

Setting Up Java Development Environment

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Steps

1. Install JRE (JAVA RUN ENVIRONMENT):

<https://www.java.com/en/download/>

2. Install JDK (JAVA SDK):

<https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html>

3. Set Environment Variables:

JAVA_HOME: jdk root

CLASSPATH: jdk root/lib

Path: jdk root/bin

4. Install Eclipse IDE:

<https://www.eclipse.org/downloads/download.php?file=/oomph/epp/2021-03/R/eclipse-inst-jre-win64.exe>

<http://www.eclipse.org/downloads/>

Install JRE(Java Runtime Environment)



64-bit Java for Windows

Recommended Version 8 Update 291 (filesize: 80.7 MB)

Release date April 20, 2021



Important Oracle Java License Update

The Oracle Java License has changed for releases starting April 16, 2019.

The new [Oracle Technology Network License Agreement for Oracle Java SE](#) is substantially different from prior Oracle Java licenses. The new license permits certain uses, such as personal use and development use, at no cost -- but other uses authorized under prior Oracle Java licenses may no longer be available. Please review the terms carefully before downloading and using this product. An FAQ is available [here](#).

Commercial license and support is available with a low cost [Java SE Subscription](#).

Oracle also provides the latest OpenJDK release under the open source [GPL License](#) at [jdk.java.net](#).



We have detected you are using Google Chrome and might be unable to use the Java plugin from this browser. Starting with Version 42 (released April 2015), Chrome has disabled the standard way in which browsers support plugins. [More info](#)

**Agree and Start Free
Download**








<https://www.java.com/en/download/>

#After download, keep click "Next" to install.

Install JDK(Java Development Kit)

<https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html>

Need to login oracle to download. After download, keep click "Next" to install.

macOS x64	207.42 MB	 jdk-8u291-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	133.69 MB	 jdk-8u291-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	94.74 MB	 jdk-8u291-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	134.48 MB	 jdk-8u291-solaris-x64.tar.Z
Solaris x64	92.56 MB	 jdk-8u291-solaris-x64.tar.gz
Windows x86	155.67 MB	 jdk-8u291-windows-i586.exe
Windows x64	168.67 MB	 jdk-8u291-windows-x64.exe

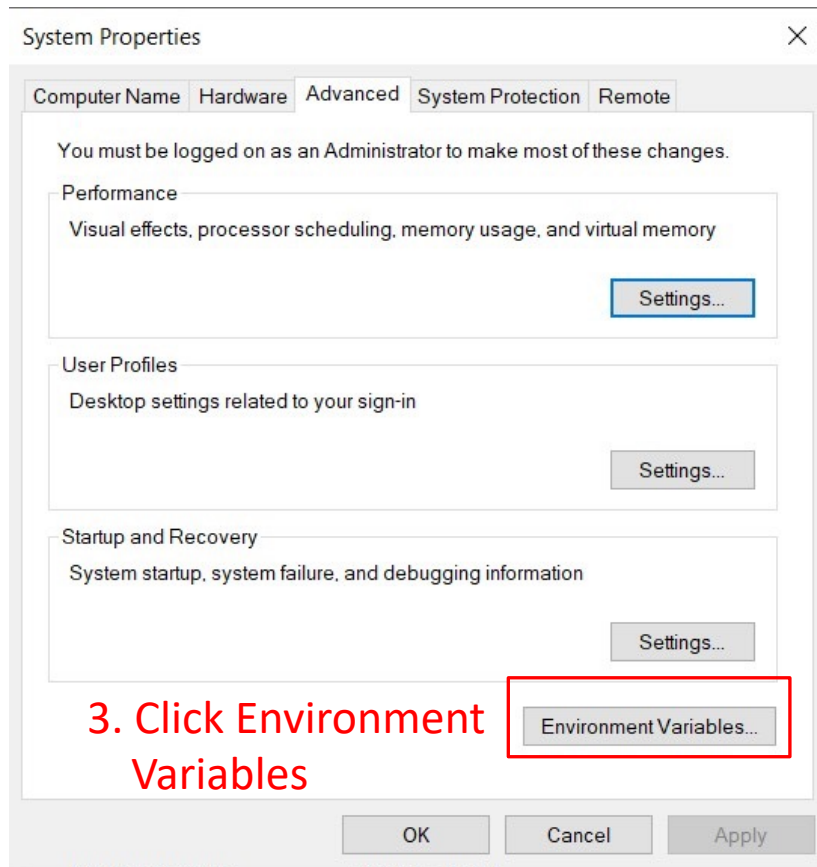
Set Environment Variables

Notice: You don't need to set environment variables on MAC OS.

