

# COMP 248

## Tutorial 1

# Download and Install Java

- Go to:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

- Select the appropriate version for your platform  
(On Windows, you will need admin privileges.)
- Be careful not to confuse the JRE with SDK: you need the **SDK**.
- Install Java by executing the downloaded file.  
This will lead you through the installation process.

# Download and install Java

The screenshot shows the Oracle Technology Network page for downloading the Java SE Development Kit 8. The page includes a navigation menu with links like Products, Solutions, Downloads, Store, Support, Training, Partners, and About. A sidebar on the left lists various Java products. The main content area is titled 'Java SE Development Kit 8 Downloads' and contains a thank you message, a list of links to related resources, and a section for the JDK MD5 Checksum. At the bottom, there is a license agreement section with two radio buttons: 'Accept License Agreement' (selected) and 'Decline License Agreement'. A red arrow points to the 'Accept License Agreement' radio button. The page also features a search bar and a Google logo in the top right corner.

www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

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## Java SE Development Kit 8 Downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications, applets, and components using the Java programming language.

The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

See also:

- Java Developer Newsletter (tick the checkbox under Subscription Center > Oracle Technology News)
- Java Developer Day hands-on workshops (free) and other events
- Java Magazine

JDK MD5 Checksum

Looking for JDK 8 on ARM?  
JDK 8 for ARM downloads have moved to the [JDK 8 for ARM download page](#).

### Java SE Development Kit 8u5

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

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Java SDKs and Tools

- Java SE
- Java EE and Glassfish
- Java ME
- Java Card
- NetBeans IDE
- Java Mission Control

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NEW!  
Get it now for FREE!

# Download and install Java

## Java SE Development Kit 8u5

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the [Oracle Binary Code License Agreement for Java SE](#); you may now download this software.

Product / File Description	File Size	Download
Linux x86	133.58 MB	 <a href="#">jdk-8u5-linux-i586.rpm</a>
Linux x86	152.5 MB	 <a href="#">jdk-8u5-linux-i586.tar.gz</a>
Linux x64	133.87 MB	 <a href="#">jdk-8u5-linux-x64.rpm</a>
Linux x64	151.64 MB	 <a href="#">jdk-8u5-linux-x64.tar.gz</a>
Mac OS X x64	207.79 MB	 <a href="#">jdk-8u5-macosx-x64.dmg</a>
Solaris SPARC 64-bit (SVR4 package)	135.68 MB	 <a href="#">jdk-8u5-solaris-sparcv9.tar.Z</a>
Solaris SPARC 64-bit	95.54 MB	 <a href="#">jdk-8u5-solaris-sparcv9.tar.gz</a>
Solaris x64 (SVR4 package)	135.9 MB	 <a href="#">jdk-8u5-solaris-x64.tar.Z</a>
Solaris x64	93.19 MB	 <a href="#">jdk-8u5-solaris-x64.tar.gz</a>
Windows x86	151.71 MB	 <a href="#">jdk-8u5-windows-i586.exe</a>
Windows x64	155.18 MB	 <a href="#">jdk-8u5-windows-x64.exe</a>

# Download and install Java



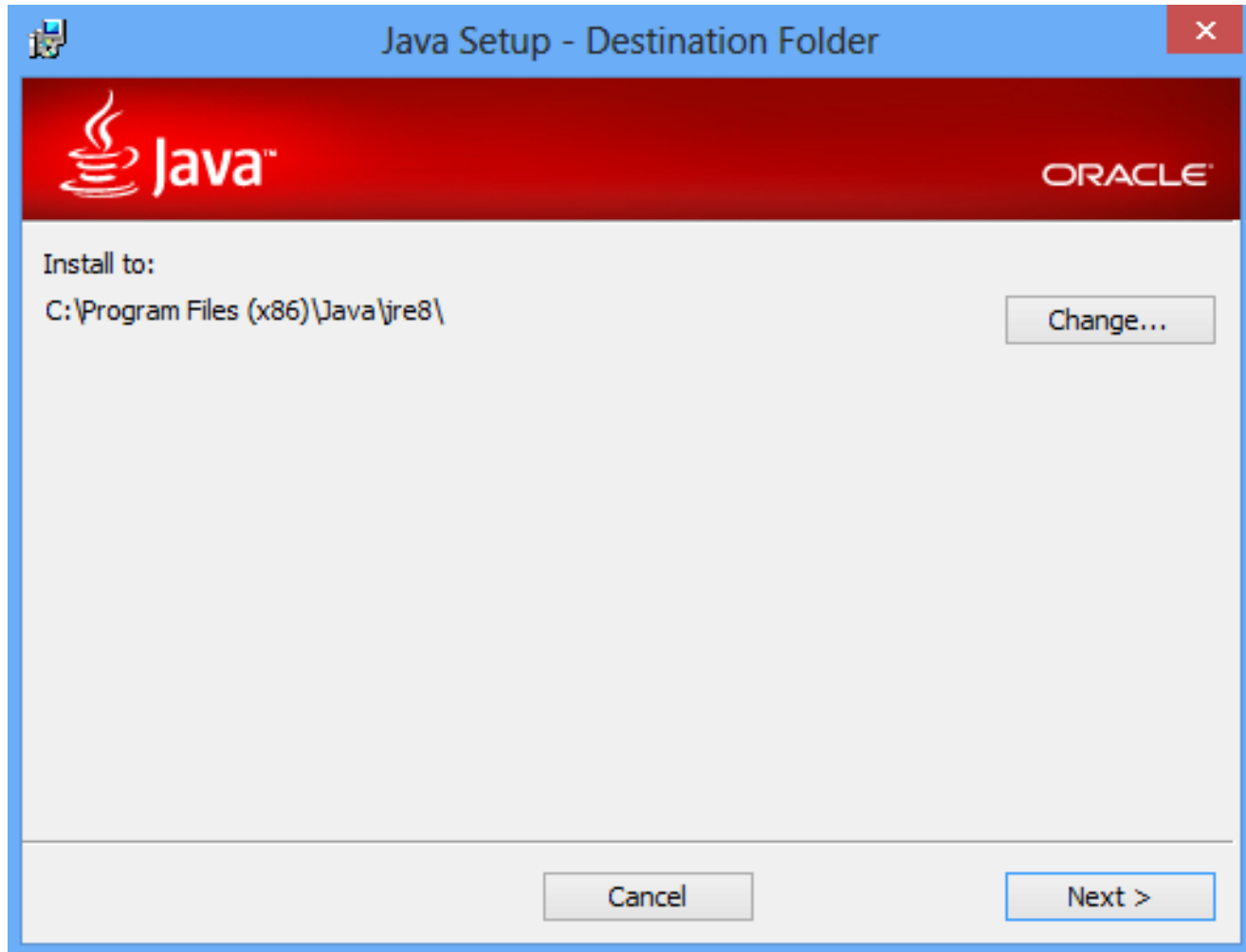
# Download and install Java



# Download and install Java



# Download and install Java





# Download and install Java



# Java Path Configuration



For more details or other OSs, go to:

