

CS330: Programming Language Project (PLP)

Assignment 2: Installation, programming environment, and Hello, World!

How to Install Java for Windows

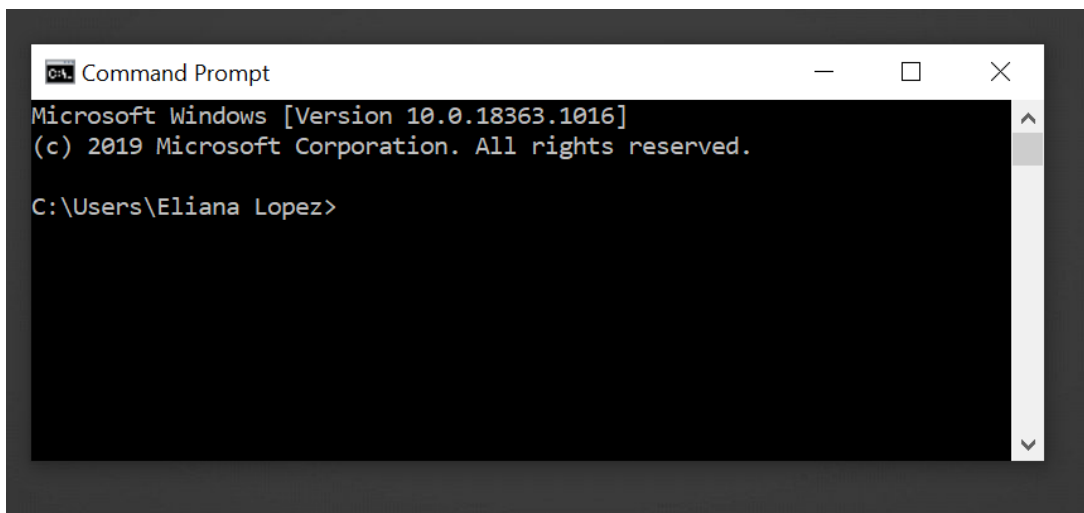
A. Before you download anything

Prior to installing Java, you must check to see if you have a version of Java already installed in your computer. To do that, you must search **“Command Prompt”** or **“cmd”** in the Start Menu, and start the Command Prompt application. Once the application is open it should look like the first image below.

Within the Command Prompt type **“java -version”** to see what version of Java your computer has if it has any. If it does the command prompt terminal will output a response similar to **Case 1**, where the version of Java is illustrated. In the case that your computer does not have Java (i.e. **Case B**), the output will be this response:

‘java’ is not recognized as an internal or external command, operable program or batch file.

If Case B is the case we can go on to downloading Java in **Part B**.



This is what the Command Prompt Application looks like!

Case 1: If Java is in your computer








```
C:\Users\Eliana Lopez>java -version
java version "14.0.2" 2020-07-14
Java(TM) SE Runtime Environment (build 14.0.2+12-46)
Java HotSpot(TM) 64-Bit Server VM (build 14.0.2+12-46, mixed mode, sharing)
```

Case 2: If Java is not in your computer

```
C:\Users\Eliana Lopez>java -version
'java ' is not recognized as an internal or external command,
operable program or batch file.
```

B. Installing Java

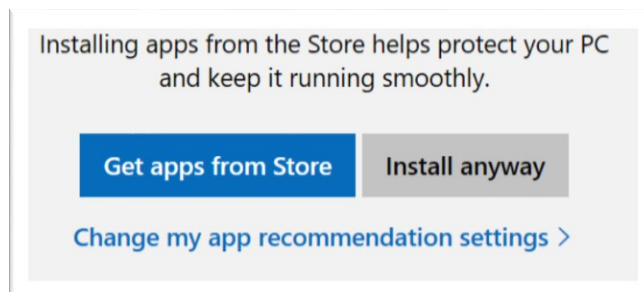
To download Java, you must go [Oracle's Java SE Development Kit Downloads page](#) and scroll down to the **Java SE Development Kit** heading. The version does in this case is 14.0.2, but you can do this for any other version such as 13.0.2 or 11.0.8.