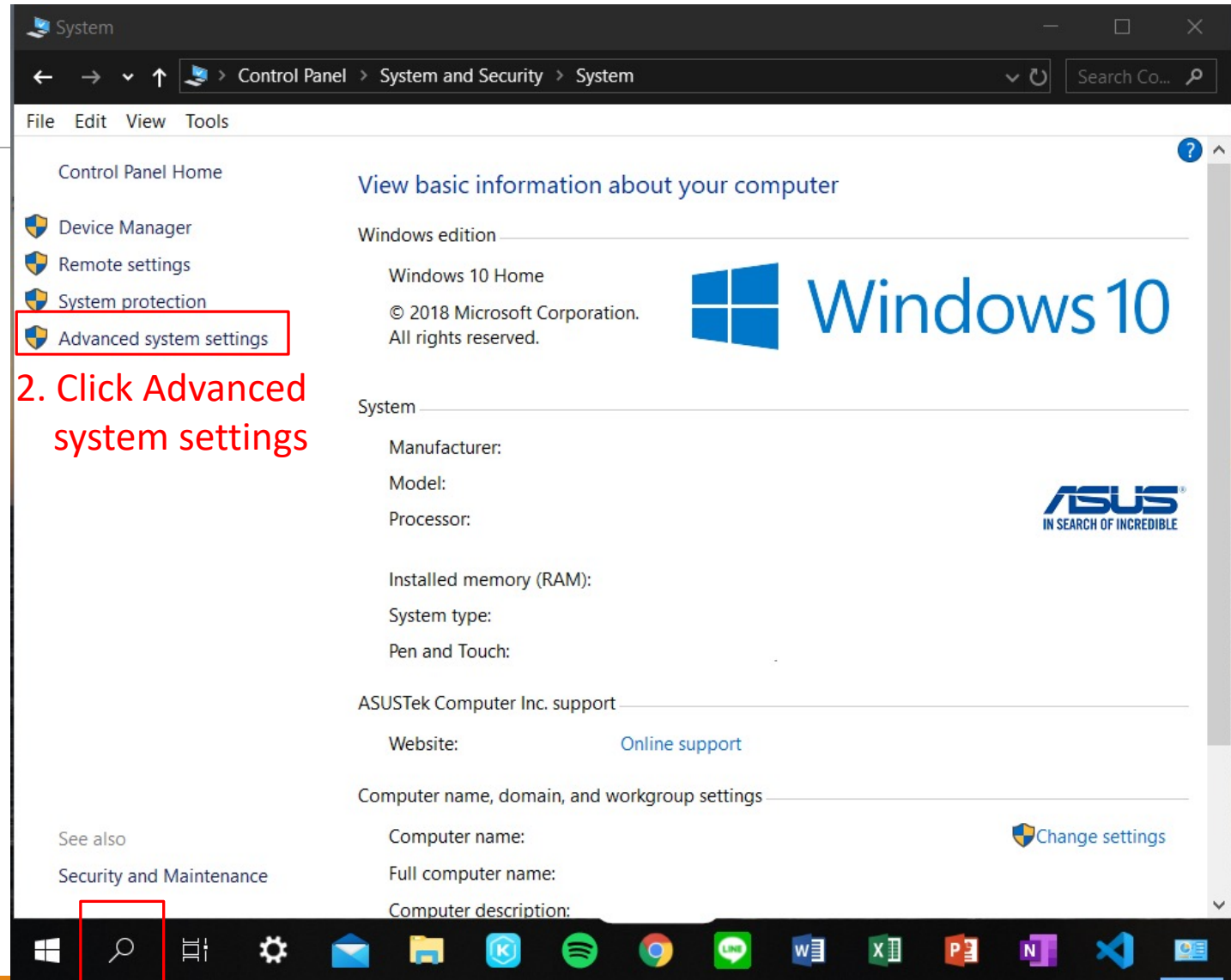
◆Environment Variables is the common variables in OS. Therefore, in order to let the OS know where we install JDK and JRE, we will set the following three environment variables:

1. JAVA_HOME: Location of the installation directory of JAVA
2. CLASSPATH: Location of the library of JAVA developer tool
3. PATH: Add JAVA related commands to the system default search location