<http://www.java.com/en/download/help/path.xml>





<http://docs.oracle.com/javase/tutorial/essential/environment/paths.html>

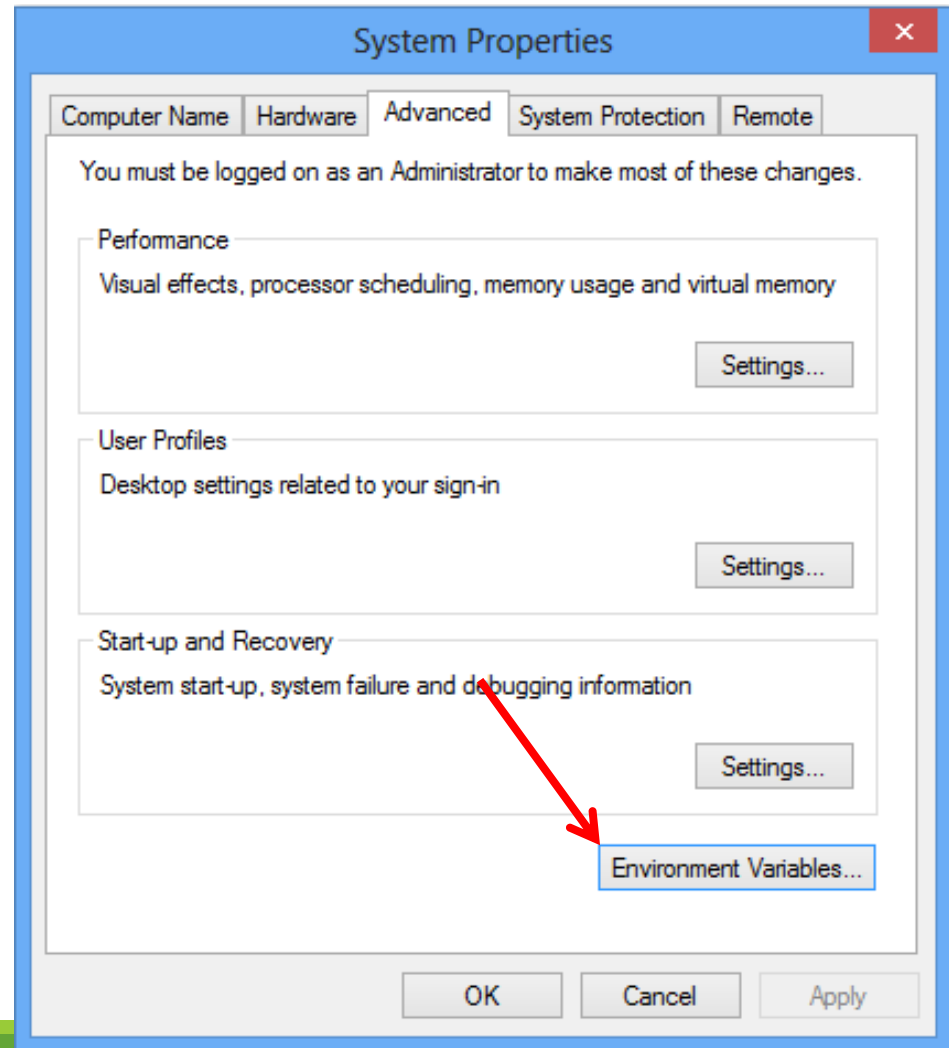
# Java Path Configuration

## Windows 7 / 8

- Go to:  
Computer  
System Properties  
Advanced system settings  
Advanced  
Environment Variables

Control Panel Home

-  Device Manager
-  Remote settings
-  System protection
-  Advanced system settings