Java SE Development Kit 14.0.2		
This software is licensed under the Oracle Technology Network License Agreement for Oracle Java SE		
Product / File Description	File Size	Download
Linux Debian Package	157.93 MB	 jdk-14.0.2_linux-x64_bin.deb
Linux RPM Package	165.06 MB	 jdk-14.0.2_linux-x64_bin.rpm
Linux Compressed Archive	182.06 MB	 jdk-14.0.2_linux-x64_bin.tar.gz
macOS Installer	176.37 MB	 jdk-14.0.2_osx-x64_bin.dmg
macOS Compressed Archive	176.79 MB	 jdk-14.0.2_osx-x64_bin.tar.gz
Windows x64 Installer	162.11 MB	 jdk-14.0.2_windows-x64_bin.exe
Windows x64 Compressed Archive	181.56 MB	 jdk-14.0.2_windows-x64_bin.zip

Download *jdk-14.0.2_windows-x64_bin.exe*

You then click on the Windows x64 Installer, and I personally recommend the downloading the executable file, **.exe**, for ease rather than the zip file, which I have boxed above.

Windows might response with a pop-up about installing apps for protection purposes but we will click **Install anyway** for ease once again.



Click *Install anyway*

The Java Installer will then appear right away, and you will **click next and leave everything to its default settings**. The two images below show what the process looks like.



Keep click next, leaving everything to default

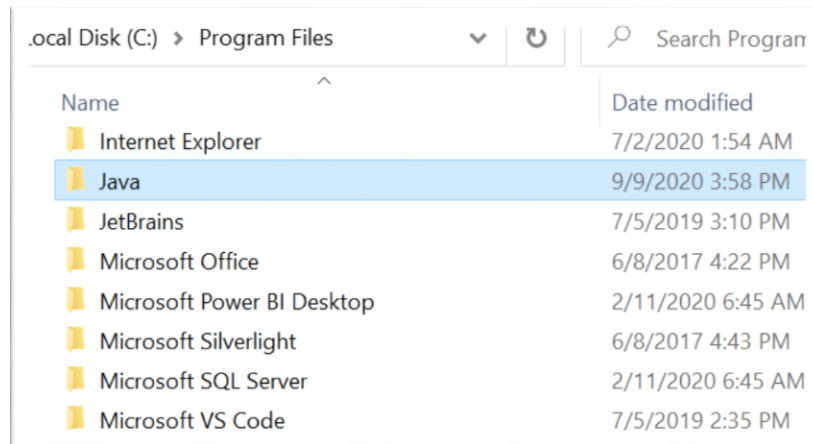


This will appear once Java has successfully installed

C. Checking for Java

After Java has downloaded successfully, to check to see if Java is in your computer you have to go to your **files** and to your C drive (**C:**), or any drive you downloaded Java in. You then check your program files from that respective drive. In the Java folder you should see one other folder inside it named **jdk**, and inside that folder, **multiple other folders** with files that help the program operate. That means you have downloaded Java successfully!

Another way to check for Java is by following the instructions in **Step A** once again by utilizing the Command Prompt application once again, and typing “*java -version*.” You should see an output of the version of Java you downloaded from the Oracle website.



C:\Program files

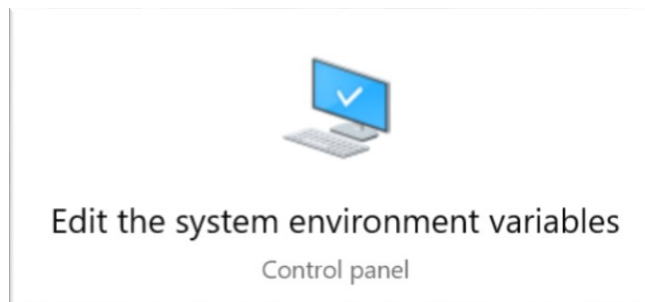
```
C:\Users\Eliana Lopez>java -version
java version "14.0.2" 2020-07-14
Java(TM) SE Runtime Environment (build 14.0.2+12-46)
Java HotSpot(TM) 64-Bit Server VM (build 14.0.2+12-46, mixed mode, sharing)
```

