

COMP 248

Tutorial 1



Download and Install Java JDK

- Go to:

<https://www.oracle.com/technetwork/java/javase/downloads/index.html>

- Click on one of the download links shown in the screen capture on the right.

The screenshot shows the Oracle Java SE Downloads page. At the top, there are two download buttons: "Java Platform (JDK) 12" and "NetBeans with JDK 8". A red arrow points to the "Java Platform (JDK) 12" button with the word "Here" in red text. Below these buttons is a section titled "Java Platform, Standard Edition". Inside this section, there is a link for "Java SE 12.0.1" and a list of links including "Installation Instructions", "Release Notes", "Oracle JDK License", "Java SE Licensing Information User Manual", "Certified System Configurations", and "Readme". On the right side of this section, there is a button labeled "Oracle JDK DOWNLOAD" with a red arrow pointing to it and the text "Or here" in red.



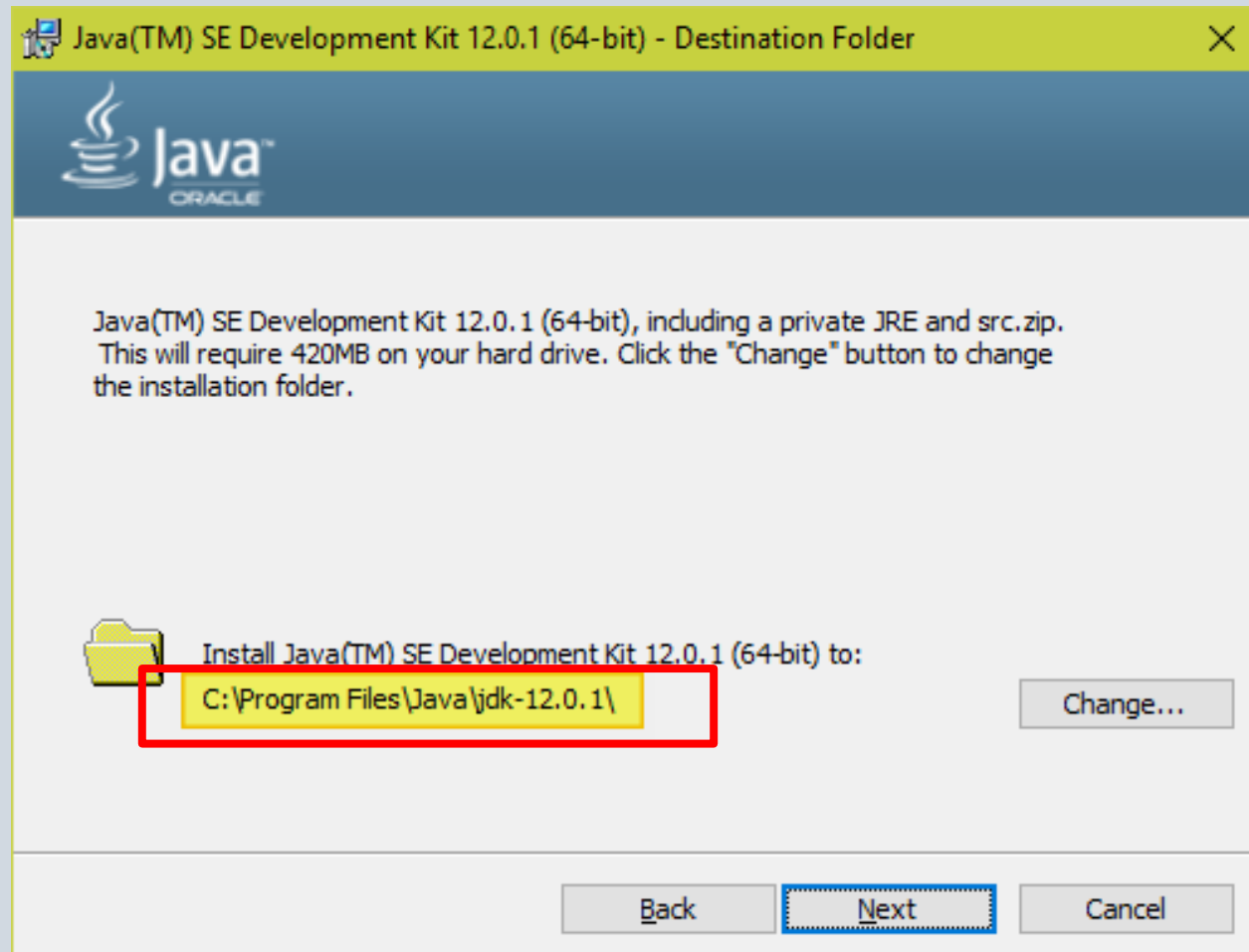
Download and Install Java JDK

- Select the appropriate version for your platform
(On Windows, you will need admin privileges.)
- Be **careful not to confuse** the JRE with JDK: you need the **JDK**.
- Install Java by executing the downloaded file **and be sure to take note character by character of the destination folder. See next slide**





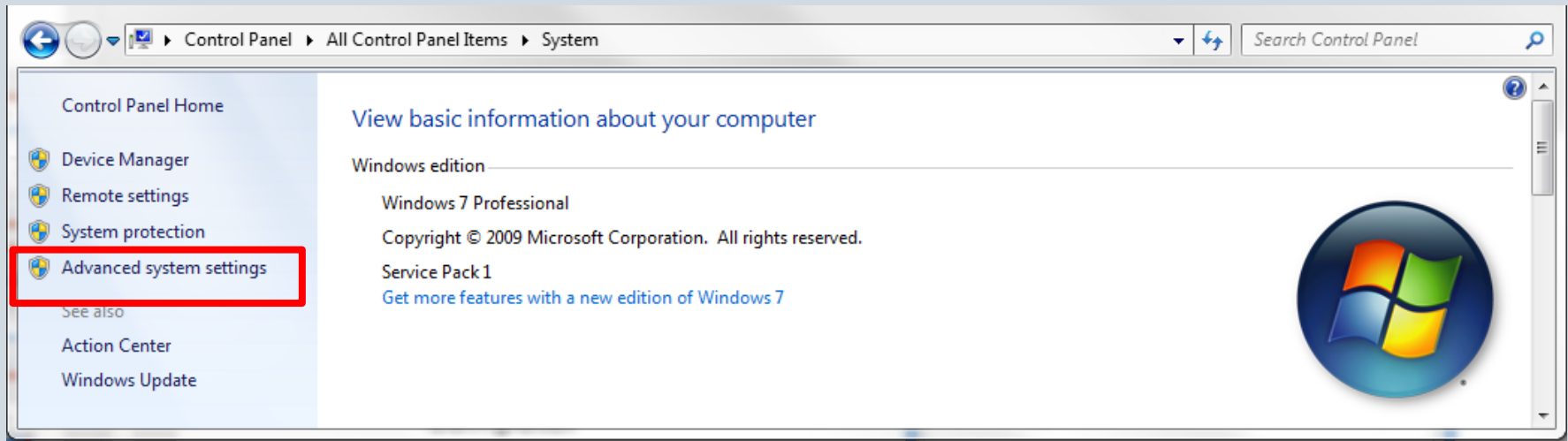
Download and Install Java JDK





Java Path Configuration (for Windows 7/8)

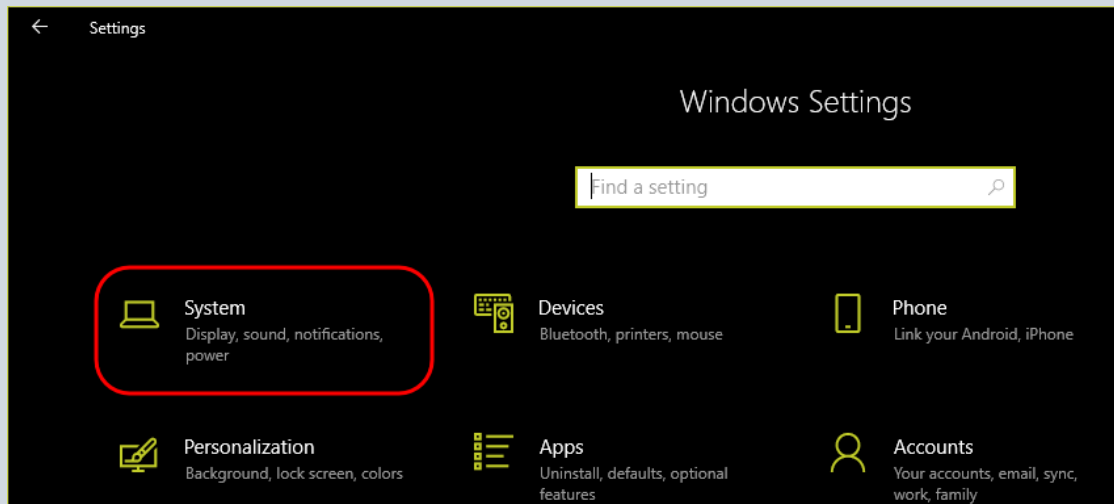
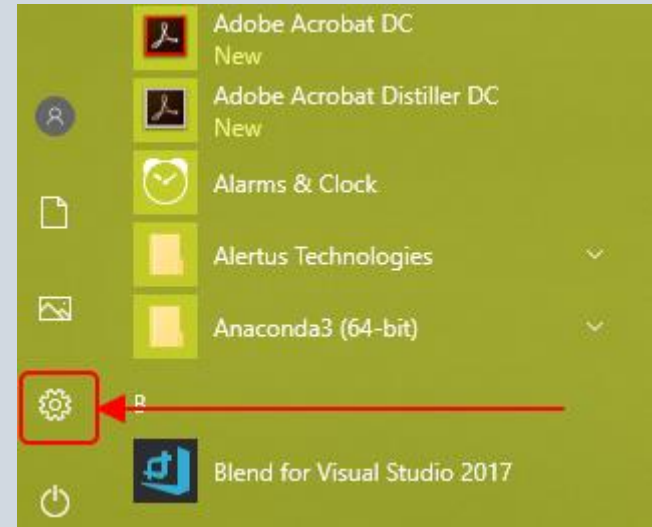
1. Go to your **Control Panel**
2. Click on **System**
3. Click on **Advanced System Settings**
4. Go to Slide #8





Java Path Configuration (for Windows 10)