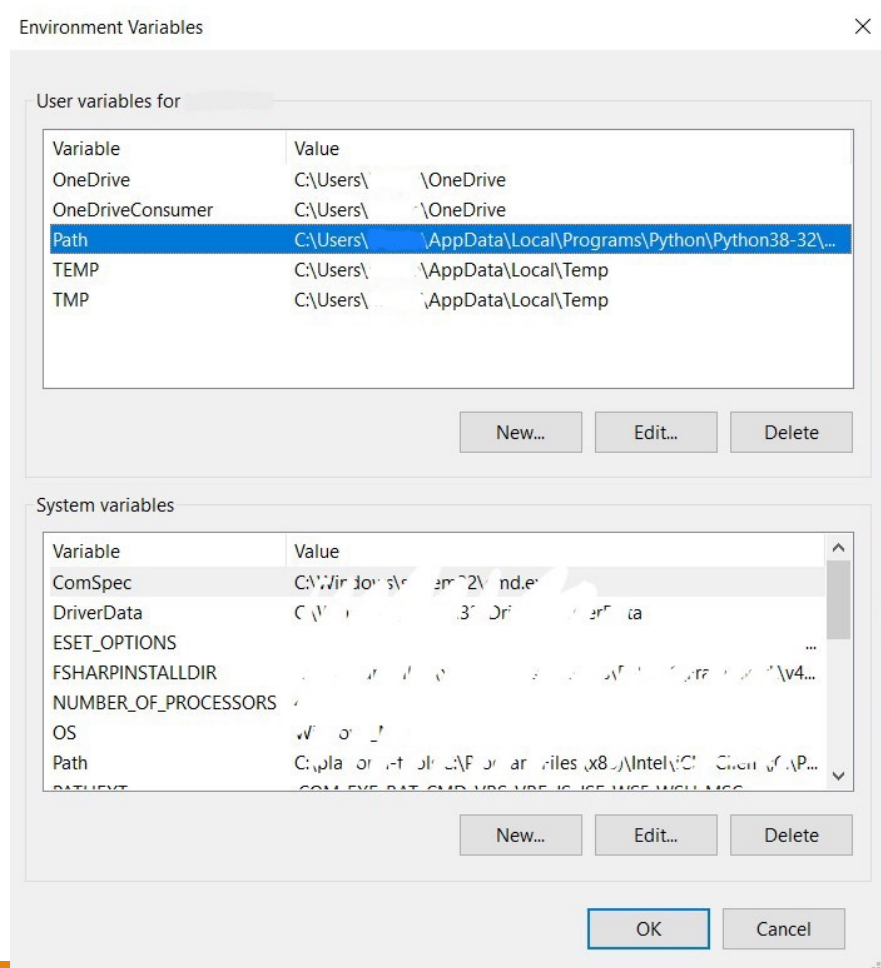
Set Environment Variables



1. Search "Control Panel"

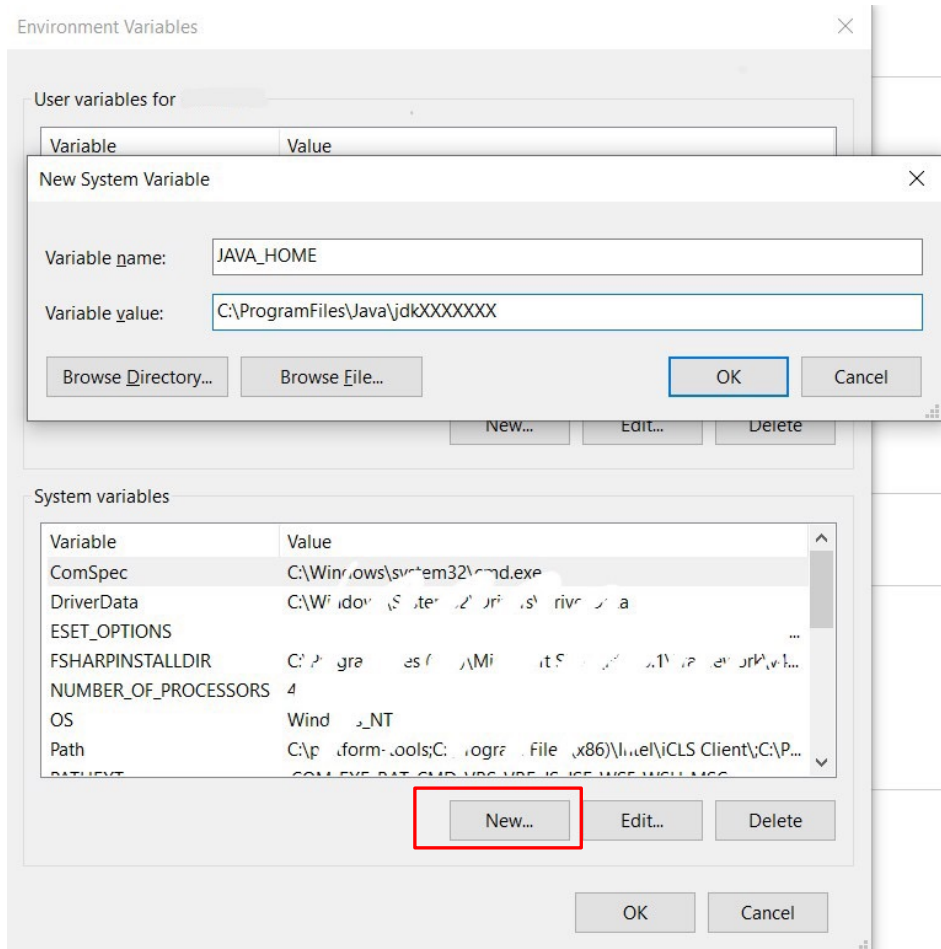


Set Environment Variables



- ◆ If we set environment variables on upper section (User variables for XXX), it means our setting only works when XXX login Windows.
- ◆ If we set environment variables on bottom section (System variables), then it works when any user login.
- ◆ Recommend that you use the bottom (System variables) to set environment variables.