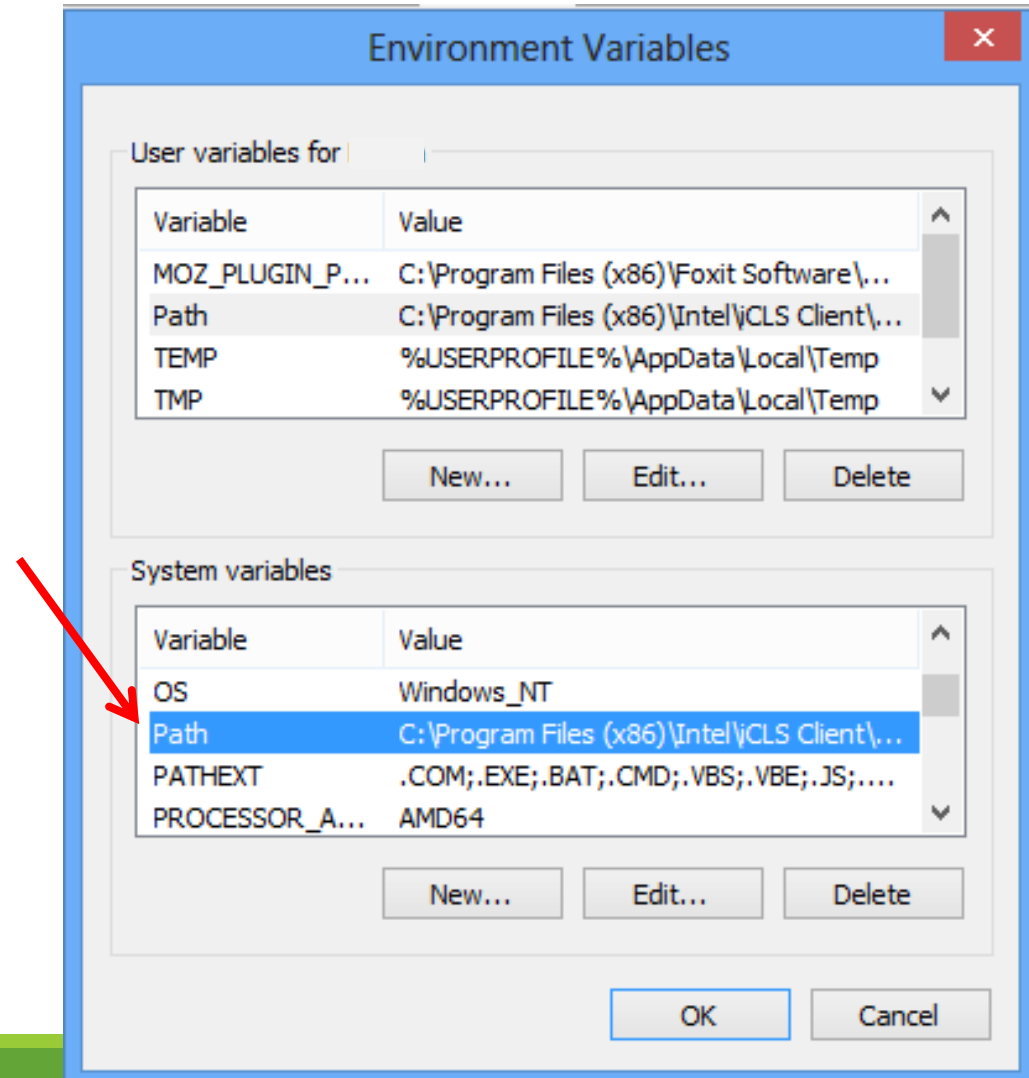


# Java Path Configuration

On System Variables,

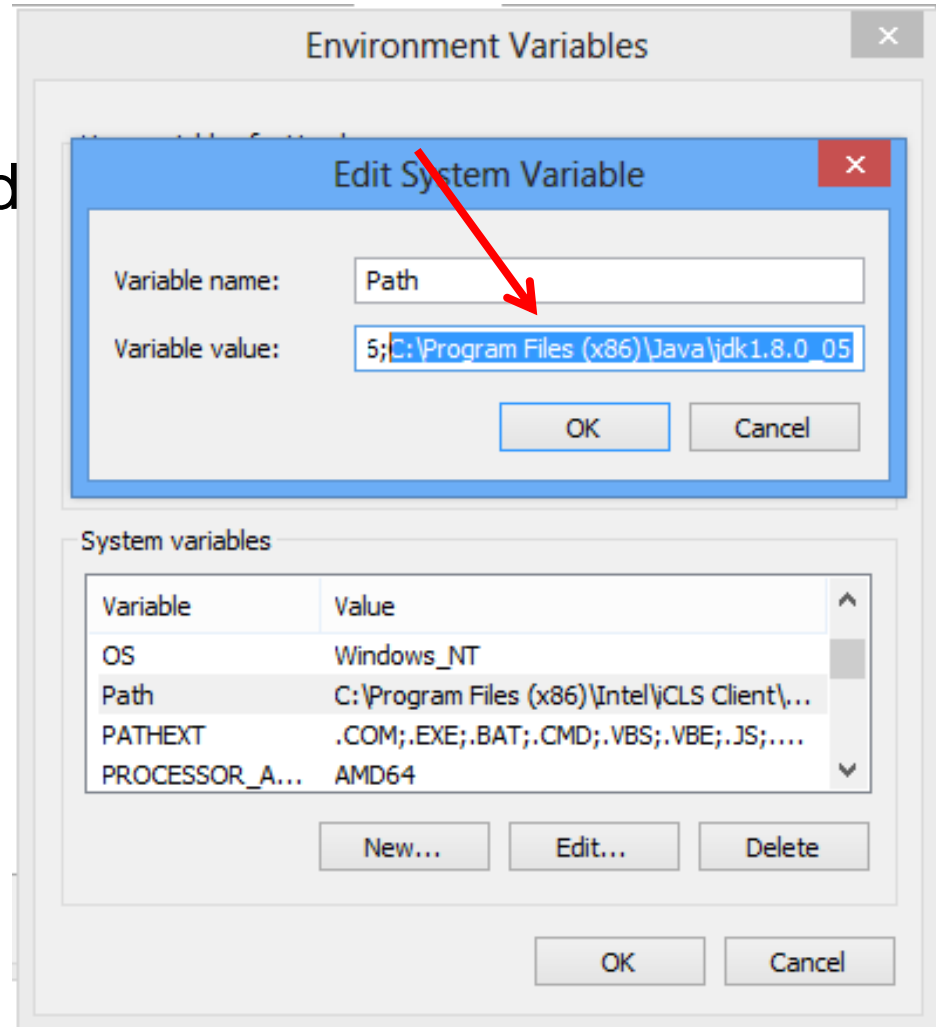
- Find **PATH**
- Double-click on it

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

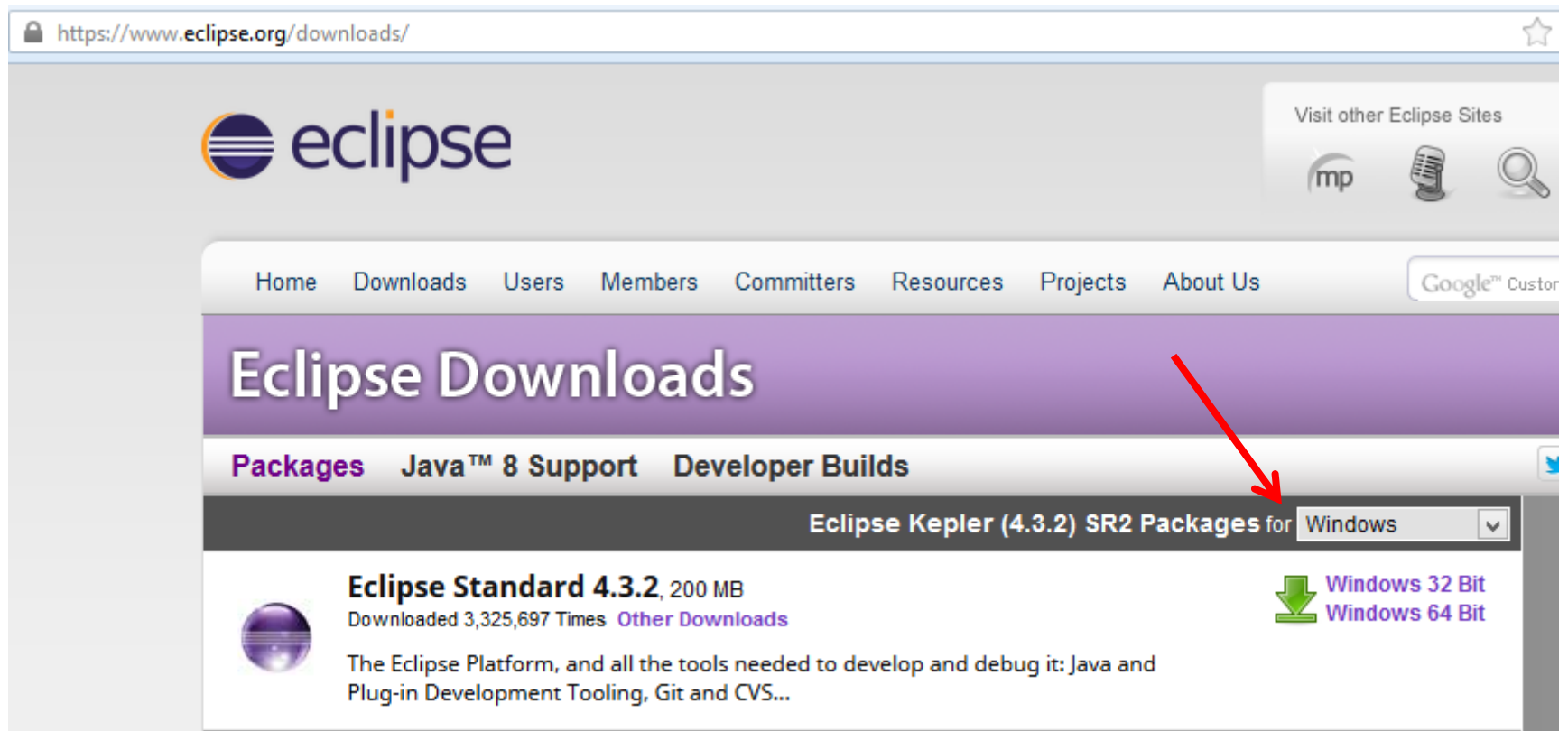
- Add the Java location at the end of the PATH (as defined during installation):  
C:\Program Files (x86)\Java\jdk1.8.0\_05\
- Also add this same location for the PATH on User Variables (just above System Variables)



# Download and Set up Eclipse

- Available at <https://www.eclipse.org/downloads/>
- You may download it from a suggested mirror, or select any other mirror site.
- There are several versions of Eclipse, and it is important you install the correct one.
- For now, select the Standard version.

# Download and Set up Eclipse



The screenshot shows the Eclipse Downloads page in a web browser. The address bar displays <https://www.eclipse.org/downloads/>. The Eclipse logo is in the top left. A navigation bar includes links for Home, Downloads, Users, Members, Committers, Resources, Projects, and About Us. A search bar with the text "Google™ Custom" is on the right. Below the navigation bar, the page title "Eclipse Downloads" is displayed. A sub-navigation bar contains "Packages", "Java™ 8 Support", and "Developer Builds". A red arrow points to the "Packages" link. Below this, a section titled "Eclipse Kepler (4.3.2) SR2 Packages for" has a dropdown menu set to "Windows". Underneath, the "Eclipse Standard 4.3.2, 200 MB" package is listed, with a download count of 3,325,697 and a link to "Other Downloads". To the right of the package name are download links for "Windows 32 Bit" and "Windows 64 Bit", each preceded by a green download icon. The page footer is a solid green bar.

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

