Differences between JDK and Java SDK

Asked 16 years, 2 months ago   Modified 3 years, 9 months ago

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Is there any substantial difference between those two terms?. I understand that JDK stands for Java Development Kit that is a subset of SDK (Software Development Kit). But specifying Java SDK, it should mean the same as JDK.

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sdk   java

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asked Oct 3, 2008 at 10:44

Juan Carlos Blanco Martínez

1,967 ● 6 ● 25 ● 29

15 Answers

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From this wikipedia entry:

107

> The JDK is a subset of what is loosely defined as a software development kit (SDK) in the general sense. In the descriptions which accompany their recent releases for Java SE, EE, and ME, Sun acknowledge that under their terminology, the JDK forms the subset of the SDK which is responsible for the writing and running of Java programs. The remainder of the SDK is composed of extra software, such as Application Servers, Debuggers, and Documentation.

The "extra software" seems to be Glassfish, MySQL, and NetBeans. This page gives a comparison of the various packages you can get for the Java EE SDK.

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edited May 4, 2013 at 21:18

Arjan Tijms
38.2k ● 12 ● 111 ● 143

answered Oct 3, 2008 at 10:48

jamesh
20.1k ● 14 ● 58 ● 96

Does SDK contains(!) in its package - the JDK "package" ?
– Royi Namir Nov 26, 2014 at 15:54 ✏️

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1 The JRE is contained within the JDK, yes. The JDK *is a* software development kit (SDK). – jamesh Dec 3, 2015 at 22:52
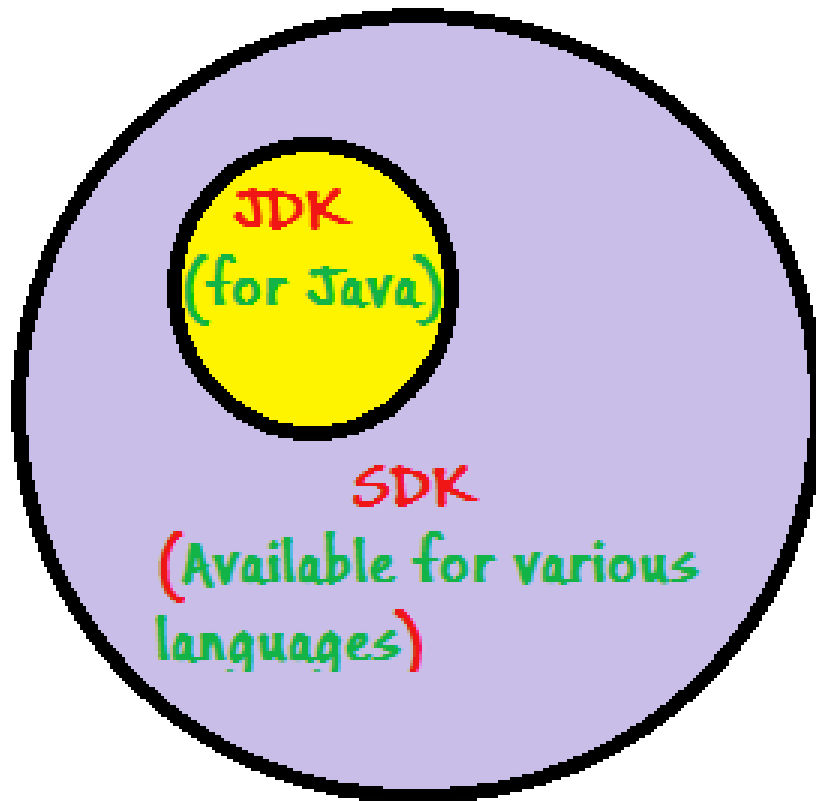

JDK is the SDK for Java.

SDK stands for 'Software Development Kit', a developers tools that enables one to write the code with more more ease, effectiveness and efficiency. SDKs come for various languages. They provide a lot of APIs (Application Programming Interfaces) that makes the programmer's work easy.

The SDK for Java is called as JDK, the Java Development Kit. So by saying SDK for Java you are actually referring to the JDK.