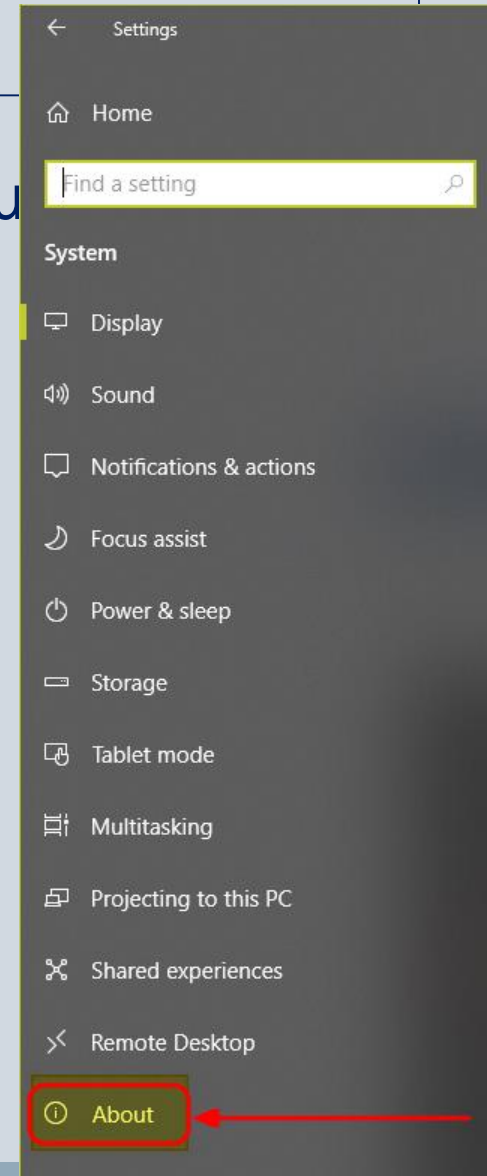
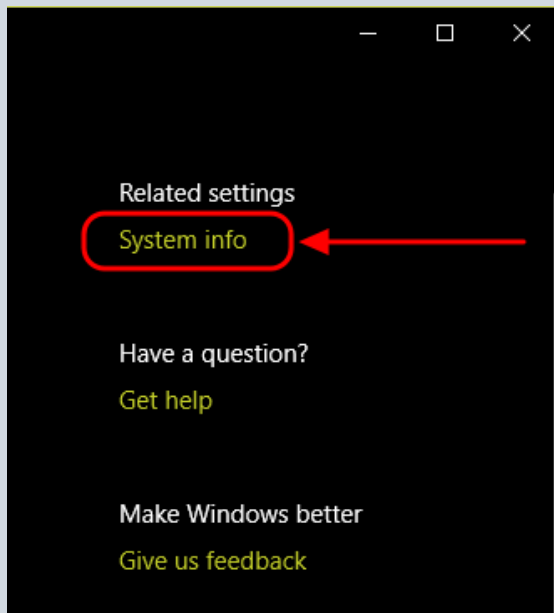
1. Open the Start Menu
2. Open the **Settings**
3. Go to **System**





Java Path Configuration (for Windows 10)

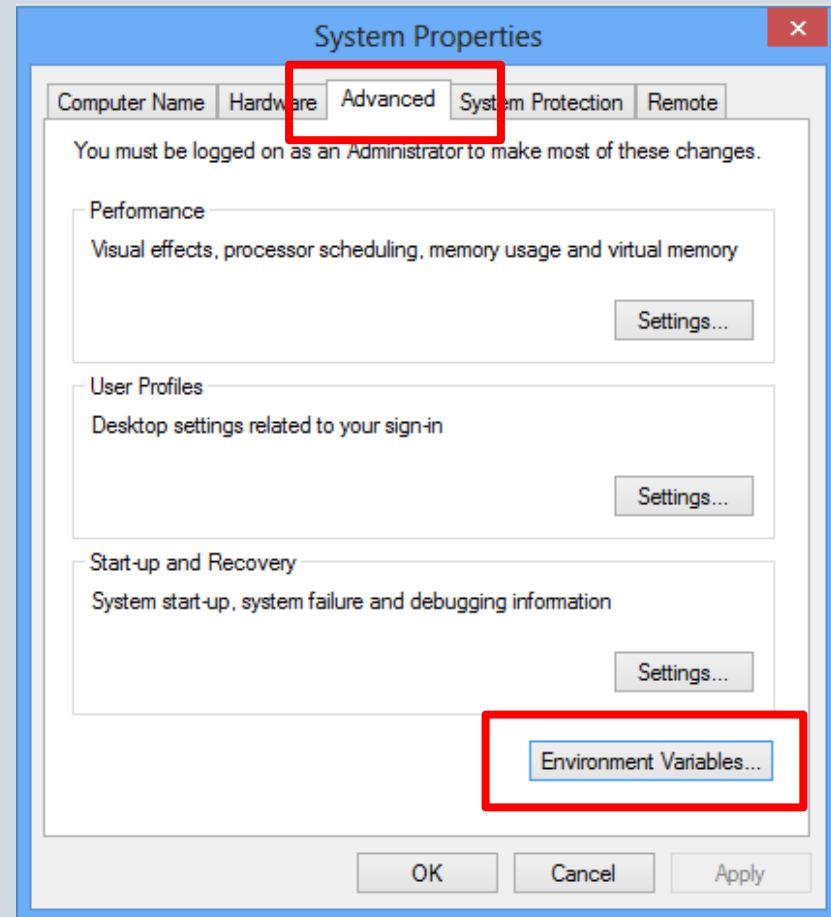
4. Click on **About** on the left hand side menu
5. Click on **System Info** under **Related Settings**.





Java Path Configuration (for all Windows)

1. Select the **Advanced** tab
2. Click on **Environment Variables**

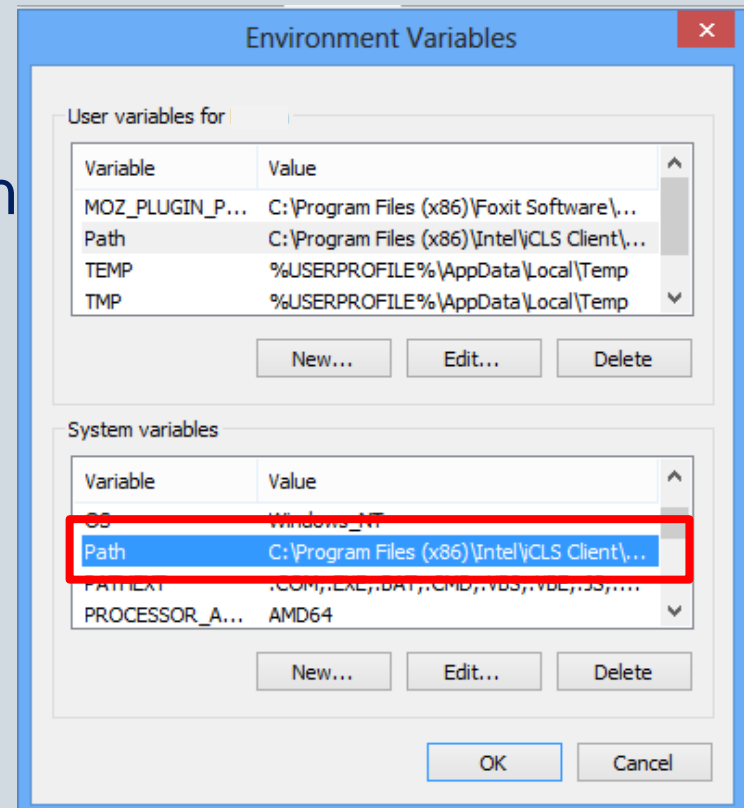




Java Path Configuration (for all Windows)

3. On System Variables, find **PATH** and double-click on it.

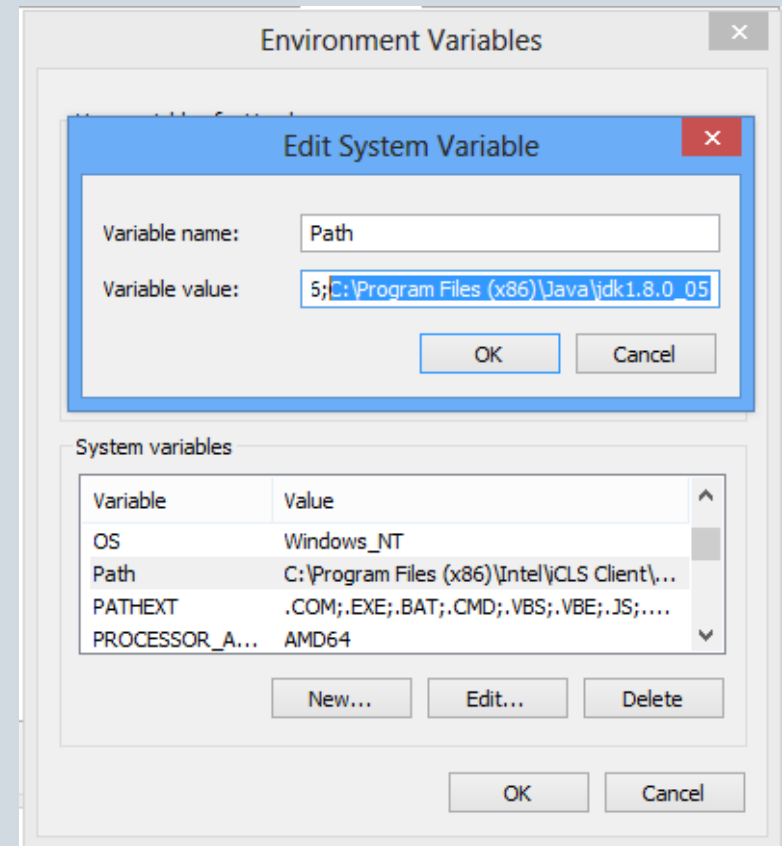
(If you do not have the item PATH, you may select to add a NEW variable and insert PATH as its name.)