eclipse

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## Eclipse Downloads

**Packages** Java™ 8 Support Developer Builds

Eclipse Kepler (4.3.2) SR2 Packages for Windows

**Eclipse Standard 4.3.2**, 200 MB  
Downloaded 3,325,697 Times [Other Downloads](#)

The Eclipse Platform, and all the tools needed to develop and debug it: Java and Plug-in Development Tooling, Git and CVS...

Windows 32 Bit  
Windows 64 Bit

# Download and Set up Eclipse



The screenshot shows the Eclipse website's download page. The header features the Eclipse logo and a navigation menu with links: Home, Downloads, Users, Members, Committers, Resources, Projects, and About Us. A sidebar on the left contains links for 'Downloads Home', 'Source code', and 'More Packages', along with a 'Give Back to Eclipse' section with buttons for \$5, \$15, and \$25. The main content area is titled 'Eclipse downloads - mirror selection' and includes a disclaimer about the Eclipse Foundation Software User Agreement. It lists the download 'eclipse-standard-kepler-SR2-win32.zip' and provides a mirror link to the University of Waterloo. A red arrow points from the 'More Packages' link in the sidebar to the download information.

**eclipse** Visit other Ecl  
mp

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Downloads Home >>

- Source code
- More Packages

**Give Back to Eclipse**

\$5 \$15 \$25

## Eclipse downloads - mirror selection

All downloads are provided under the terms and conditions of the [Eclipse Foundation Software User Agreement](#) unless otherwise specified.

Download eclipse-standard-kepler-SR2-win32.zip from:

[\[Canada\] University of Waterloo Computer Science Club \(http](#)

Checksums: [\[MD5\]](#) [\[SHA1\]](#)

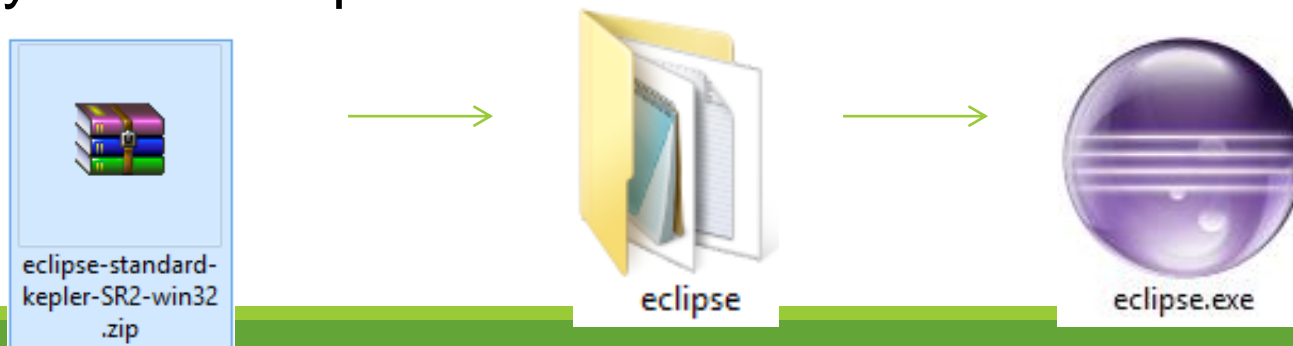
...or pick a mirror site below.