Assuming that you are new to Java, there is another term that you'll come across- JRE, the acronym for Java Runtime Environment. JRE is something that you need when you try to run software programs written in Java.

Java is a platform independent language. The JRE runs the JVM, the Java Virtual Machine, that enables you to

run the software on any platform for which the JVM is available.

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answered Mar 22, 2016 at 12:44

[Arnold Laishram](#)
1,881 ● 2 ● 20 ● 26

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2   Please clarify where does JRE fits in your diagram ? – [vikramvi](#) Sep 7, 2017 at 9:38

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1   JRE comes well inside the JDK or it can be a standalone depending what you are doing. It's the runtime so when you are building an application it comes inside the JDK but when you are just running the application it is stand alone in which case this diagram doesn't make much sense. – [raj240](#) Sep 11, 2019 at 5:37

Are you sure jdk is the sdk of java? Considering java se, it could be true but for java ee and java me, i have seen only SDK's provided by Oracle. So, are you really sure about that? – [user12208242](#) Mar 23, 2020 at 11:46

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image is talking with me :) – [mohammad](#) Nov 11, 2020 at 13:43 ✎

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42

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Yes, there is a difference between the SDK and the JDK. Most of people forget that Java Platform is not only used to develop programs in Java language. The JVM supports some other languages also. Thus, making it clear, the SDK is the generic bundle of software that supports software creation in a variety of languages like Clojure, Groovy, Scala, JRuby, and others. The JDK is the specific bundle to develop software in Java language, containing

all Java standard API to do so. (I hope I've explaned it well, since I actually do not speak english)

answered Jun 13, 2014 at 15:14

JavaBrazil
421 ● 4 ● 2

Taken from the Java EE 6 SDK Installer, shows what SDK 6 contains besides JDK:

7

Java EE 6 SDK

- Install Update Tool Bootstrap
- Install JDK
- Install GlassFish Server 3.1.2
- Install Uninstallation Software
- Configure Update Tool Bootstrap
- Configure GlassFish Server 3.1.2

answered Mar 17, 2015 at 13:11

Crenguta S
512 ● 9 ● 11

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5

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Sun just likes changing the names of things for no apparent reason. Look at the three different numbering schemes for SunOS/Solaris, or the two numbering schemes for Java. Is is Java 1.6, Java 2 Version 6, or Java 6?
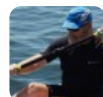
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answered Oct 3, 2008 at 10:47

[Paul Tomblin](#)

183k ● 59 ● 323 ● 410

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The JDK (Java Development Kit) is an SDK (Software Dev Kit).

It is used to build software/applications on Java and of course it includes the JRE (Java Runtime Edition) to execute that software. If you just want to execute a Java application, download only the JRE.

By the way, Java EE (Enterprise Edition) contains libraries of packages of classes "with methods (functions)" to build apps for the WEB environment and Java ME (Micro Edition) for mobile devices. If you are interested in it (Java ME) I would recommend to take a look at Google's Android DevKit and API.

Take a look here: it's gonna explain bit more..
http://www.oracle.com/technetwork/java/archive-139210.html

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edited Jan 20, 2013 at 10:33
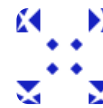
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Arjan Tijms

38.2k ● 12 ● 111 ● 143

answered Nov 9, 2012 at 8:10

leonardolabolida

41 ● 1

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The JDK comes with a collection of tools that are used for developing and running Java programs,

They include:

1. appletviewer (for viewing Java applets)

2. javac (Java compiler)

3. java (Java interpreter)

4. javap (Java disassembler)

5. javah (for C header files)

6. javadoc (for creating HTML documents)

7. jdb (Java debugger)

Whereas, the SDK comes with many other tools also including the tools available in JDKs.

http://parvindersingh.webs.com/apps/forums/topics/show/8853125-solved-java-difference-between-jdk-and-sdk-

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answered Apr 9, 2013 at 7:34

Parvinder Singh

133 ● 1 ● 2

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There is no difference.