Set Environment Variables JAVA_HOME



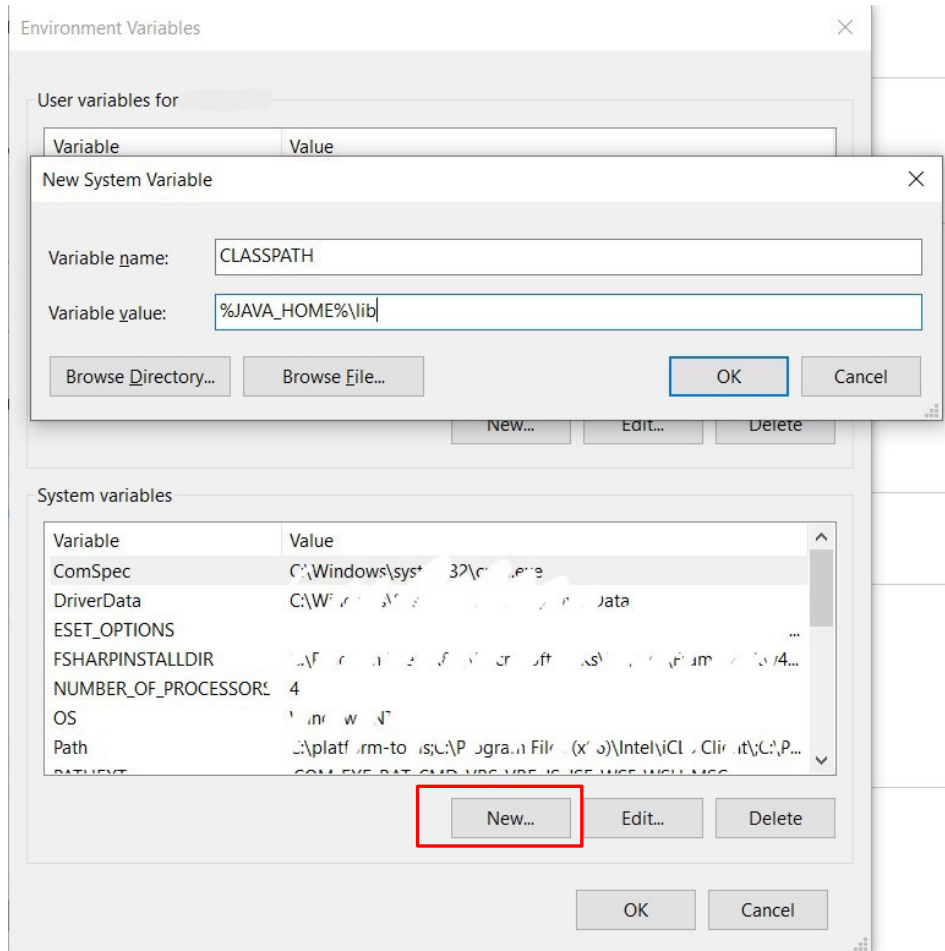
◆ Click “New”

1. Variable name: JAVA_HOME
2. Variable value: installation directory of JDK
 - a. X64 windows usually is:
C:\ProgramFiles\Java\jdkXXXXXXX
 - b. X86 windows usually is:
C:\Program Files(x86)\Java\jdkXXXXXXX

◆ The red part depends on version, please check whether the directory exists, and then set the environment variables.

◆ Click “OK” to save.