# Download and Set up Eclipse

## 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

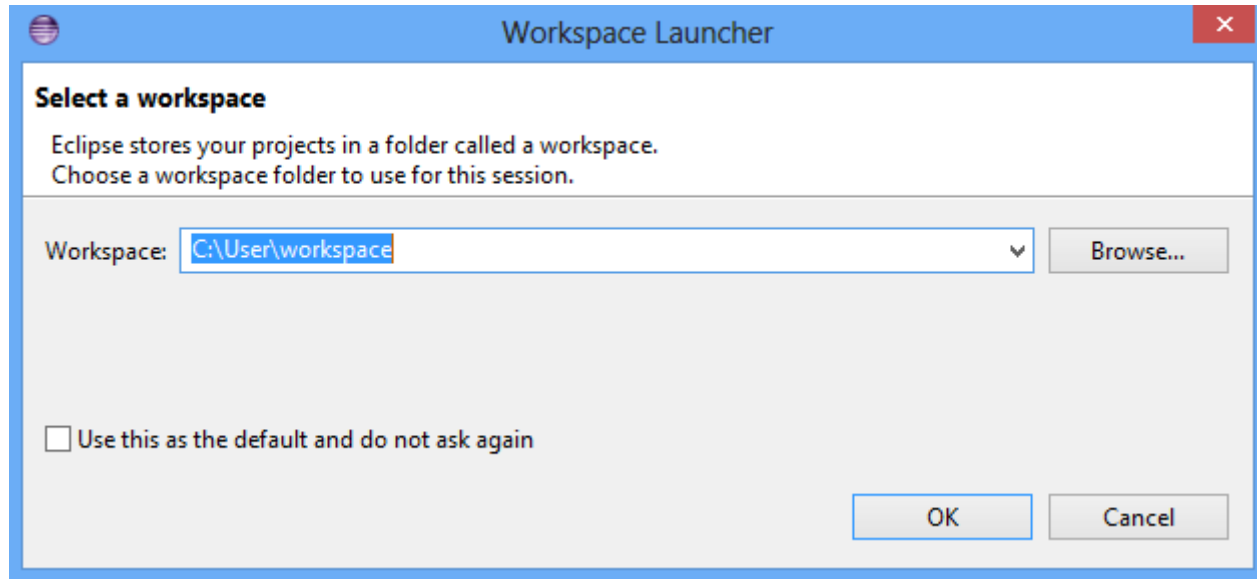


# Download and Set up Eclipse

## Initializing Eclipse:

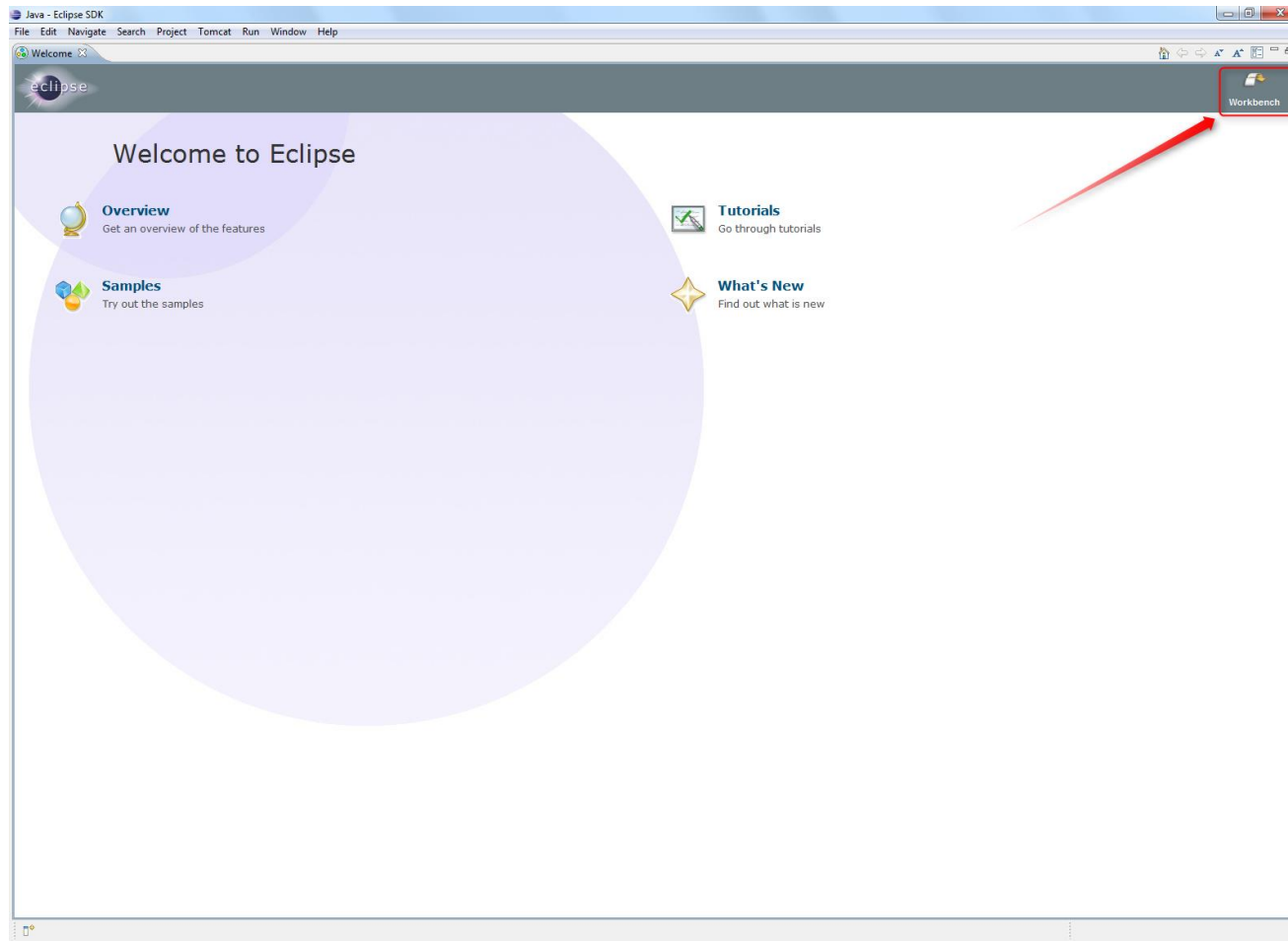
- Eclipse stores all its files in a directory called "workspace".
- When running for the first time, Eclipse asks for a workspace location.
- You can use the default location (which will be in the directory where eclipse was installed).
- It can be convenient to place your workspace somewhere in "My Documents" directory, e.g. "My Documents\Workspace".
- After defining the workspace location, you should see the Eclipse Welcome page.