The Java Software Development Kit (Java SDK) used to be called the Java Development Kit (JDK) before the marketing department at Sun got crazy with the "tm" and terminology. For political reasons & for sanity, they call the meaningful names (jdk) & versions (1.2 / 1.3 / 1.4 1.5 / 1.6) "engineering" terms. The marketing terms are "Java2 platform" (aka jdk 1.2 thru 1.4) or Java5 (aka jdk 1.5) or Java6 (aka jdk1.6). I'm getting a headache just thinking about it.

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answered Dec 6, 2013 at 12:58

mravmrav
31 ● 1

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Best example for this Question, SDK - Software Development Kit - Ex: Netbeans JDK - Java Development Kit.(This is Java compiler). Without JDK, we unable to run java programs in SDK.

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answered Feb 15, 2012 at 13:13

Thirumal
37 ● 1

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There's no difference between JDK and Java SDK. Both of them mean the same thing. I think it was a PR decision at Sun to change over from JDK to Java SDK. I think its back to JDK for now.

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answered Oct 3, 2008 at 10:47

Nikhil Kashyap
1,049 ● 3 ● 11 ● 15

In my point of view there is no difference between JDK and SDK in java. We can find all development tools as well as facilities in both of them. it is just an alias provided by sun.

1

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answered Jan 10, 2012 at 8:01

Alok Kumar Sahoo
11 ● 1

My initial guess would be that the Java SDK is for building the JVM while the JDK is for building apps *for* the JVM.

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Edit: Although this looks to be incorrect at the moment. Sun are in the process of opensourcing the JVM (perhaps they've even finished, now) so I wouldn't be too surprised if my answer does become correct... But at the moment, the SDK and JDK are the same thing.

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answered Oct 3, 2008 at 10:47

Oli
240k ● 65 ● 226 ● 303

Sorry what do you mean by building the JVM?
– Juan Carlos Blanco Martínez Oct 3, 2008 at 10:49

Java applications run inside the Java Virtual Machine. Part of the JRE which is being opened up to the public, so a Java SDK would be useful for people to build JREs for their platforms. – Oli Oct 3, 2008 at 10:52

Sorry, where did you get this statement (a Java SDK would be useful for people to build JREs for their platforms) from? I think that either I'm not understanding you or that is not the target of the Java SDK. Java SDK is formed by the JRE and some tools as Javac, javap, javadoc ...
– Juan Carlos Blanco Martínez Oct 3, 2008 at 11:24

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I think jdk has certain features which can be used along with particular framework. Well call it SDK as a whole.

Like Android or Blackberry both use java along with their framework.

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answered Apr 26, 2013 at 10:45

dkumar
33 ● 4

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- The **JDK** is what you need to `write a java program`.

- The **JRE** is what you need to need to `run a java program`.

- Since the JDK `contains` the JRE you can download the JDK to write and run java program.

- The JRE contains **JVM** which makes java program run on any platform as long as the JVM is installed on that OS (without having to rewritten or recompiled the code again for other platform). This is why Java is known to be

```
Write Once(compile once) run anywhere.(WORA)
```

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answered Mar 6, 2021 at 14:30

Kidus Tekeste

661 ● 3 ● 11 ● 30

There are two products JavaSE and JavaEE. EE is the web application/enterprise edition that allows the development and running of web application. SE is the plain Java product that has no EE specifics in it, but is a subset of EE. The SE comes in two types a JDK and a JRE.

-1

There is one big difference that may not be obvious, and I am not sure if it applies to all Operating Systems but under Windows the JRE does not have the server HotSpot JVM, only the client one, the JDK has both, and as far as I know all other OS's have both for the JDK and the JRE. The real difference is the the JDK contains the Java compiler, that is the JDK allows you to compile and run Java from source code where as the JRE only allows the running of Java byte code, that is Source that has already been compiled. And yes newer versions bundle a number of extra components, such as NetBeans editor

environment and Java in memory Database (derby/cloudscape), but these are optional.

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answered Oct 3, 2008 at 11:08

Donal Tobin
95 ● 1 ● 4