java -version

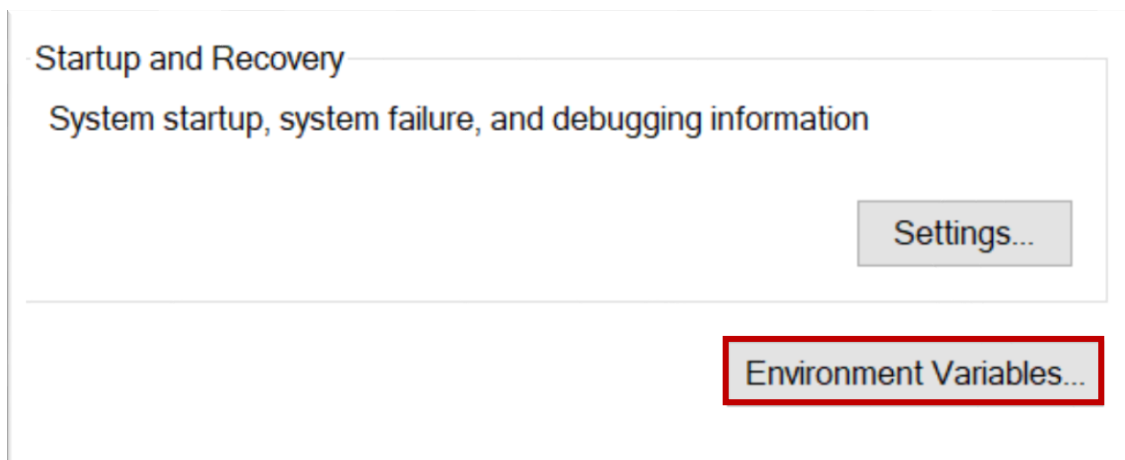
D. Setting Environmental Variables in Java

The last thing you have to do is **set your environmental variables** for Java just to making things easier to run. What setting the environmental variables would do is provide a path for compiling a Java Program.

To do this you must **go to the Start menu and search “*Environmental Variables*,”** you would then see a shortcut to your control panel that says “*Edit the system environment variables*” which you would click. A window called Systems Properties will then pop up and in the section Startup and Recovery you have to **click on the Environmental Variables button.**



Click this from the Start Menu



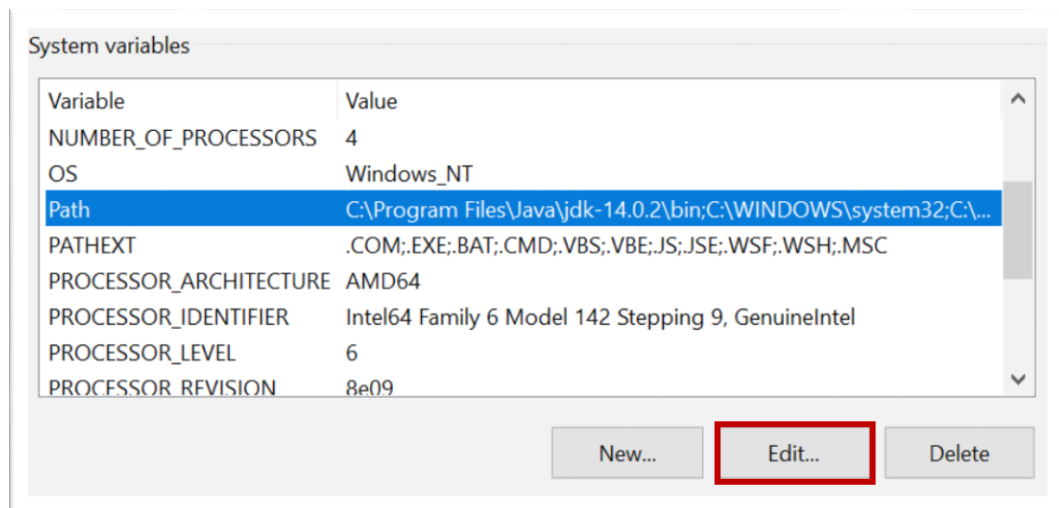
Click Environmental Variables

You then have to clicked *Environmental Variables*, you would then search for **Path** in the Systems Variable section of the window (see **Image A**) click **Edit...**, click **new**, and copy paste the file directory that the Java folder is located (*See program files image in Step C*), go to the JDK folder and lastly go to the bin folder and click on the file navigation search bar and you should have something like this:

C:\Program Files\Java\jdk-14.0.2\bin

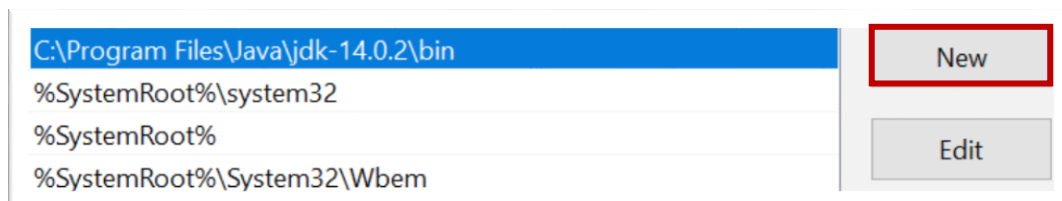
You then paste this to the empty row and you should have something like **Image B**. Then click okay and you should be back in the *Environmental Variables* window once again. Once you are in the window again you will click new this time, just like in **Image C**.