Java Path Configuration (for 7/8 Windows)

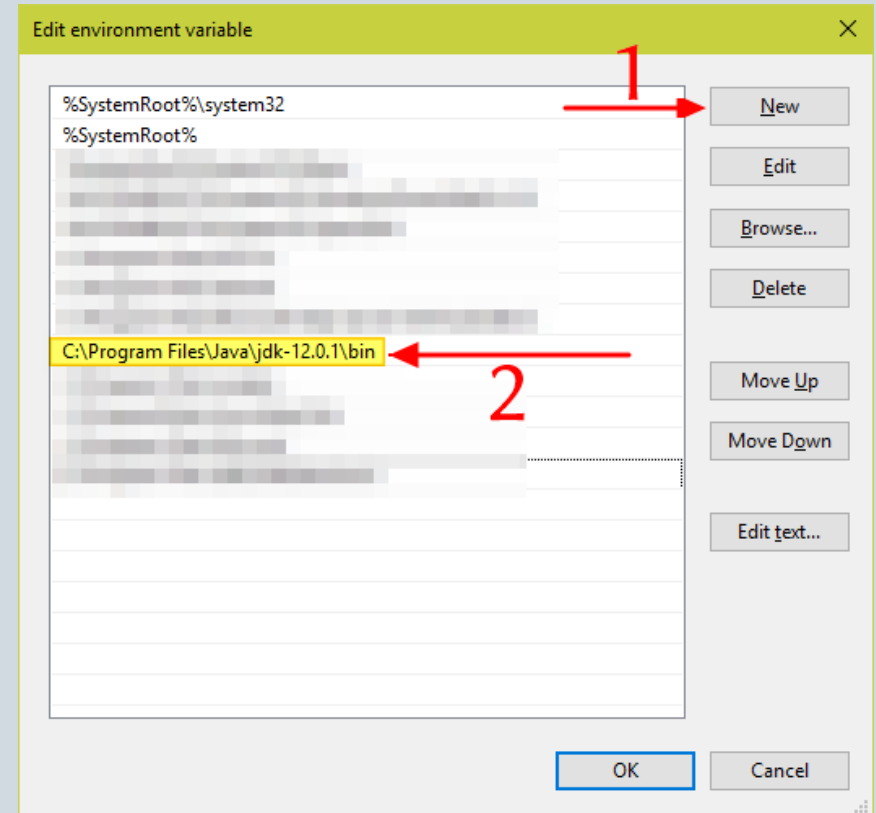
4. Add the Java location at the end of the PATH followed by **\bin** (as defined during installation)
5. Also add this same location for the PATH on User Variables (just above System Variables)





Java Path Configuration (for Windows 10)

4. Add the Java location at followed by **\bin** (as defined during installation) by clicking on **New** then entering the information

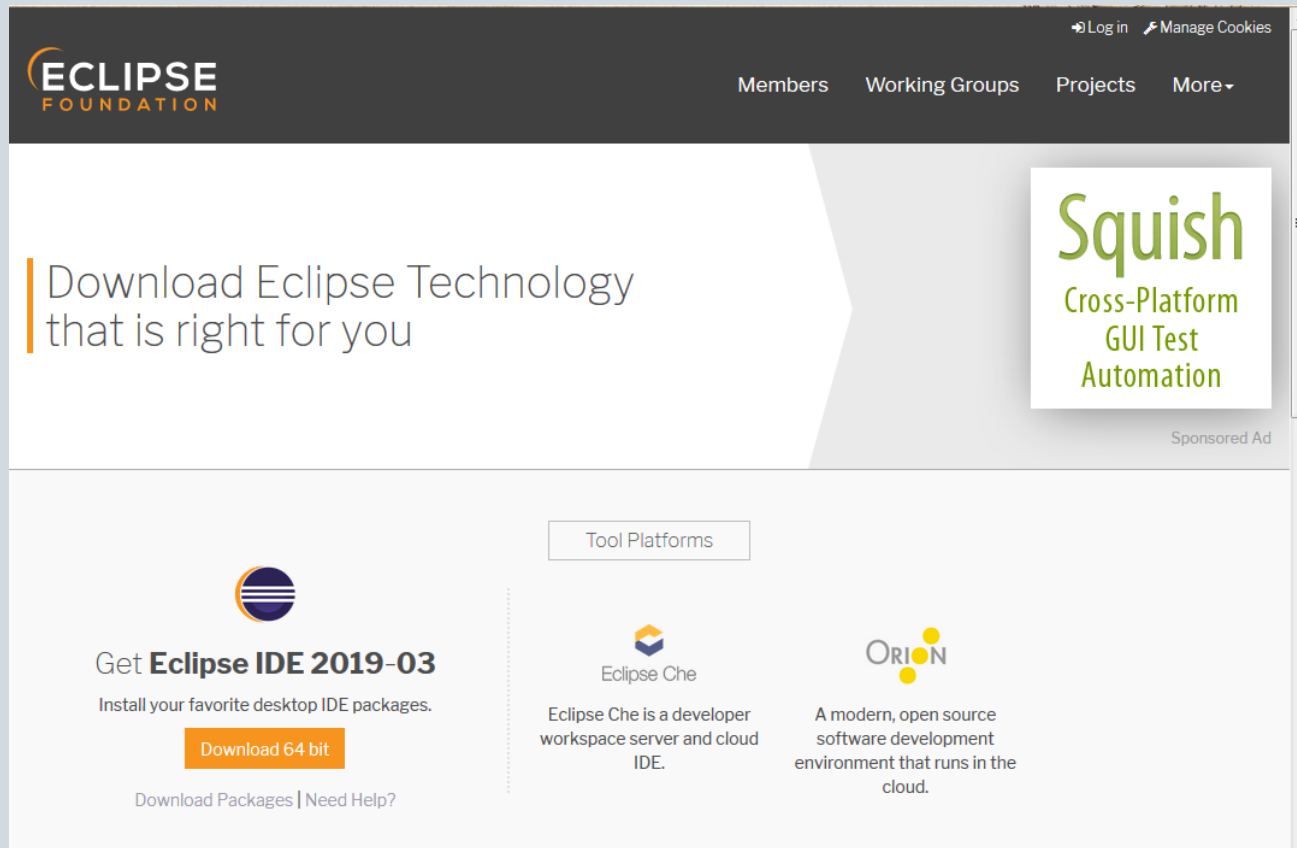


Download and Set up Eclipse

- Available at <https://www.eclipse.org/downloads/>
- There are several versions of Eclipse; select the Standard version



Download and Set up Eclipse



The screenshot shows the Eclipse Foundation website. At the top, there is a dark navigation bar with the Eclipse Foundation logo on the left and links for 'Log in', 'Manage Cookies', 'Members', 'Working Groups', 'Projects', and 'More' on the right. The main content area has a large white section on the left with the text 'Download Eclipse Technology that is right for you'. To the right of this is a 'Squish' advertisement for 'Cross-Platform GUI Test Automation'. Below these, there is a 'Tool Platforms' section. On the left of this section is a large circular logo with horizontal stripes, followed by the text 'Get Eclipse IDE 2019-03' and 'Install your favorite desktop IDE packages.' with a 'Download 64 bit' button. To the right of this are two smaller logos: 'Eclipse Che' and 'ORION'. The 'Eclipse Che' section describes it as a 'developer workspace server and cloud IDE.' The 'ORION' section describes it as a 'modern, open source software development environment that runs in the cloud.'



Download the latest version – Might not be the one in the screen capture above

Installing Eclipse

- Eclipse does not have an installation procedure.
- Simply extract the zip file in a directory where your programs are stored, e.g. **C:\Program Files**.
- This creates a directory named **eclipse**.
- The executable "eclipse.exe" file is in this directory
- It may be helpful to create a shortcut to this executable on your desktop

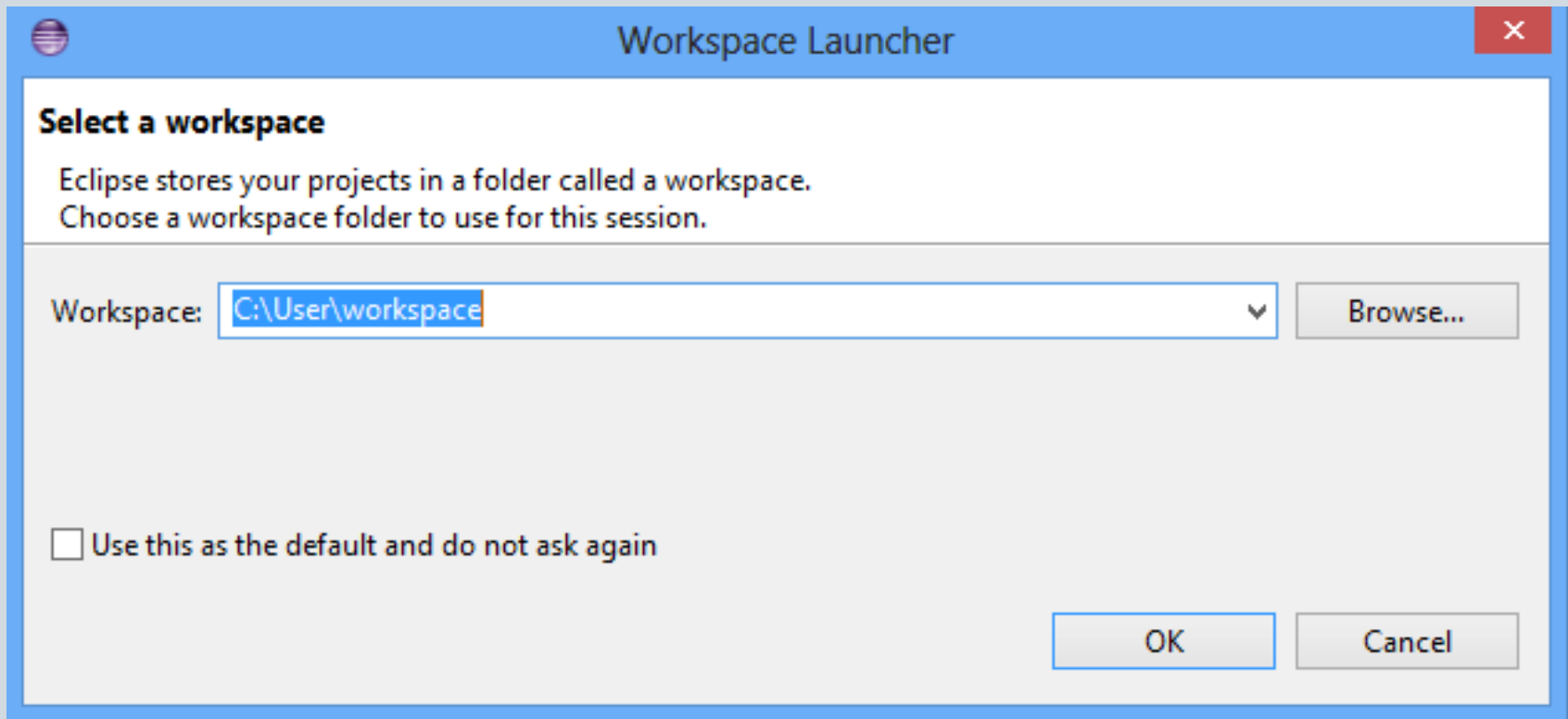


Initializing Eclipse



- Eclipse stores all its files in a directory called "workspace".
- When running for the first time, Eclipse asks for a workspace location.
- You can use the default location (which will be in the directory where eclipse was installed).
- It can be convenient to place your workspace somewhere in "My Documents" directory, e.g. "My Documents\Workspace".
(See screen capture on next slide)