Set Environment Variables CLASSPATH

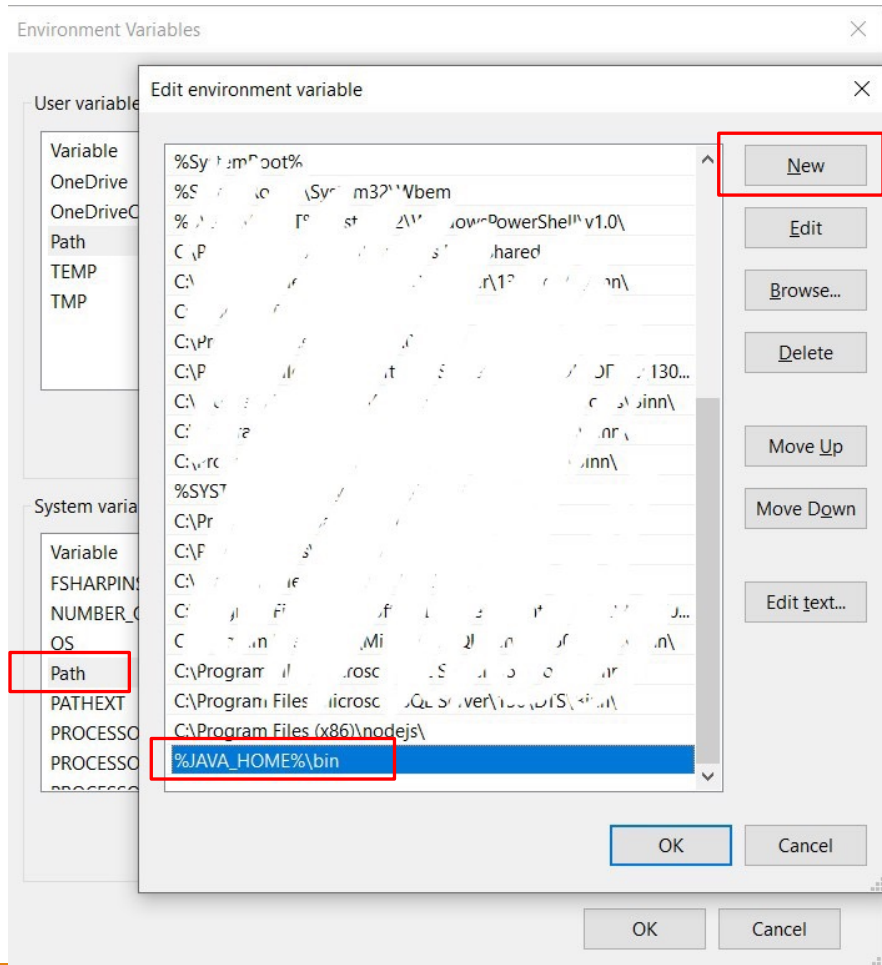


◆ Click “New”

1. Variable name: CLASSPATH
2. Variable value: installation directory of JDK
 - a. Variable value: **%JAVA_HOME%\lib**
 - b. **%JAVA_HOME%** is the path of JAVA_HOME
 - c. If you alter Java JDK version in the future, only need to change the environment variables of JAVA_HOME, and don't need to change others.

◆ Click “OK” to save.

Set Environment Variables PATH



◆ PATH variable usually has other values, so instead of adding this, we need to find “PATH” variable in the list and click “Edit”.

◆ PATH contains lots of paths, and each path is separated by semicolons. Therefore, please enter a semicolon after the original variable value, and then input
`%JAVA_HOME%\bin`

◆ `%JAVA_HOME%` is the path of JAVA_HOME

Install Eclipse IDE


<https://www.eclipse.org/downloads/download.php?file=/oomph/epp/2021-03/R/eclipse-inst-jre-win64.exe>



ProjectsWorking GroupsMembersMore▼

Home / Downloads / Eclipse downloads - Select a mirror


All downloads are provided under the terms and conditions of the Eclipse Foundation Software User Agreement unless otherwise specified.

 Download

Download from: China - University of Science and Technology of China (https)

File: eclipse-inst-jre-win64.exe SHA-512

>> Select Another Mirror





Install Eclipse IDE



#You can download the basic Java SE (first one) for usual, and use Java EE(Enterprise) for final.

Install Eclipse IDE


- ◆ Eclipse is the tool for coding in the future, so please put the unzipped folder in a suitable place (ex C:\), don't put it in the folder like "Download" to avoid losing it in the future.
- ◆ Recommend everyone put a shortcut of Eclipse on desktop, it will be easier to find in the future!

Install Eclipse IDE

#Recommend add a new folder (ex: Eclipse) in driver C, and then select the folder you just create here.

eclipseinstaller by Oomph

★ DONATE



Eclipse IDE for Java Developers

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration.