Image A



Go to Path and click on the *Edit...* Button

Image B

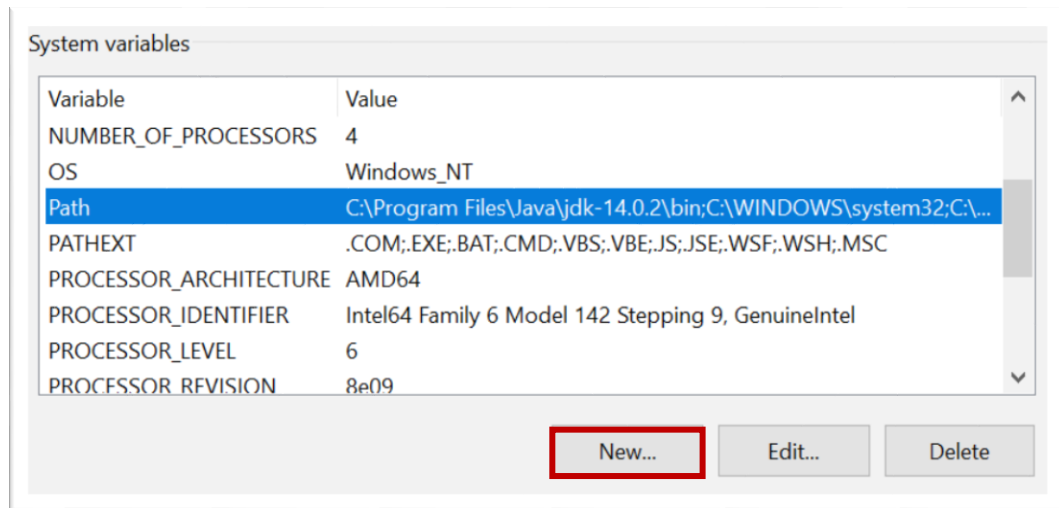


Click the New Button and paste “*C:\Program Files\Java\jdk-14.0.2\bin*” from the file window

After you click new you are directed to a new window that pops called *Edit System Variable* out and you **fill the two text columns, Variable name and Variable Value** as seen in **Image D**. Variable name would be called “JAVA_HOME” and variable value would be a copy paste of the Java file directory all the way up to the JDK folder, *C:\Program Files\Java\jdk-14.0.2*.

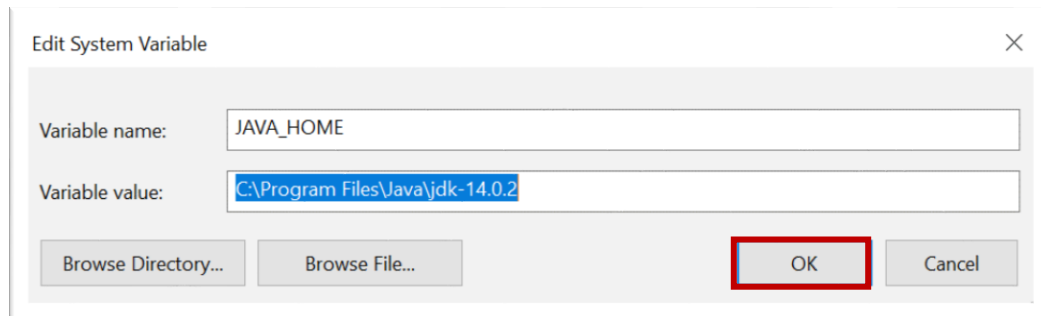
When these columns are filled out you click on *OK* and **you are ready to start programming with Java!**

Image C



Click New...

Image D



Then name the variable JAVA_HOME and copy paste the variable value from the file window

Variable Value: “C:\Program Files\Java\jdk-14.0.2”

Then click *OK* and you are all done!