Initializing Eclipse

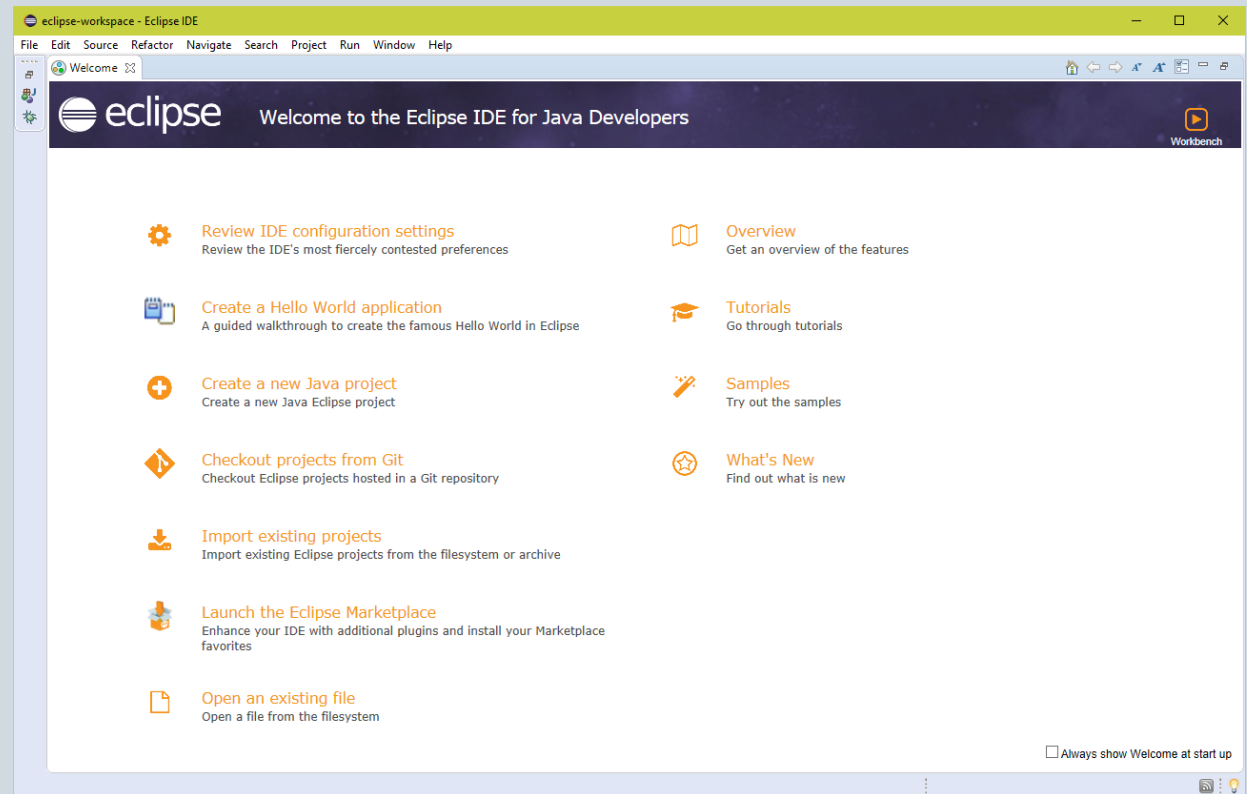


Make sure you remember the location of your workspace

Using Eclipse the first time



After defining the workspace location, you should see the Eclipse Welcome page. (Note your welcome screen may be different)



Create a project



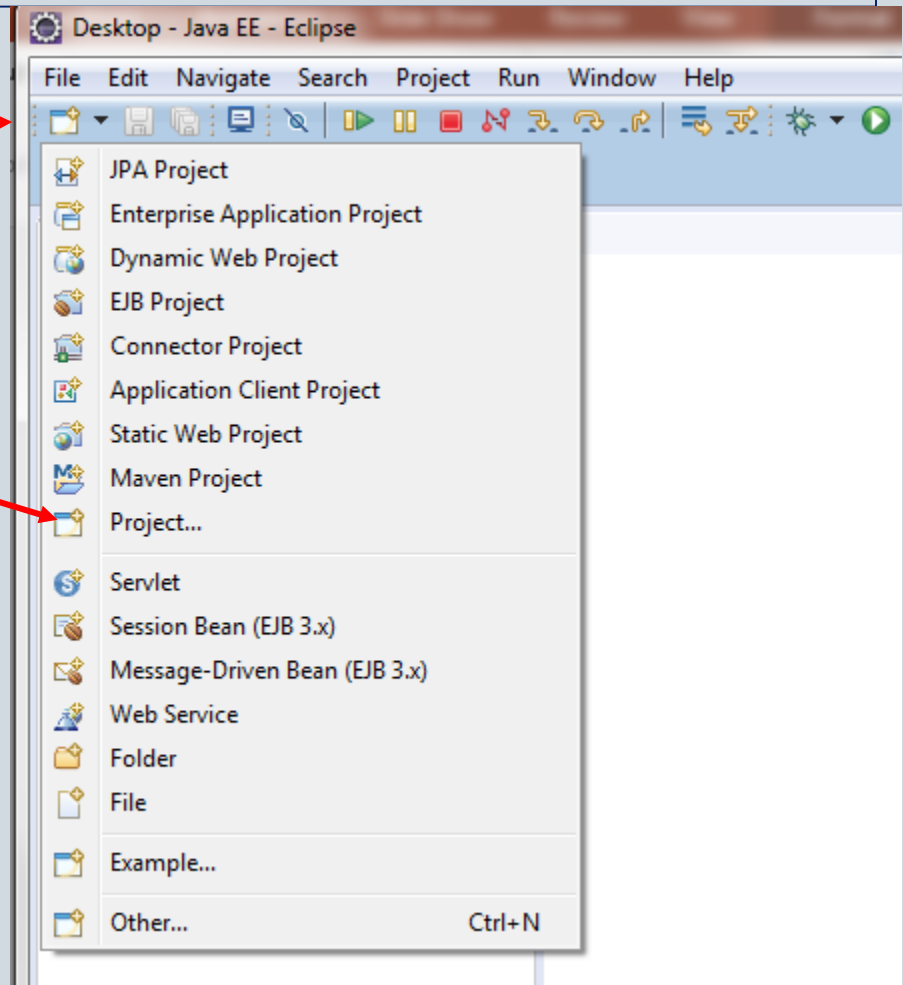
- Click on the icon



- Click on the project icon



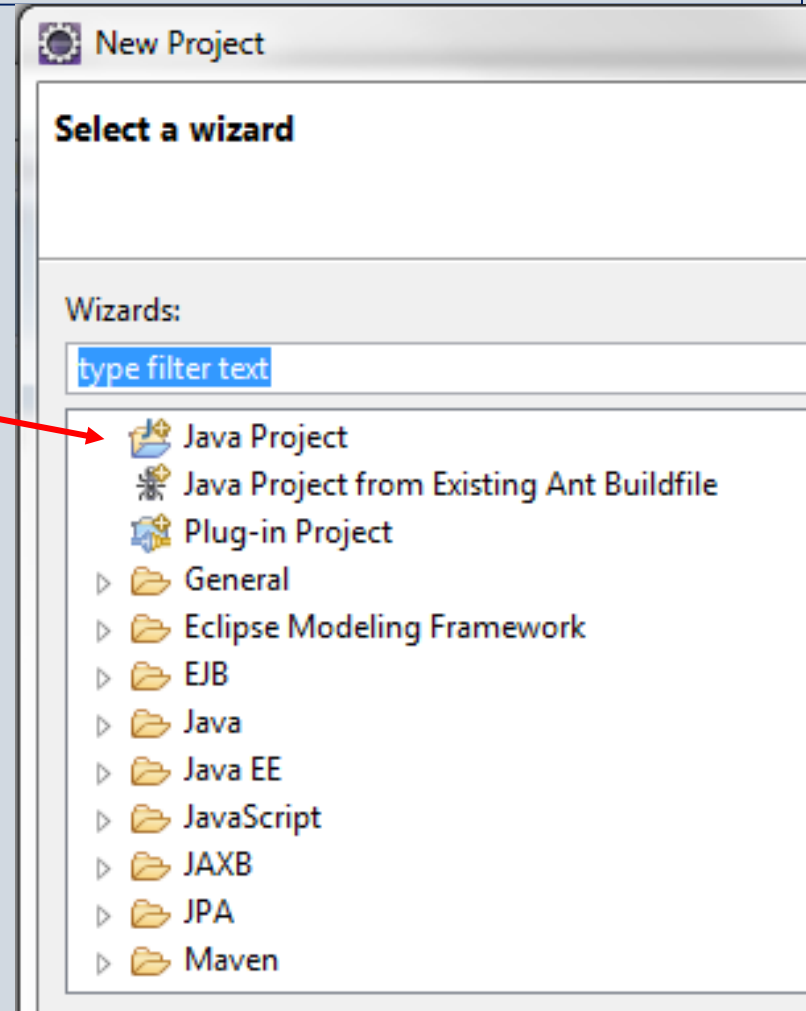
Project...



Create a project



- The New Project window will appear
- Select *Java Project*
- Press the Next key at the bottom of the window.

