands for Java Virtual Machine

- JVM is platform dependent

- JVM takes .class files and executes it by managing the memory (JVM architecture is attached in other slide, for more reference)

- JVM contains JIT

- JVM loads , verifies and executes the code and provides the runtime environment

- JVM plays a major role in java memory management

What is JIT.....?

- JIT stands for Just In Time compiler

- Java was a interpreted programming language, but after introducing JIT it was called as interpreted-compiled programming language

- JIT increased the speed of execution

- JIT helps the JVM to find the active OS

- JIT was introduced from 1.2 JDK

JDK contains JRE, JRE
contains JVM, JVM
contains JIT.
Hence once if we install
JDK all the other
components gets
installed.