[details](#)

Java 11+ VM

C:\Program Files\Java\jdk-██████

Installation Folder

C:\Eclipse

☒ create start menu entry

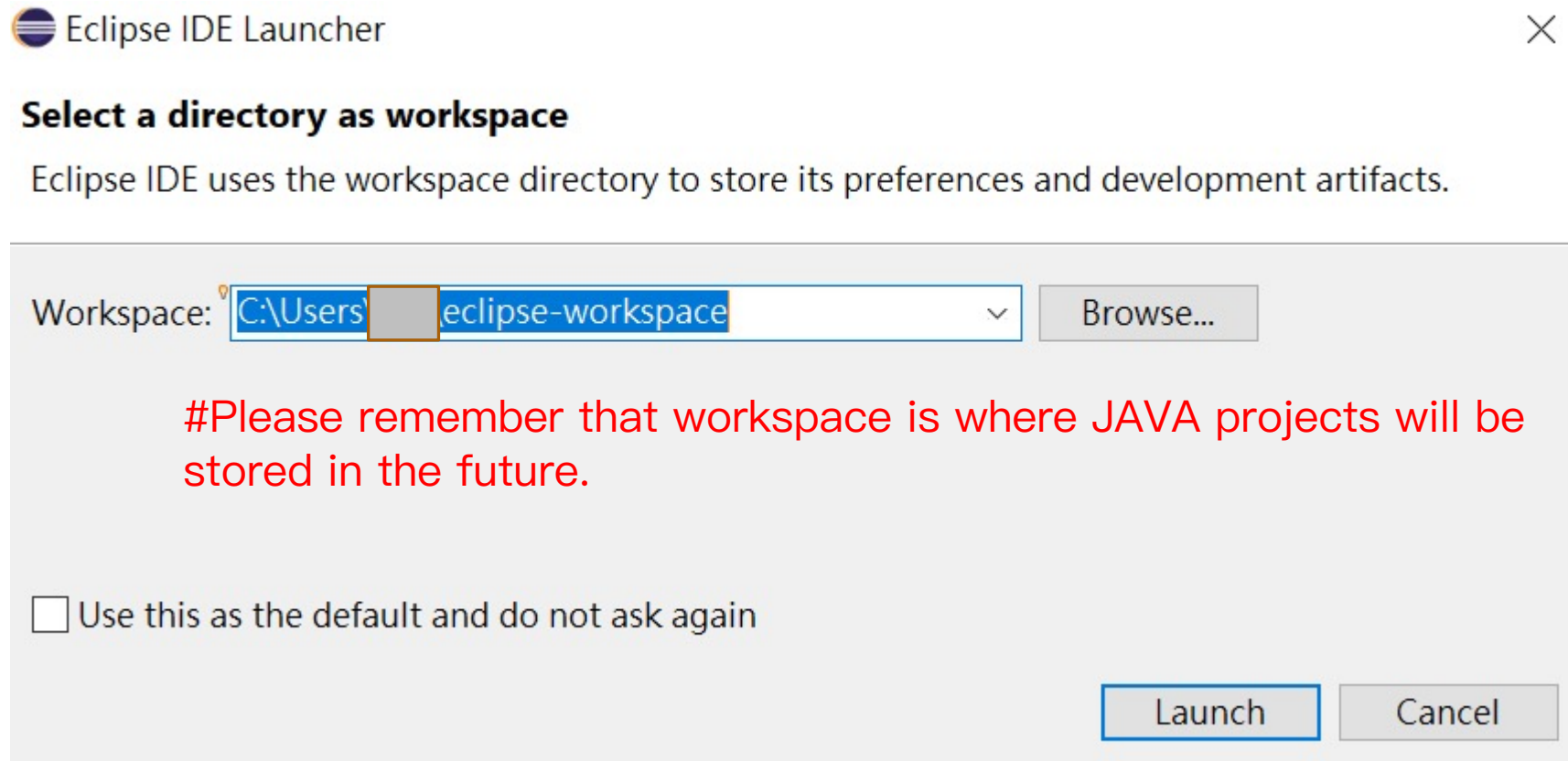
☒ create desktop shortcut

⬇️ INSTALL

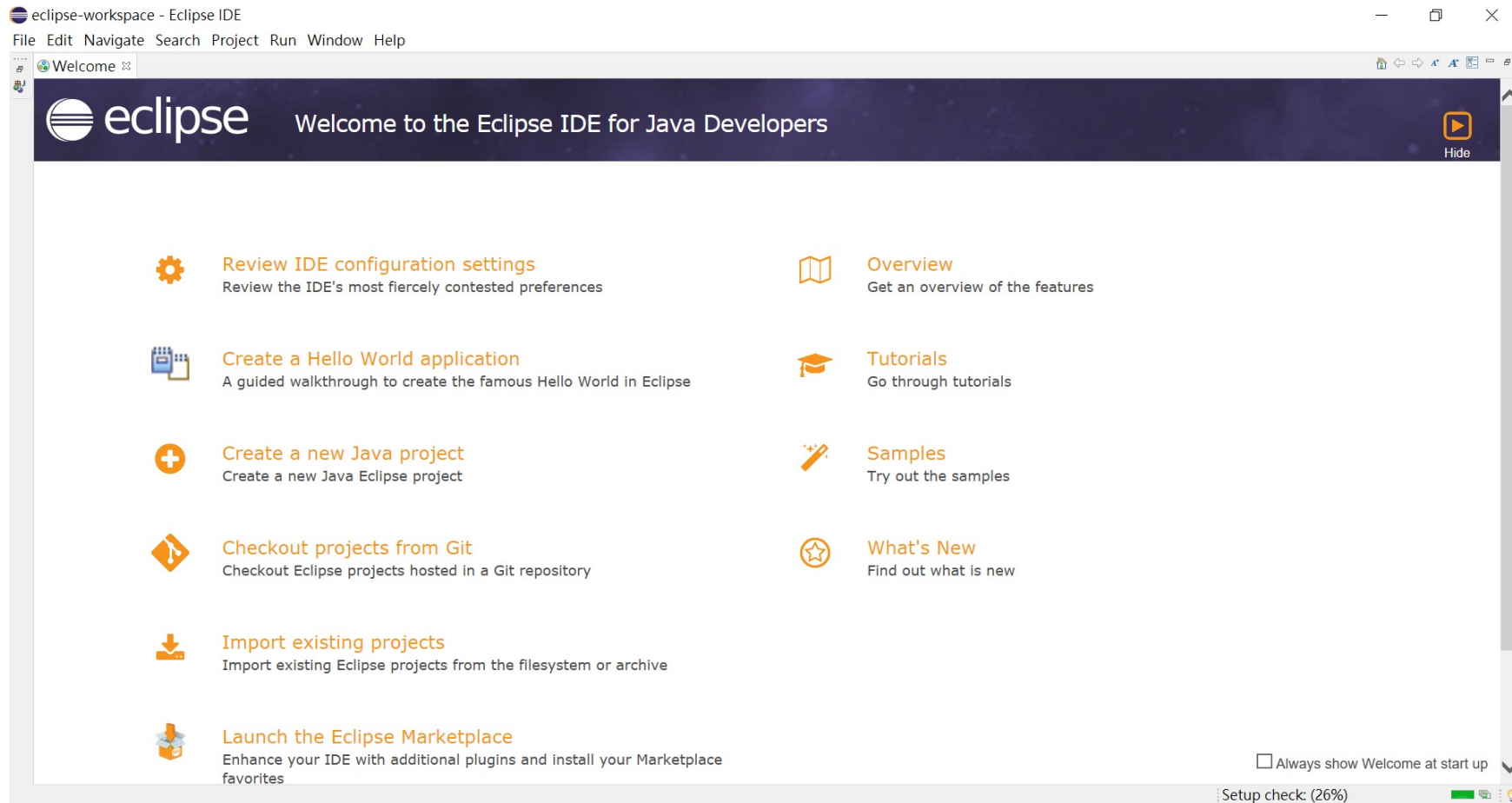
⬅️ BACK

#Depends on the version of JDK which you download.

Open Eclipse IDE



Finish!



-
- ◆ Students who have used commercial development environments such as Visual Studio, will feel difficult to adapt when they are new to Eclipse. However, Eclipse as a high-end free development environment, the function of Visual Studio can also be used on Eclipse with a little setting.
 - ◆ Following will teach everyone set the code auto completion function via “Preference...”

How to open Preferences...