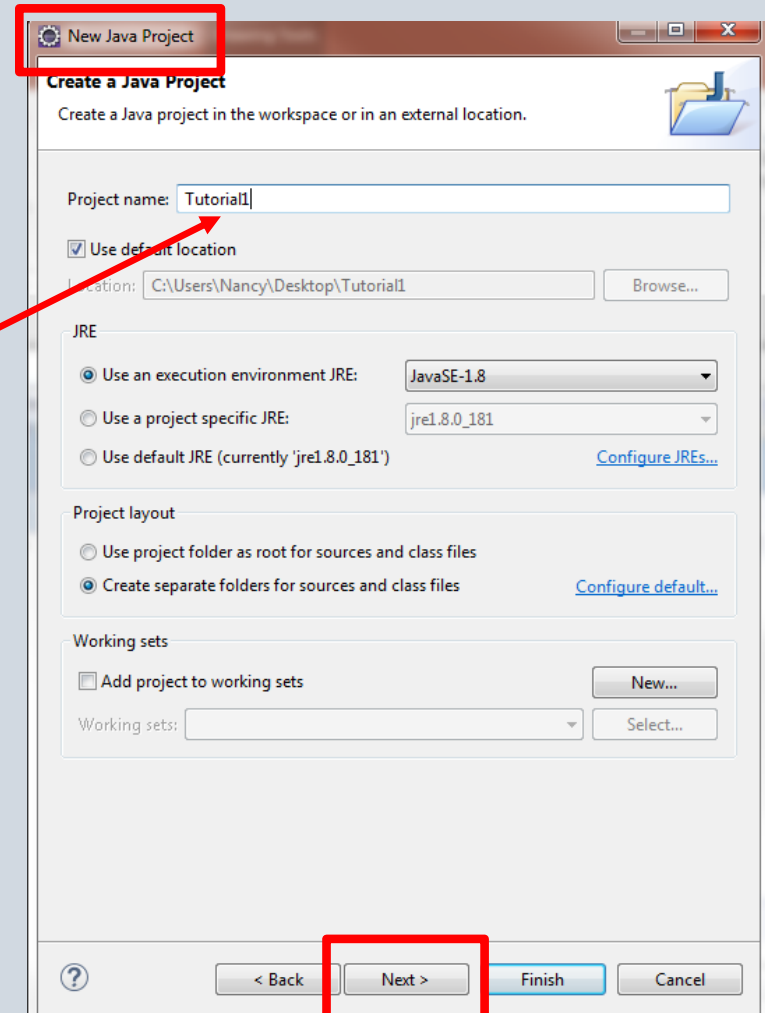


Create a project



The **New Java Project** Window will appear

1. Enter a name for your project.
2. Click on the **Next** button

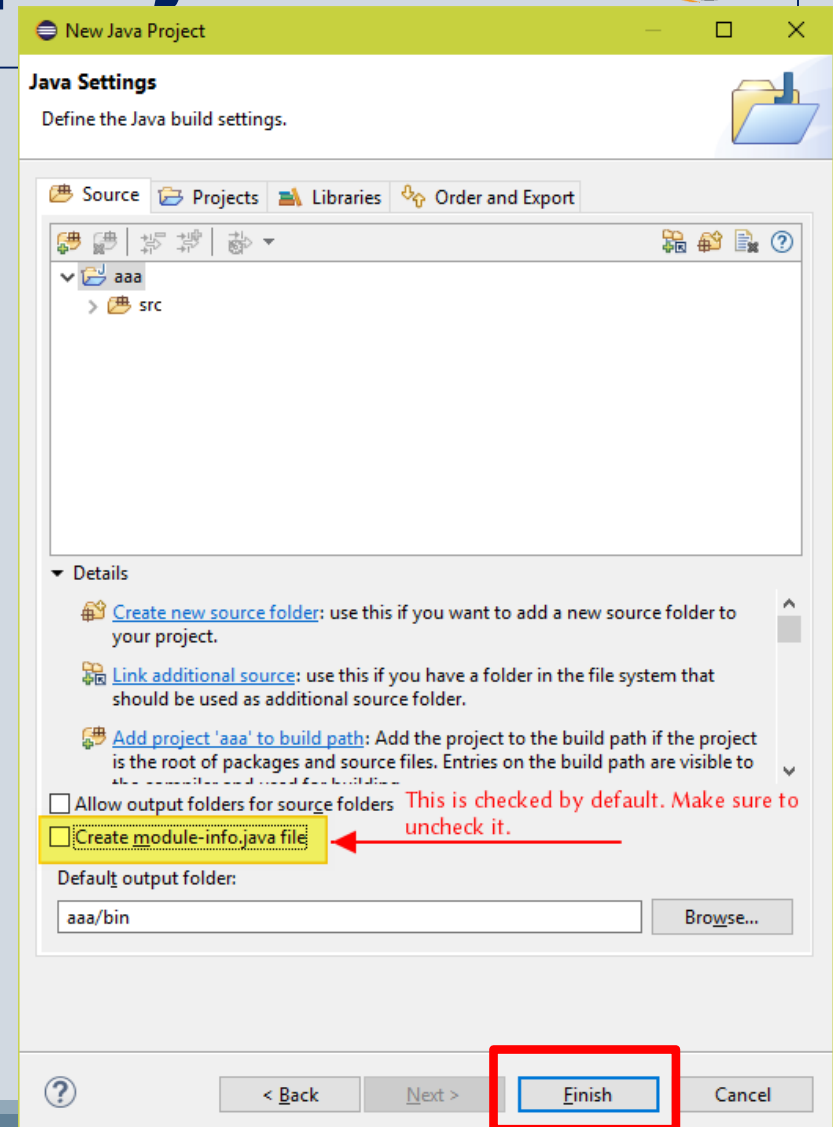


Create a project



3. Uncheck **Create module-info.java file**. In the newer version of Eclipse this is checked by default.

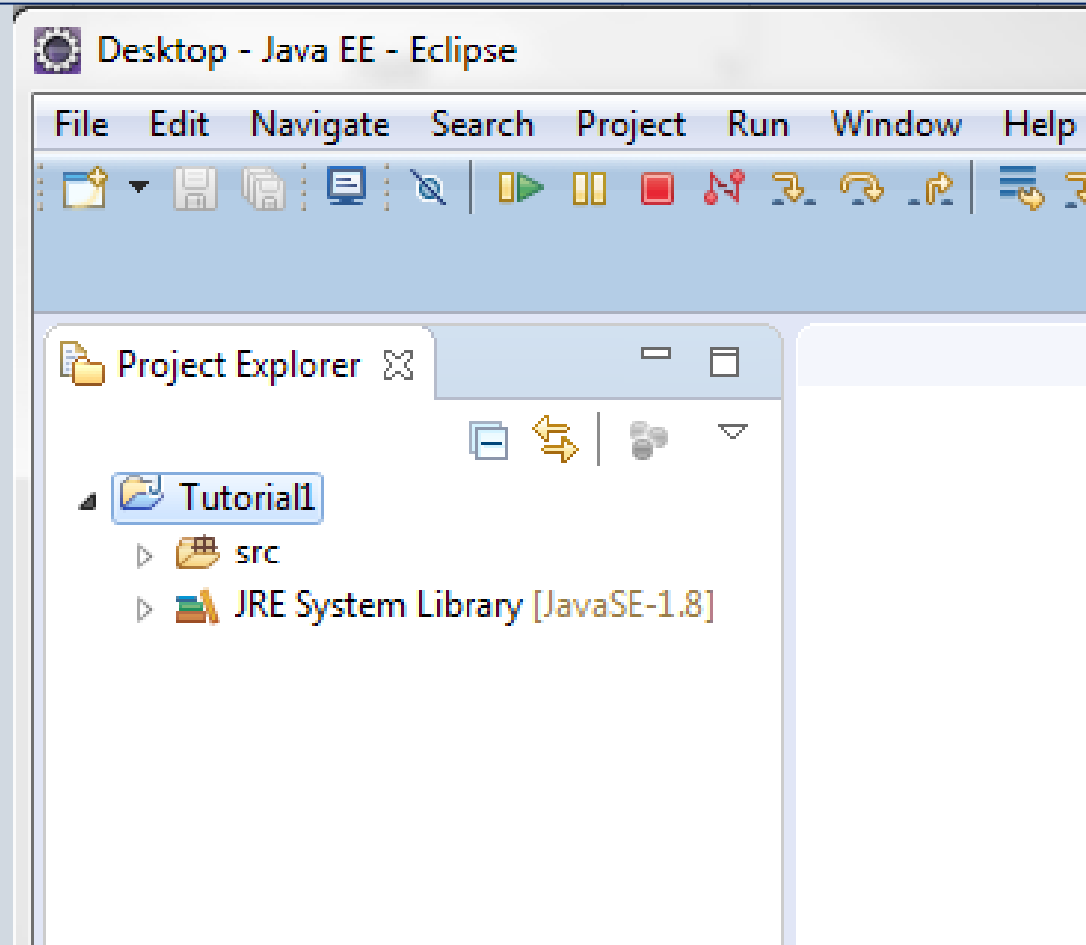
4. Click on **Finish**



Create a project



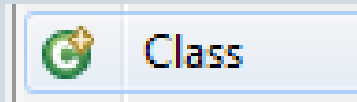
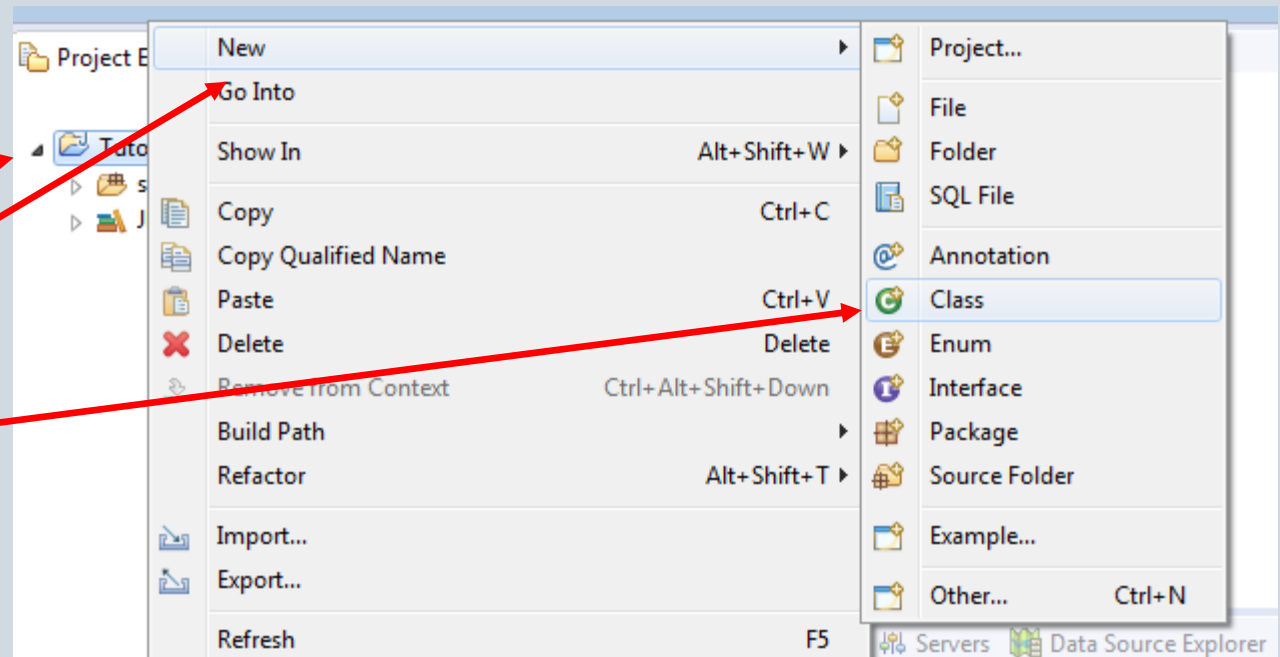
You will see your project Folder (in this example Tutorial1) created with a folder to hold your .java files (src)



Creating a .java file



- Right click on the project name (in this case Tutorial 1)
- Click on New
- Click on Class



Creating a .java file



- The **New Java Class** window will appear
- Notice that your .java file will be saved in the `src` folder of the project you created.
- Make sure that **Package** textbox is empty.
- Enter the name of the .java file- in this example Hello. (Note: No spaces allowed in a file name.)
- Select ☒ `public static void main(String[] args)`
- Click **Finish** Button

New Java Class

The use of the default package is discouraged.