# Download and Set up Eclipse

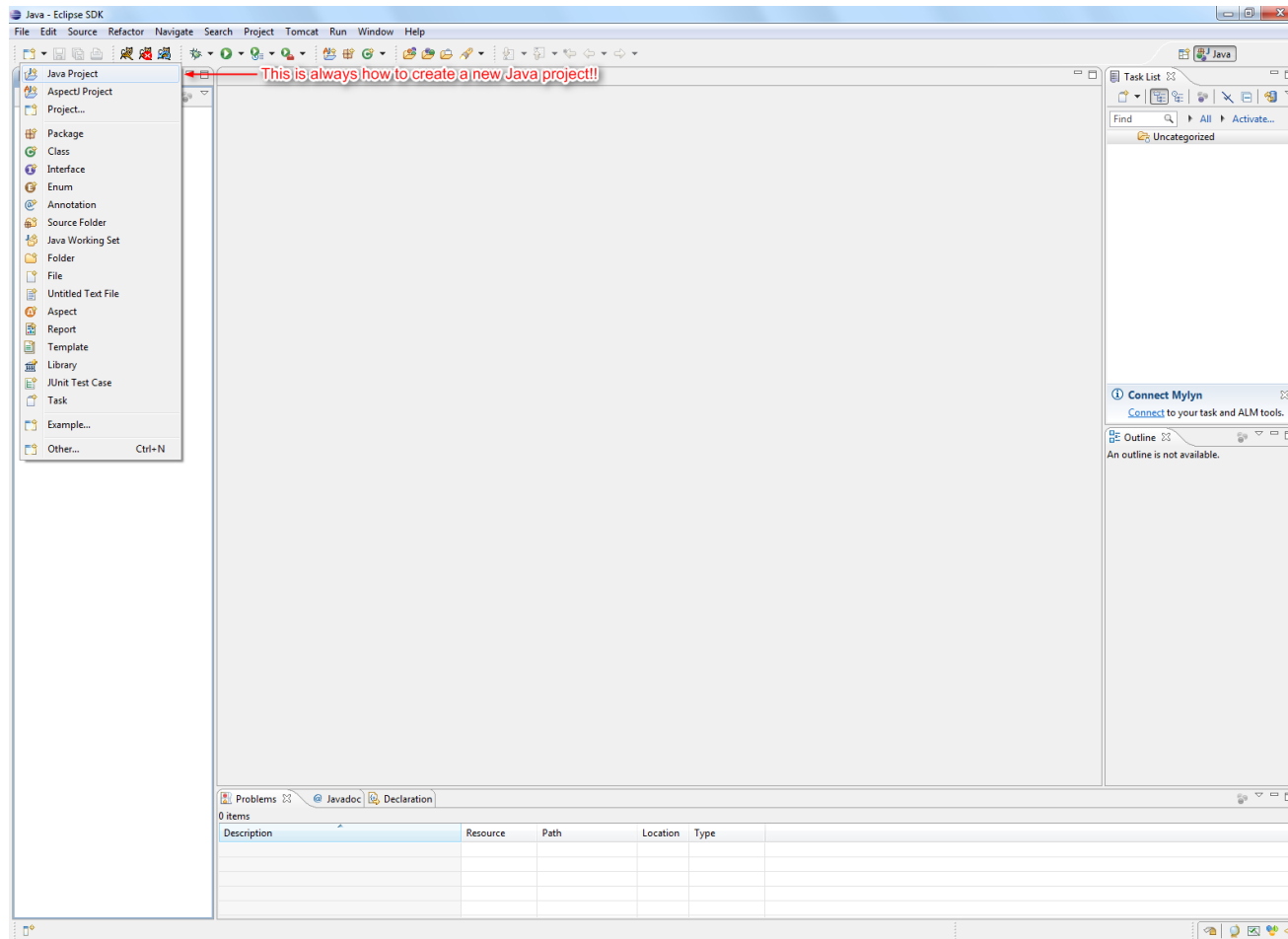


**Make sure you remember the location of your workspace**

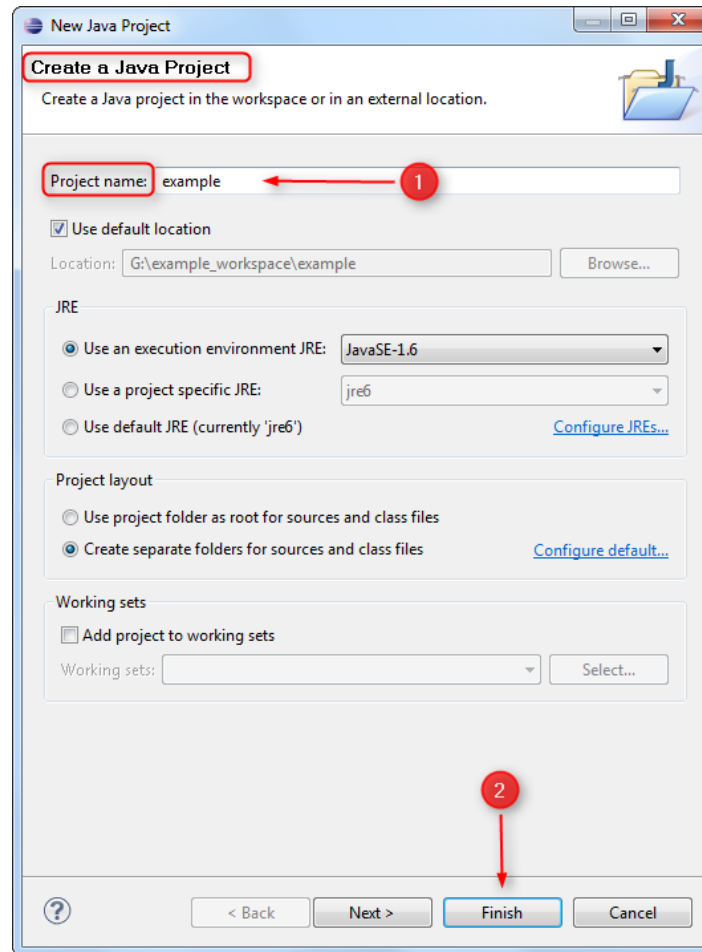
# Using Eclipse the first time



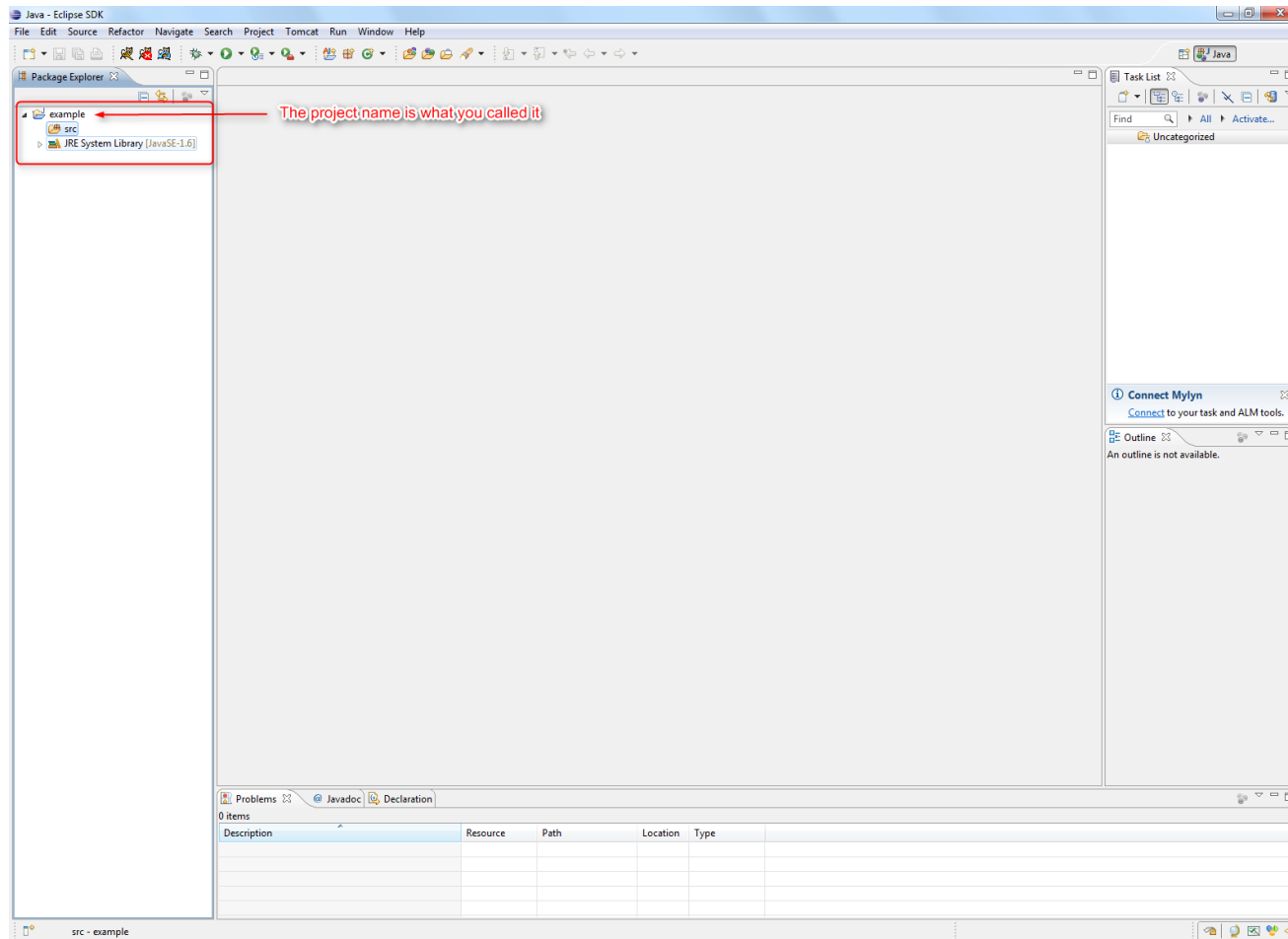
# Using Eclipse the first time



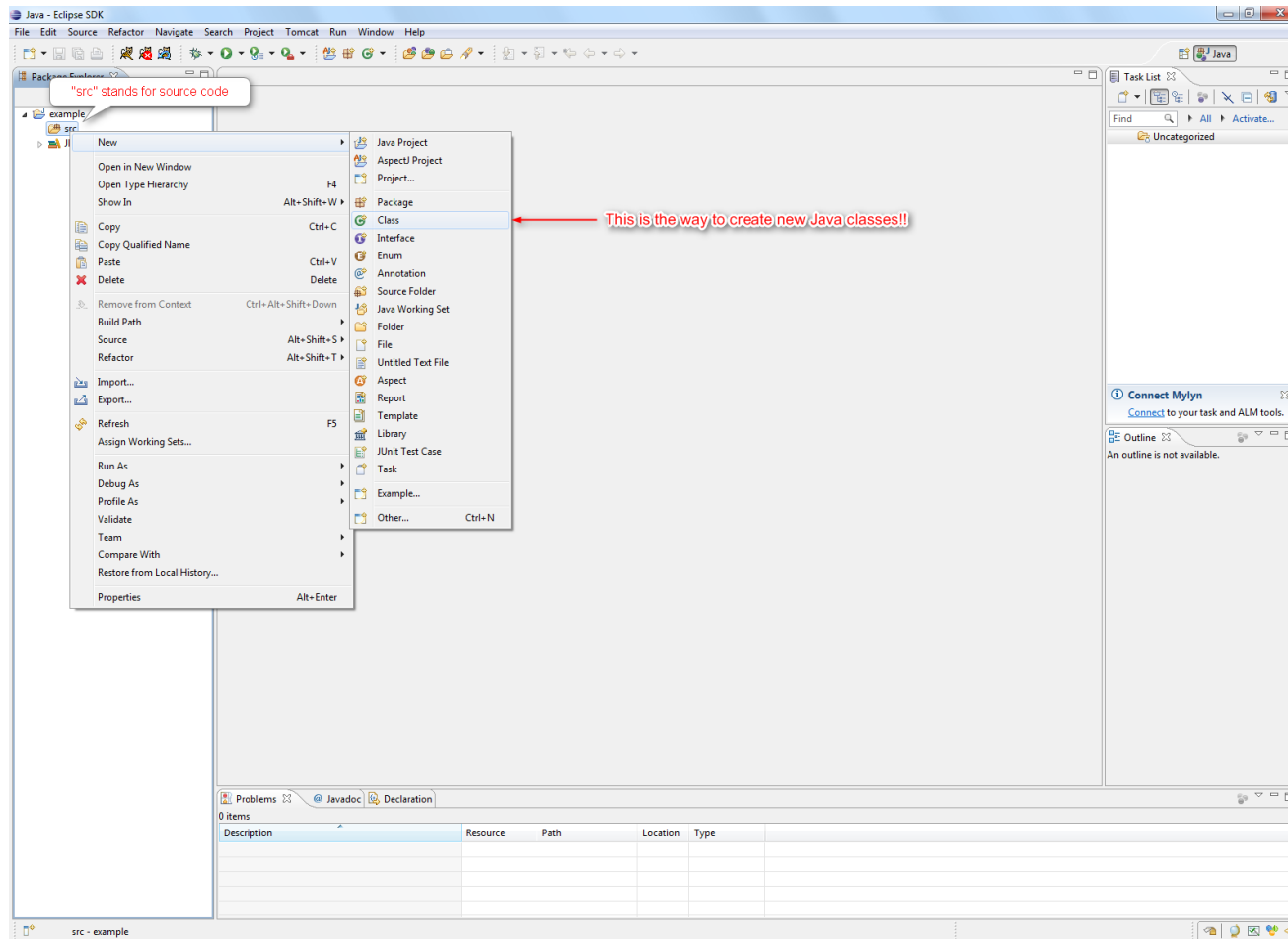
# Using Eclipse the first time



# Using Eclipse the first time

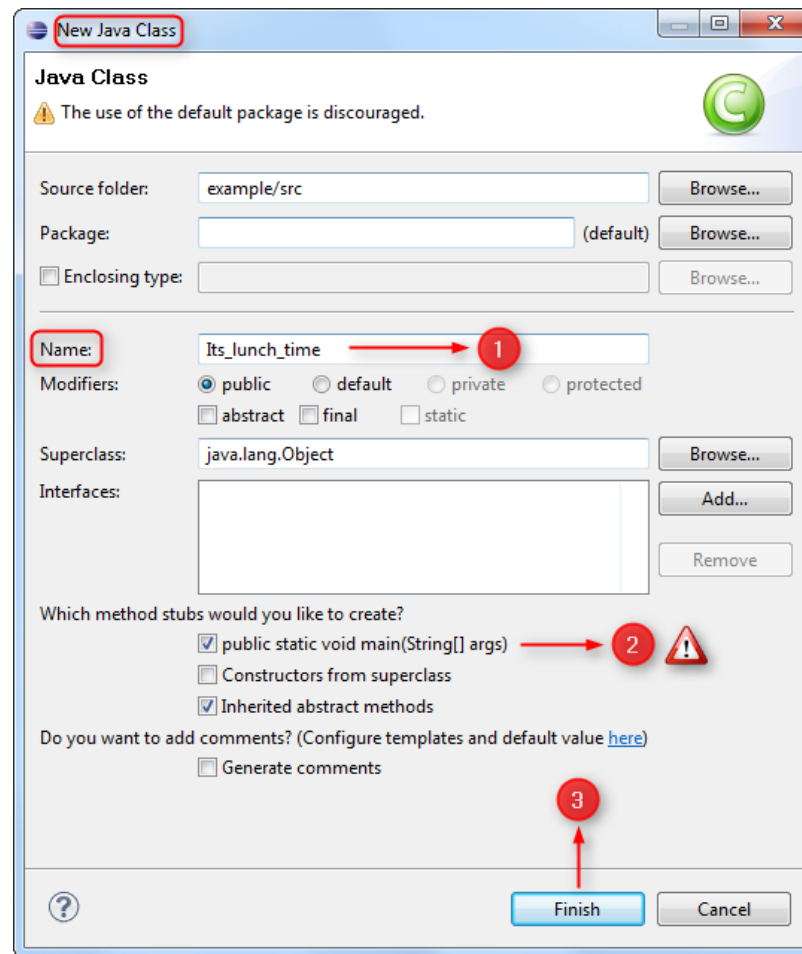


# Using Eclipse the first time

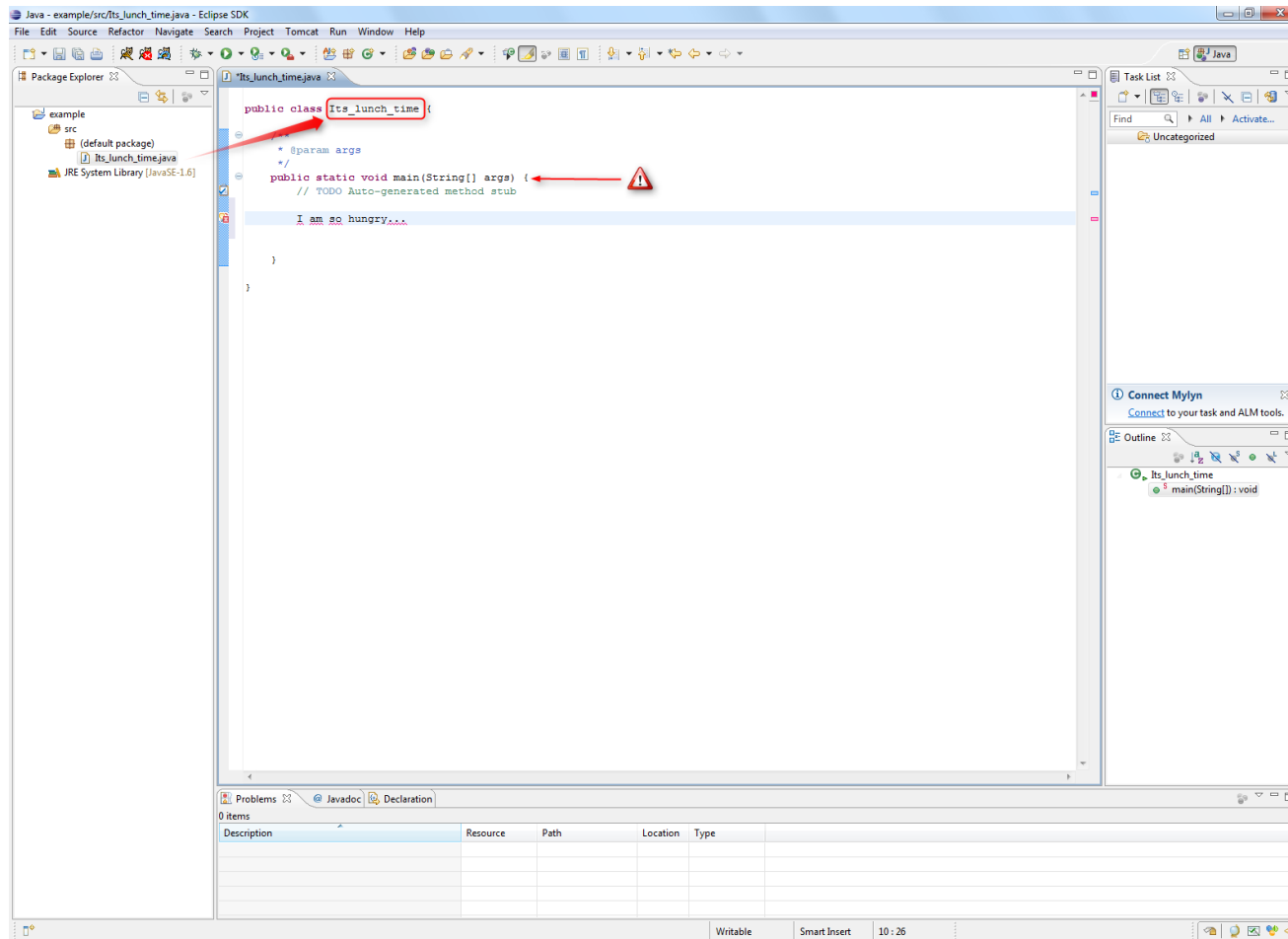




# Using Eclipse the first time



# Using Eclipse the first time



# Example of Java program

- Hello World Application

Note: the java file must be named as HelloWorld.java

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

# Compiling & Running a Java program

- There are 2 ways to compile and run a Java program
  - Using command line
  - Through a Development Editor like Eclipse

# Using the Command Line

- Write a Java program using any editor (ex: Notepad) and save it as (\*.java) file with the same name as the class.
- Go to the directory where you created your program using DOS command
- To compile on a DOS command line:  
`javac filename.java`
- To run on a DOS command line:  
`java filename`

File Edit Format View Help

```
public class test {  
  
    public static void main(String[] args) {  
