

Question 2

In your own words, what is the difference between

JDK(Java Development Kit, JRE(Java Runtime Environment) and JVM
(Java Virtual Machine)

Solution

Difference	JDK(Java Development Kit)	JRE(Java Runtime Environment)	JVM(Java Virtual Machine)
By definition	<ul style="list-style-type: none">• JDK is a software development kit used to develop java and applets.• JDK is a dependent platform• JDK is a piece of software that's the reason is called software development kit	<ul style="list-style-type: none">• JRE is a software designed to run other software, it contains JVM,• JRE is a dependent platform• JRE is bundled software that allows java program to run	<ul style="list-style-type: none">• JVM is a part of JRE that converts java bytecode to machine learning• JVM is also a dependent platform in the sense that is implemented for the specific platform• JVM is environment designed to for executing java bytecode
By function (uses)	<ul style="list-style-type: none">• JDK contains tools required to write Java programs, such as compiler-	<ul style="list-style-type: none">• Utilize some crucial packages like util, math, lang and awt, etc• Essentiall	<ul style="list-style-type: none">• Jvm provides a platform independent way of executing java source code

	<p>where compile converts java codes written into byte code, and java application launchers which open JRE, load classes, and execute the main method</p>	<p>y to JRE, JRE contains class libraries, JVM and supporting files</p>	<ul style="list-style-type: none"> • JVM runs faster as a regular application • JVM also convert java source code into low-level machine language
<p>By features</p>	<ul style="list-style-type: none"> • JDK includes all features that JRE has • JDK contains development tools such as a compiler and debugger, etc • JDK provides the environment to develop and execute Java source code. 	<ul style="list-style-type: none"> • JRE contains deployment technology, including Java Web Start and Java Plug-in • JRE has JVM and Java HotSpot virtual machine clients • JRE includes integration libraries like Java Database Connectivity (JDBC), Remote Method Invocation (RMI), Java 	<ul style="list-style-type: none"> • JVM provides basic java functions like memory management, security, garbage collection • JVM runs the program by using libraries and files given by Java Runtime Environment • JVM can execute the java program line by line hence it is also called an interpreter

		Naming and Directory Interface (JNDI)	r
By installation	It is possible to install more than one JDK version on the same computer.	Though, all JDK versions come bundled with Java Runtime Environment, so you do not need to download and install the JRE separately on your PC	To install JVM, you need to install JRE