Source folder: Tutorial1/src Browse...

Package: (default) Browse...

☐ Enclosing type: Browse...

Name: Hello

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass: java.lang.Object Browse...

Interfaces: Add... Remove

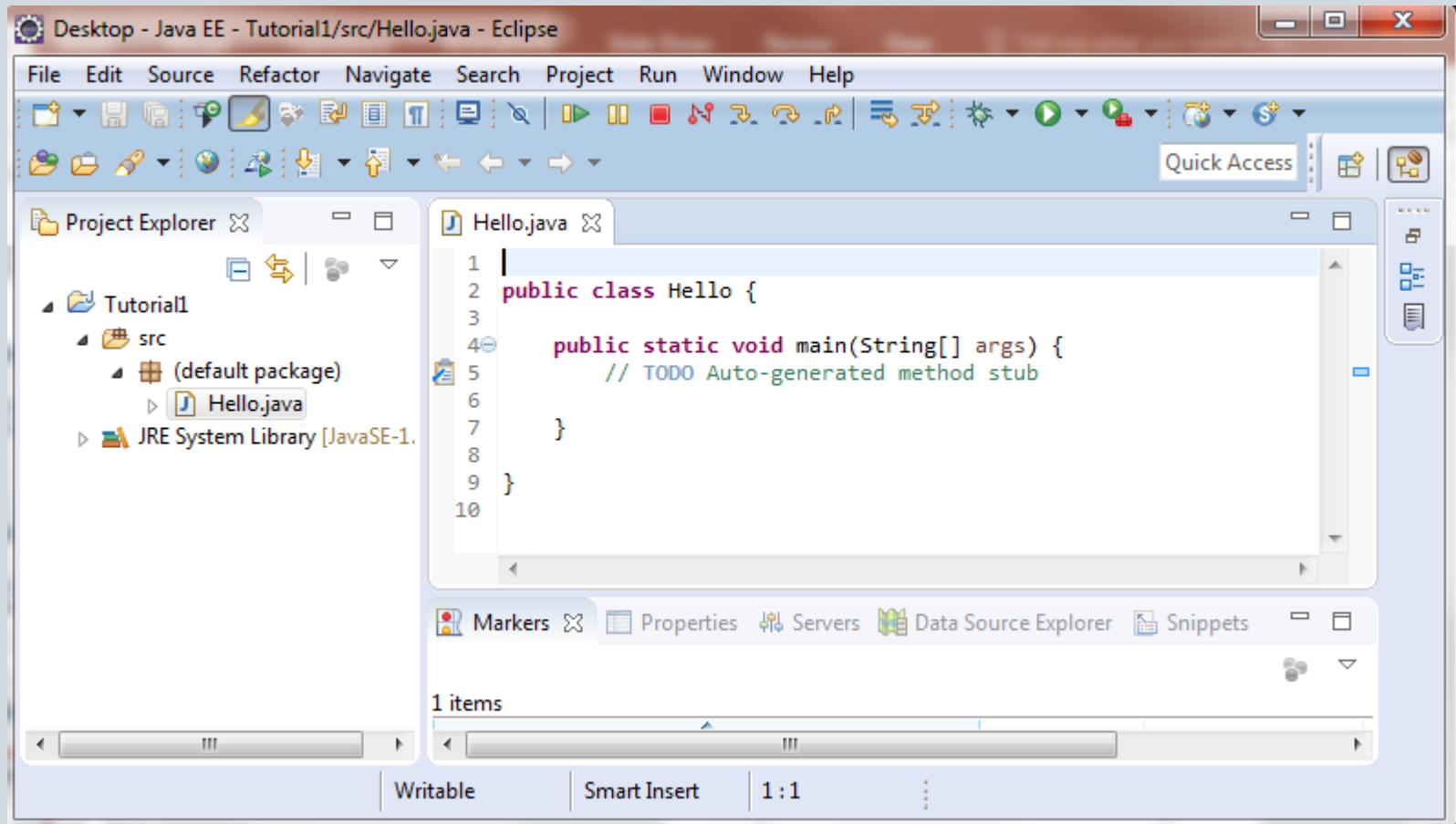
Which method stubs would you like to create?

☒ `public static void main(String[] args)`
☐ Constructors from superclass
☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))
☐ Generate comments

? Finish Cancel

Ready to enter Java statements



Type Java Statement



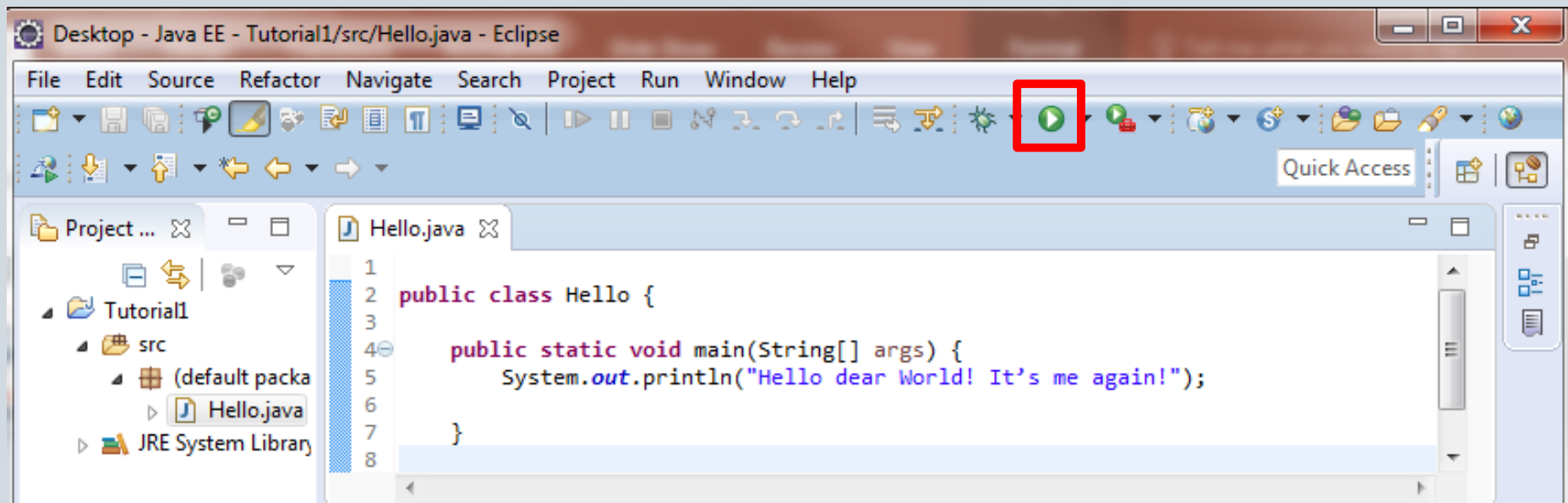
- Type the statement in red

```
public class Hello
{
    public static void main(String[] args)
    {
        System.out.println("Hello dear World! It's me again!");
    }
}
```