        System.out.println("Hello");  
    }  
}
```

Microsoft Windows XP [Version 5.1.2600]  
(C) Copyright 1985-2001 Microsoft Corp.

```
C:\Documents and Settings\Administrator>cd "My Documents"  
C:\Documents and Settings\Administrator\My Documents>cd ja  
The system cannot find the path specified.  
C:\Documents and Settings\Administrator\My Documents>cd Java  
C:\Documents and Settings\Administrator\My Documents\Java>javac test.java  
C:\Documents and Settings\Administrator\My Documents\Java>java test  
Hello  
C:\Documents and Settings\Administrator\My Documents\Java>_
```


# Using Eclipse

- Run Eclipse
- Specify the location of your workspace
- Click on File → New → Project → Java Project → Write the project name → then finish
- See the snapshot

New Java Project

Create a Java Project

Enter a project name.



Project name:

☒ Use default location

Location: C:\Users\workspace

Browse...

JRE

☒ Use an execution environment JRE: JavaSE-1.7

☐ Use a project specific JRE: jre7

☐ Use default JRE (currently 'jre7')

[Configure JREs...](#)

Project layout

☐ Use project folder as root for sources and class files

☒ Create separate folders for sources and class files

[Configure default...](#)

Working sets

☐ Add project to working sets

Working sets:

Select...