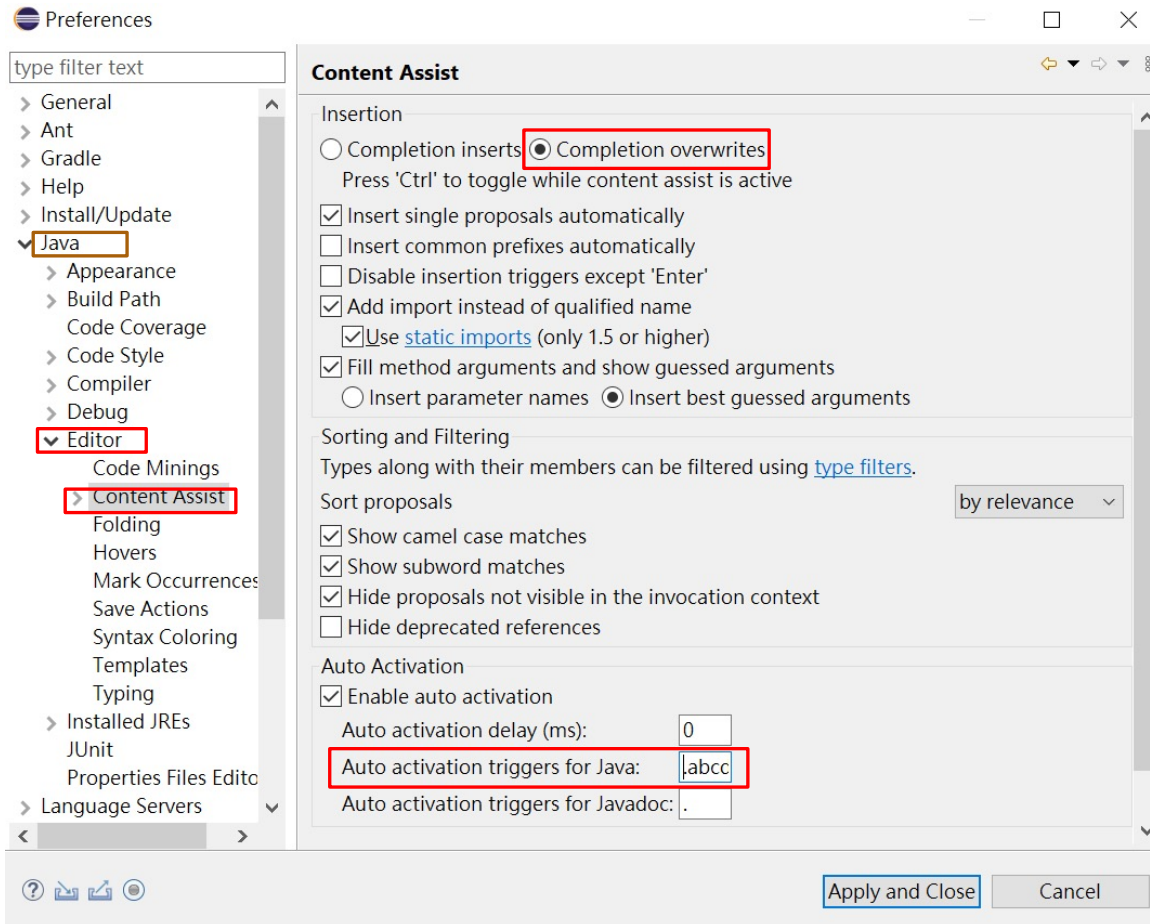
◆ Windows

The top menu of Eclipse “Window” → “Preferences...”

◆ MAC

The top menu of Eclipse “Eclipse” → “Preferences...”

Code auto completion



1. Open “Preferences...”
2. Preferences select “Java” → “Editor” → “Content Assist” on left side.
3. Choose “Completion overwrites” on right side.
4. Change “Auto activation triggers for java” value to `.abcdefghijklmnopqrstuvwxyz(,`

Lab class notice

- ◆ In this semester, the lab class will start at 12:10 p.m. on Monday, and the class will start on time, won't wait for those who are late.
- ◆ Won't roll call on lab class.
- ◆ You can only get 4 out of 5 for late homeworks. Lab class homeworks can be made up before the end of the semester in the special section of 數位學習網 WM5. (This make-up section will open when the end of the semester is near.)

Special rules of Homework

- ◆ Project Name: HW{#number of homework} , ex: HW1
- ◆ The class name where the main function of the code is located must be Main
- ◆ Remind uppercase and lowercase
- ◆ When the code is compressed and uploaded, please compress the project folder (ex. HW1) into .zip
- ◆ Unless otherwise specified by TA, homeworks that cannot be compiled and executed won't be accepted.

Special rules of Homework

- ◆ Reject the homework of plagiarism and tampering
- ◆ First time: Zero point for that homework.
- ◆ Second time: Zero point for the entire semester homeworks.
- ◆ The list of plagiarism and tampering will announce at the end of the semester.

HW1

Homework 1 (Due on 9/30)



- BMI Calculator:
 - $BMI = (\text{Weight in Kilograms} / (\text{Height in Meters} \times \text{Height in Meters}))$
- Enter Height and Weight, return BMI and
 - “You are not in shape. Actually, you are not even close.” if $BMI \geq 30$
 - “To be honest, you are not in shape.” if $30 > BMI \geq 26$
 - “You are in shape” if $26 > BMI \geq 20$
 - “You are under shape” if $20 > BMI$
- Use Eclipse to write/execute/debug your java code
- Upload your code using WM5 (**no** direct copy accepted)
- TAs will show you “clear” hints to do so on Monday’s lab (Sep. 27)