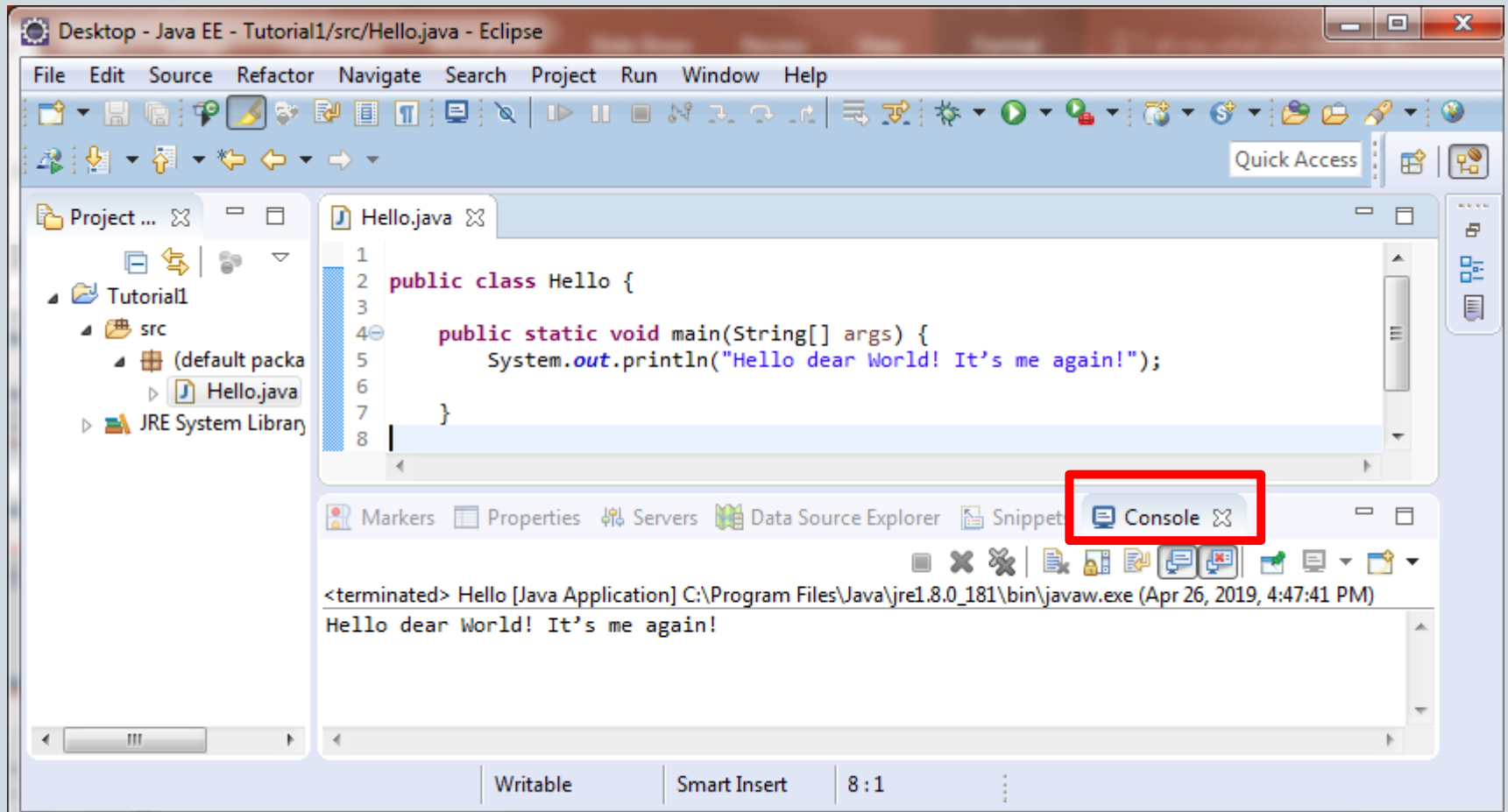
Compiling & Running a Java program



Save your program & click on the **Run** Icon



Output in Console window

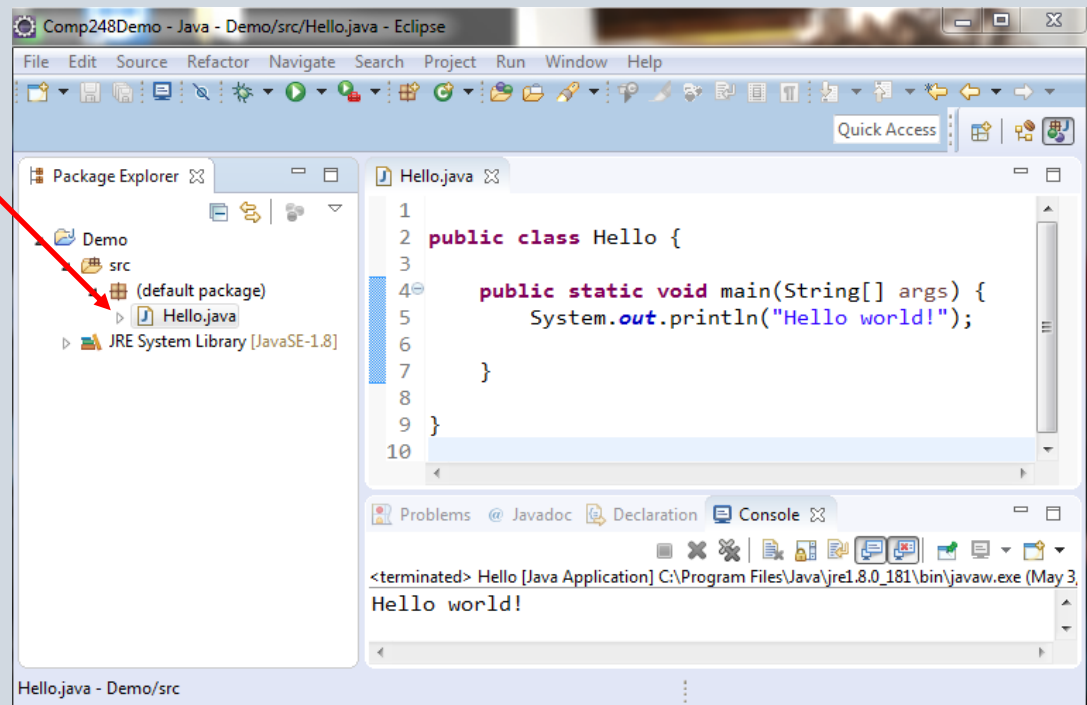


A few useful operations

Locating your source file (.java)

It is time to submit your lab or assignment but you don't know where it is saved.

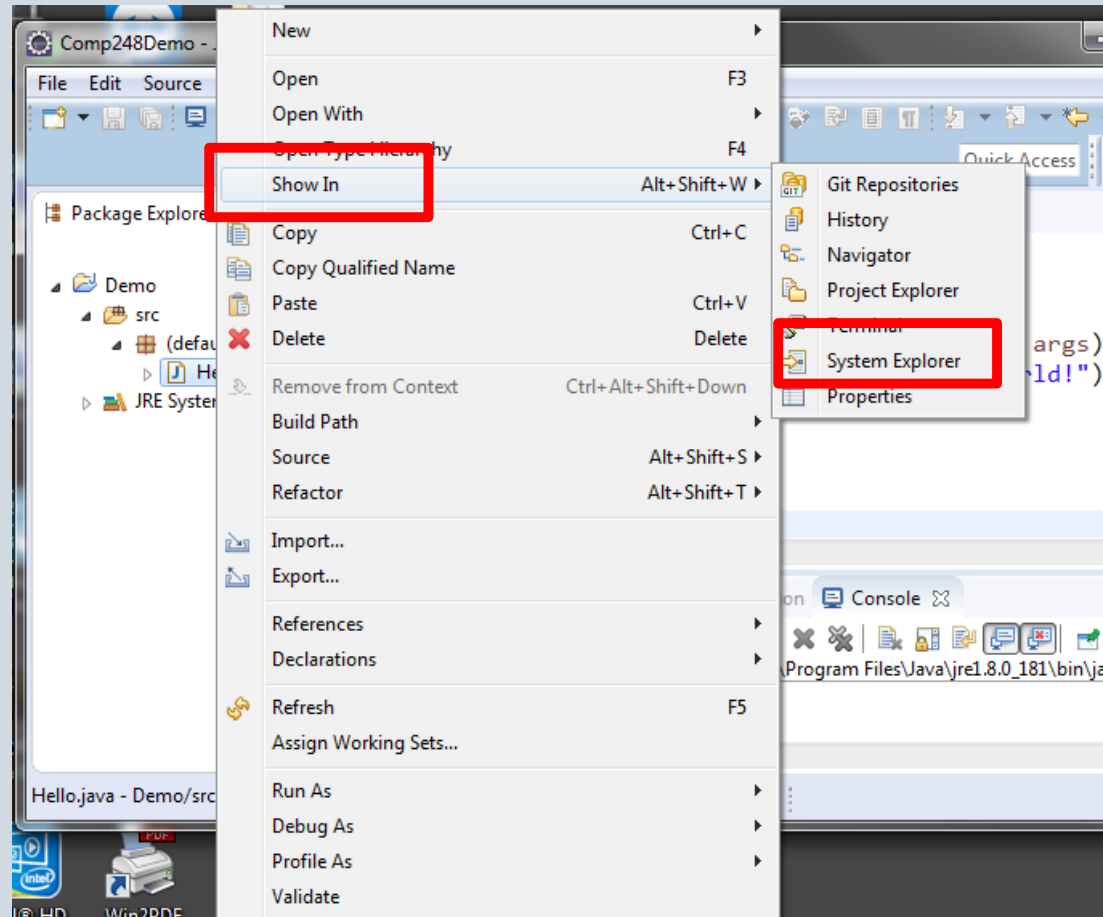
1. Right click on the .java file you want to locate. (In this example the file Hello.java)



Locating your source file (.java)

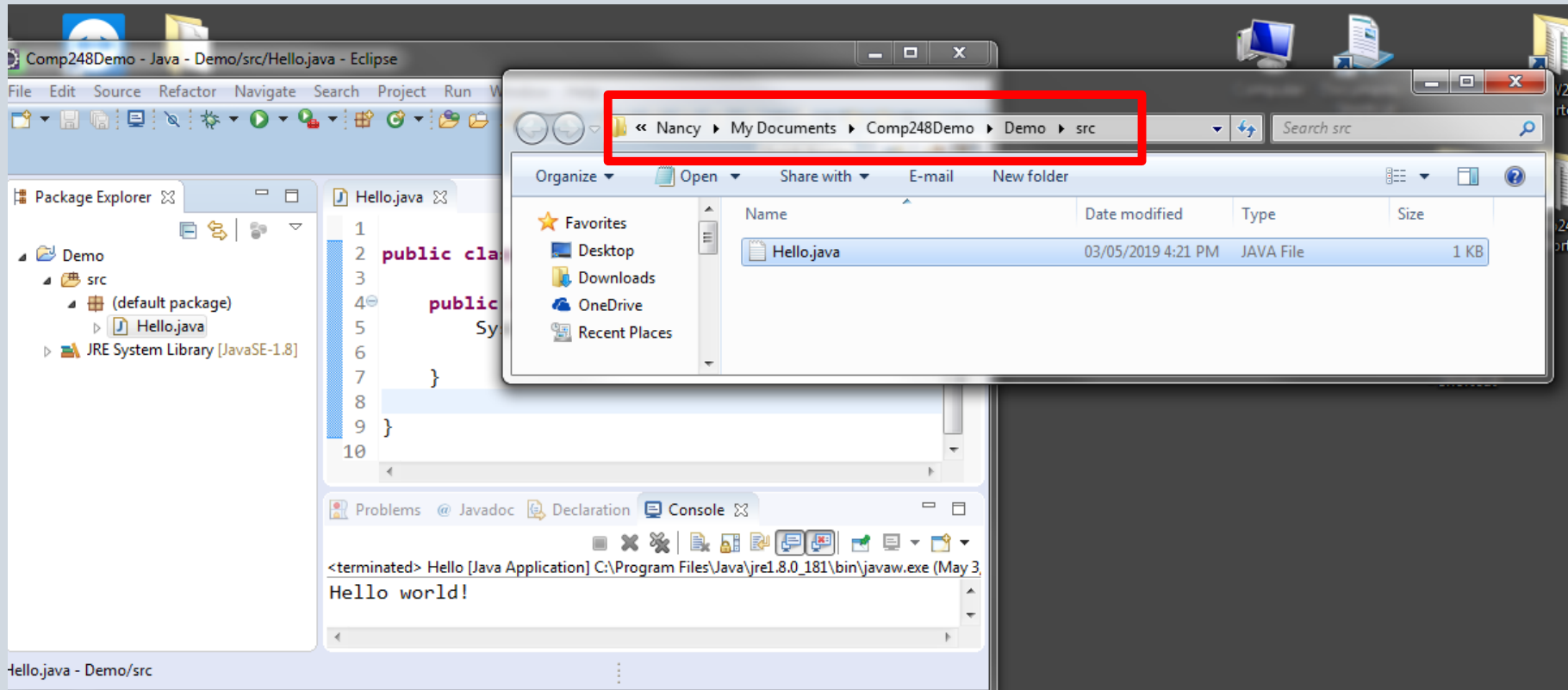
2. Next click on
Show In

3. Select
System Explorer



Locating your source file (.java)

