##### How to Install JAVA and Get Started with Java Programming

Java Development Kit (JDK), officially named "Java Platform Standard Edition (Java SE)", which is freely available from Oracle website is needed for writing Java programs.

##### What is "JDK" or "JRE"?

JRE (Java Runtime) is needed for running Java programs. JDK (Java Development Kit), which includes JRE plus the development tools (such as compiler and debugger), is need for writing as well as running Java programs. Since you are supposed to write Java Programs, you should install JDK, which includes JRE.

**Java SE 8** (JDK 1.8) is current version.

##### Step 1: Download JDK

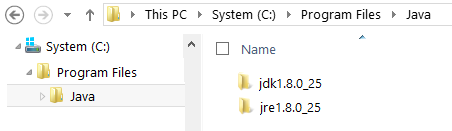
1. Go to Java SE download site @ <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.
2. Under "Java Platform, Standard Edition" ⇒ "Java SE 8u{xxx}", where {xxx} is the latest update number ⇒ Click the "JDK Download" button.
3. Check "Accept License Agreement".
4. Choose your operating platform, e.g., "Windows x64" (for 64-bit Windows OS) or "Windows x86" (for 32-bit Windows OS). You can check whether your Windows OS is 32-bit or 64-bit via "Control Panel" ⇒ "System" ⇒ Under "System Type".

##### Step 2: Install JDK and JRE

Run the downloaded installer (e.g., "jdk-8u{xxx}-windows-x64.exe"), which installs both the JDK and JRE. By default, the JDK will be installed in directory "C:\Program Files\Java\jdk1.8.0\_xxx", where xxx denotes the latest upgrade number; and JRE in "C:\Program Files\Java\jre1.8.0\_xxx".

For beginners, accept the defaults. Follow the screen instructions to install JDK and JRE.

Check the JDK installed directory by inspecting these folders using File Explorer. Take note of your JDK installed directory, which you will need in the next step.



**Step 3: Create JAVA\_HOME variable and include JDK's "bin" Directory in the PATH**

Launch "Control Panel" ⇒ "System" ⇒ Click "Advanced system settings".

Switch to "Advanced" tab ⇒ "Environment Variables".

Under "System Variables", click “New…”

Set Variable name as JAVA\_HOME and value as JDK directory like below:

JAVA\_HOME= C:\Program Files\Java\jdk1.8.0

Under "System Variables", scroll down to select "Path" ⇒ "Edit...".

Go to end of the value give semi-colon (;) and paste append path of JDK’s bin directory

(;) separates the JDK's binary directory from the rest of the existing directories. \

DO NOT DELETE any existing entries; otherwise, some existing applications may not run.

1. Variable name : **PATH**

Variable value: **[*exiting entries...*];c:\Program Files\Java\jdk1.8.0\_xx\bin**

**Step 4: Verify the JDK Installation**

Launch Command Prompt

run **java –version** command. If below output comes that means JAVA is configured properly

1. java version "1.8.0\_xxx"
2. Java(TM) SE Runtime Environment (build 1.8.0\_xxx-b60)
3. Java HotSpot(TM) 64-Bit Server VM (build 25.5-b60, mixed mode)