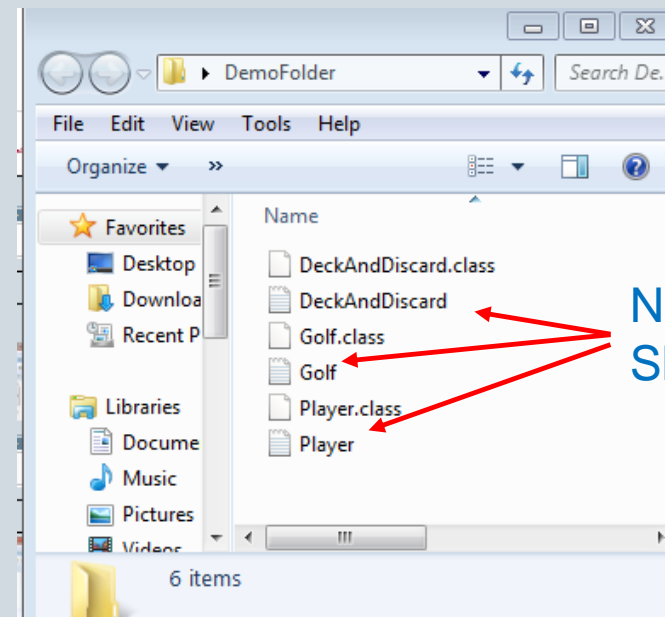
4. You will see the full path to your file



Enable the showing of file extensions in Windows

When submitting files (assignments or labs) be sure to select the .java file (and not the .class file). Sometimes the extension is not visible on your computer.

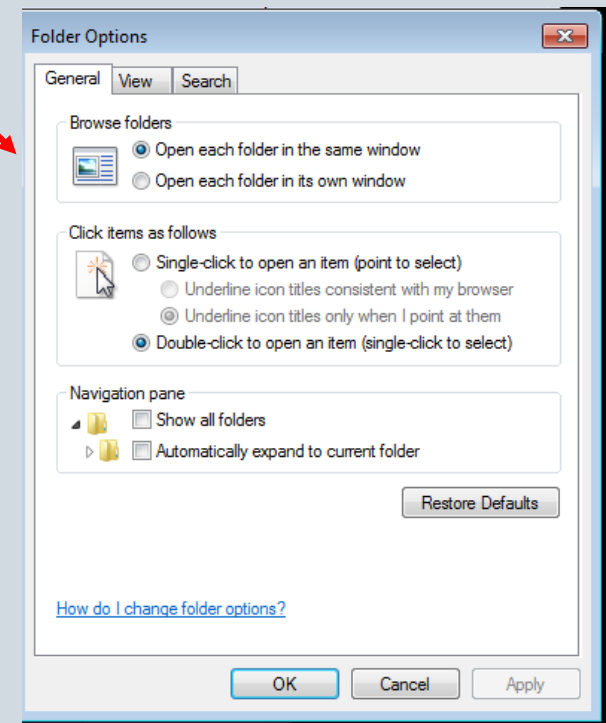
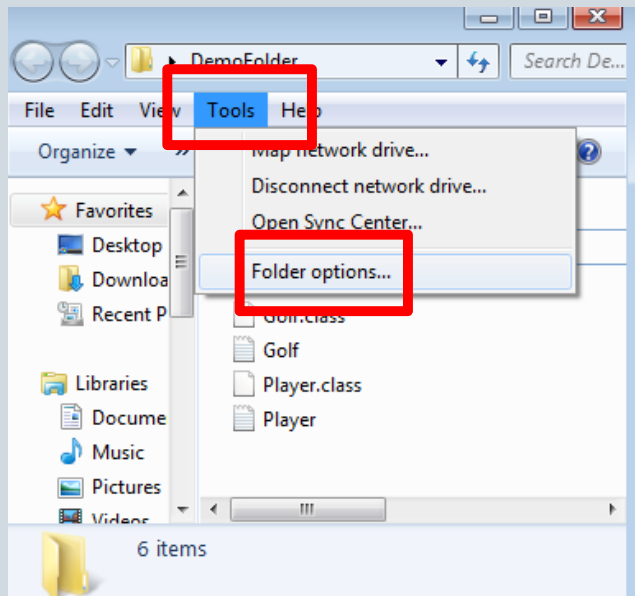
If that is the case, here is how to turn on the displaying of extensions.



No extension
Showing

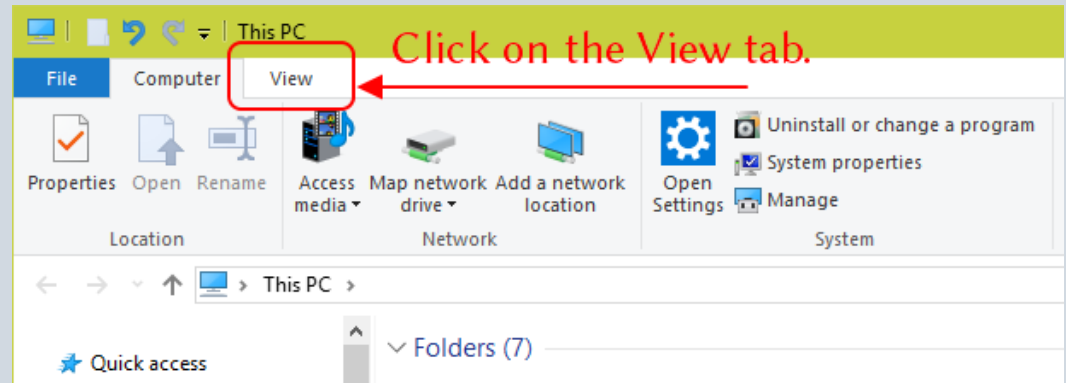
Enable the showing of file extensions in Windows 7/8

1. Click on **Tools** and select **Folder Options**
2. The following window will appear.
3. Go to Slide 36

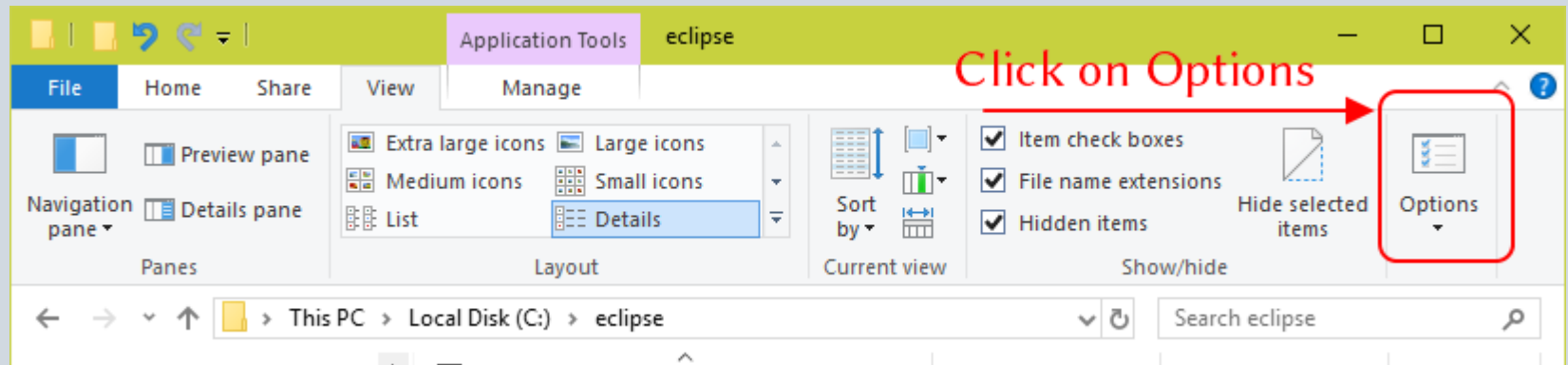


Enable the showing of file extensions in Windows 10

1. Click on **Views**



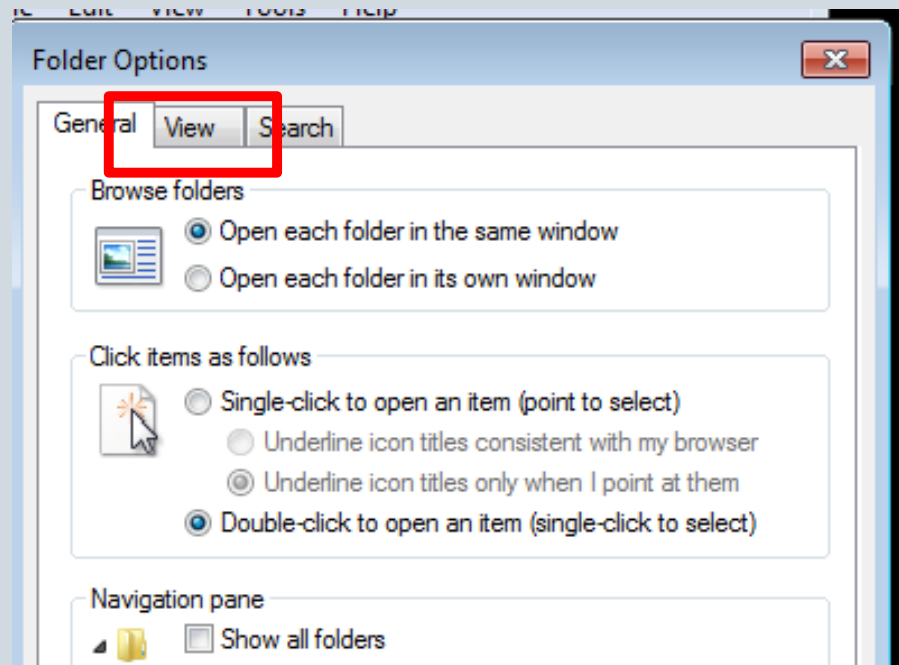
2. The following window will appear. Click on **Options**



3. Continue on to slide 36

Enable the showing of file extensions in **all** Windows

4. Click on the **View** Tab



Enable the showing of file extensions in **all** Windows

5. The following window will appear
6. Make sure that the *“Hide extensions for known types”* is **unchecked** (in this screen capture it is checked)