< Back

Next >

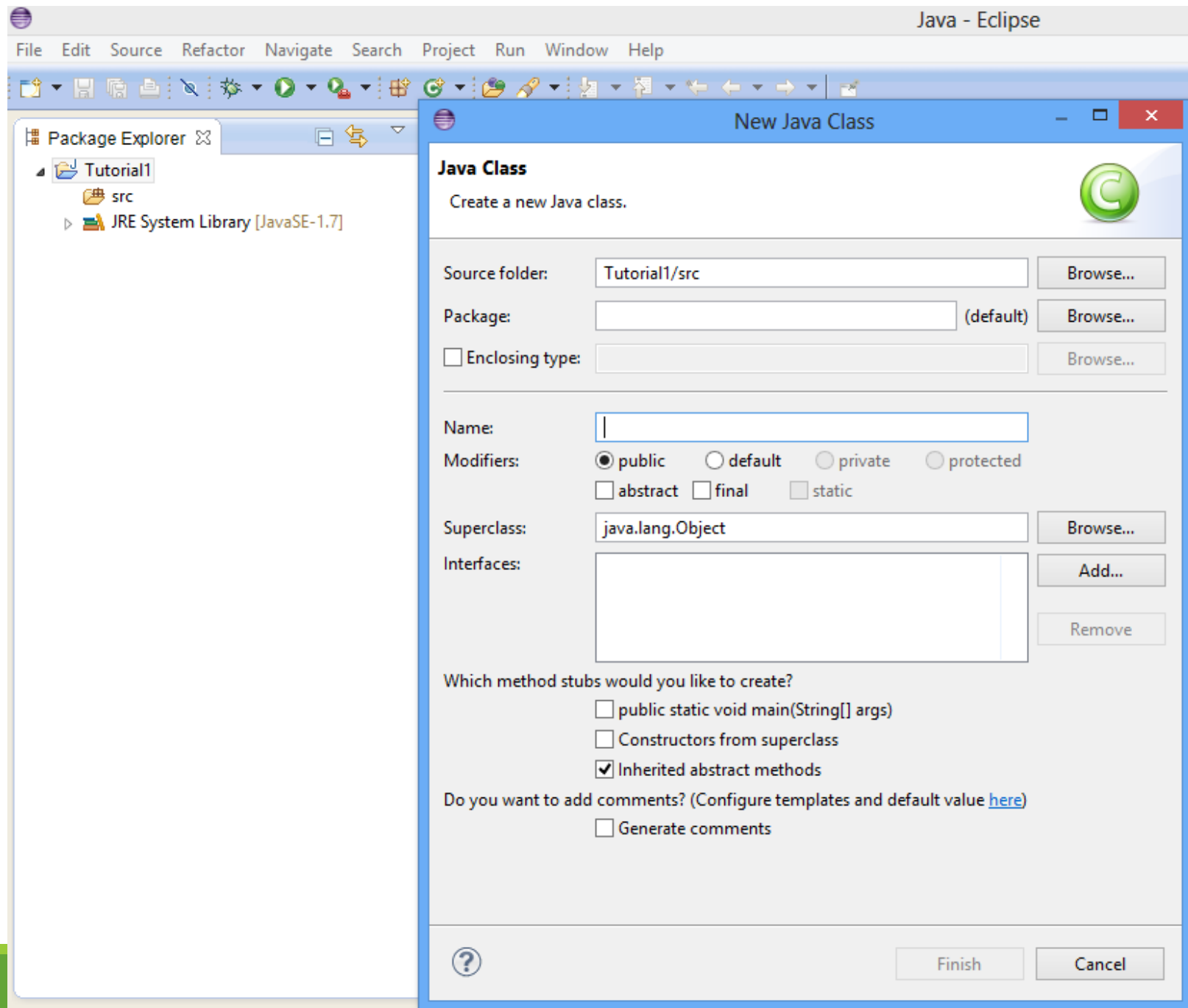
Finish

Cancel

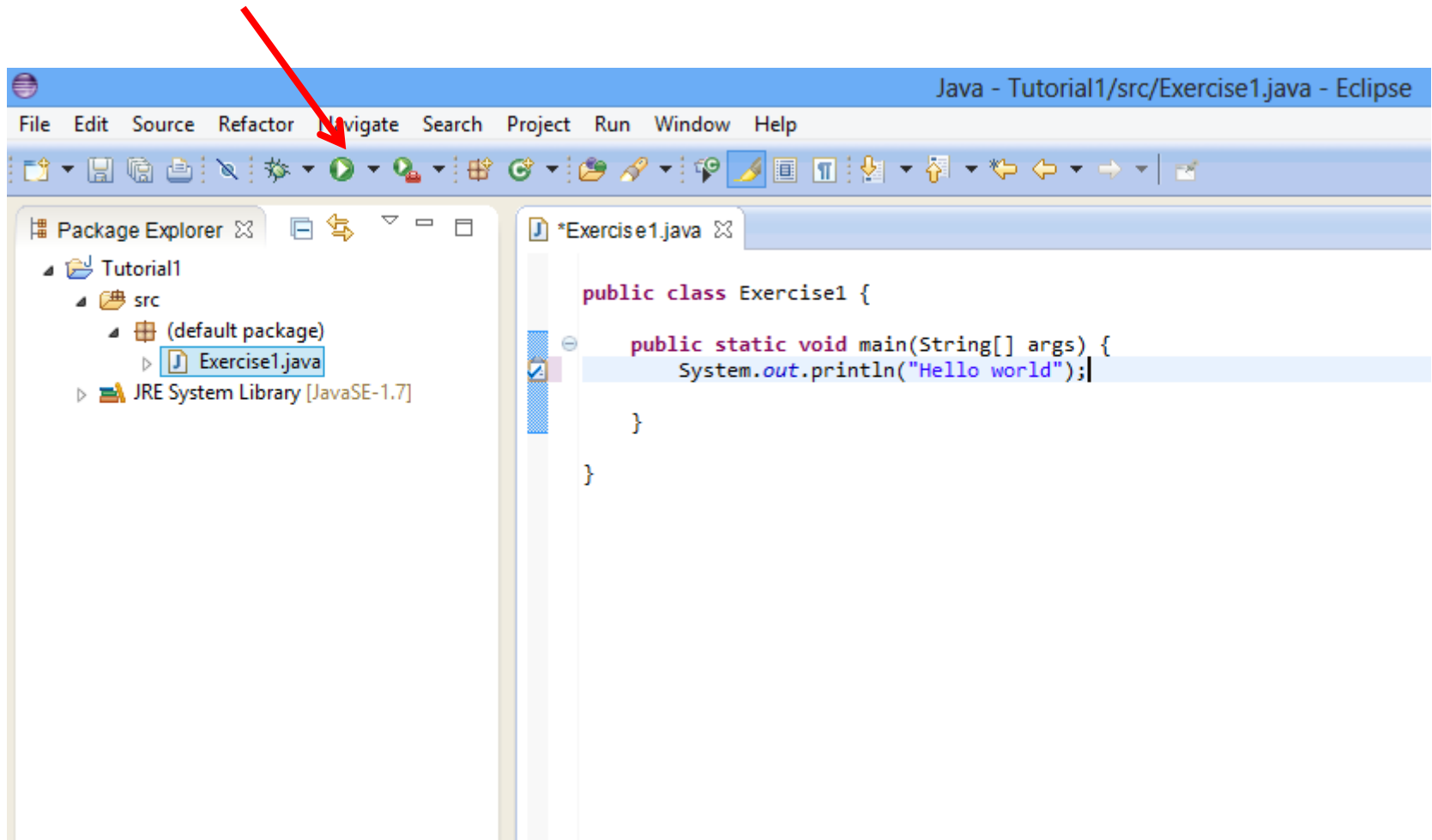


# Create a Class

- Right Click on the project → New → Class  
→ Specify the name of the class → Check the option (public static void main(...)) if the class is the main class of the project
- See the snapshot
- Write your program into the editor and then compile and run it from the menu bar



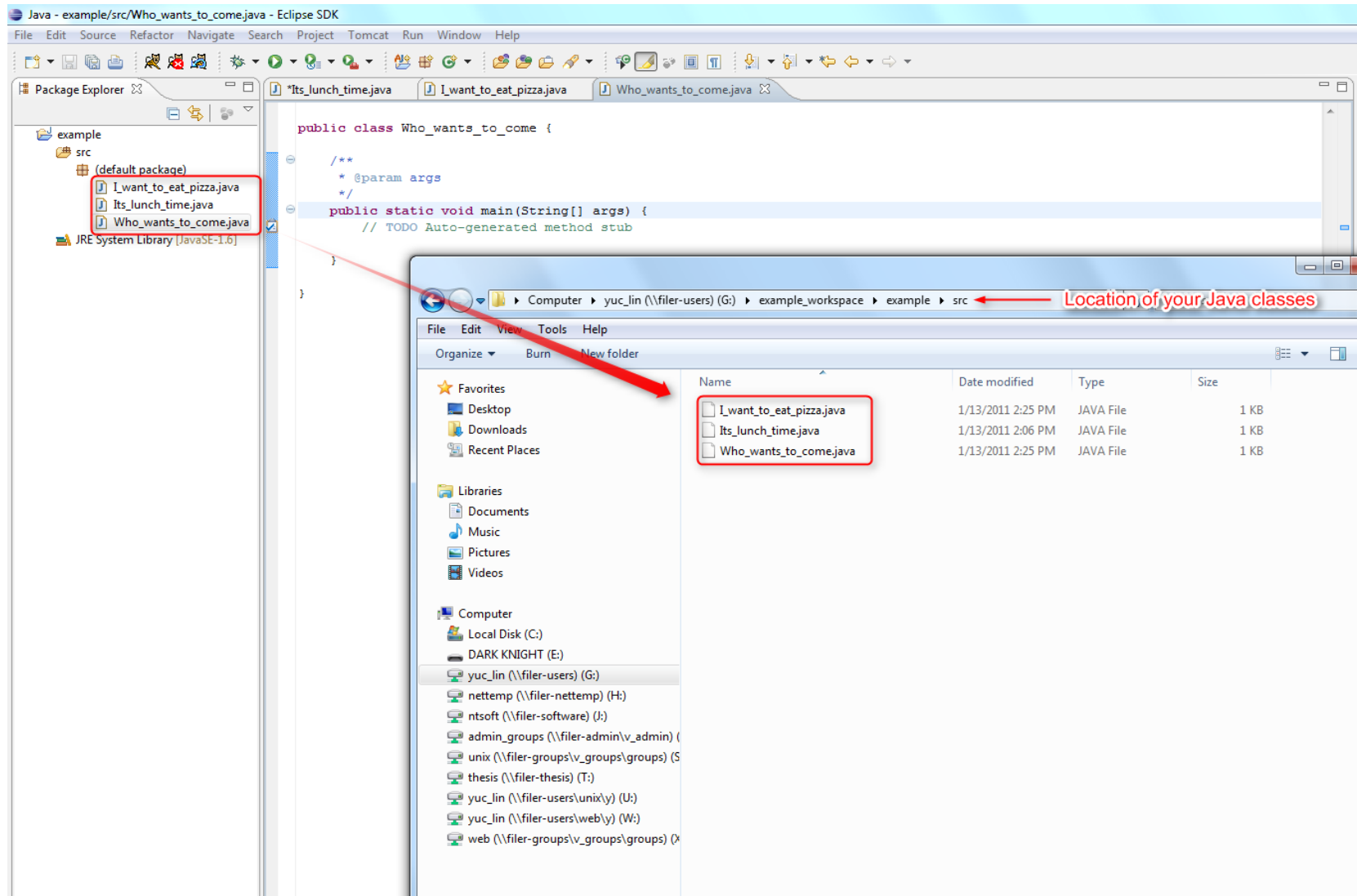
Press here to Run



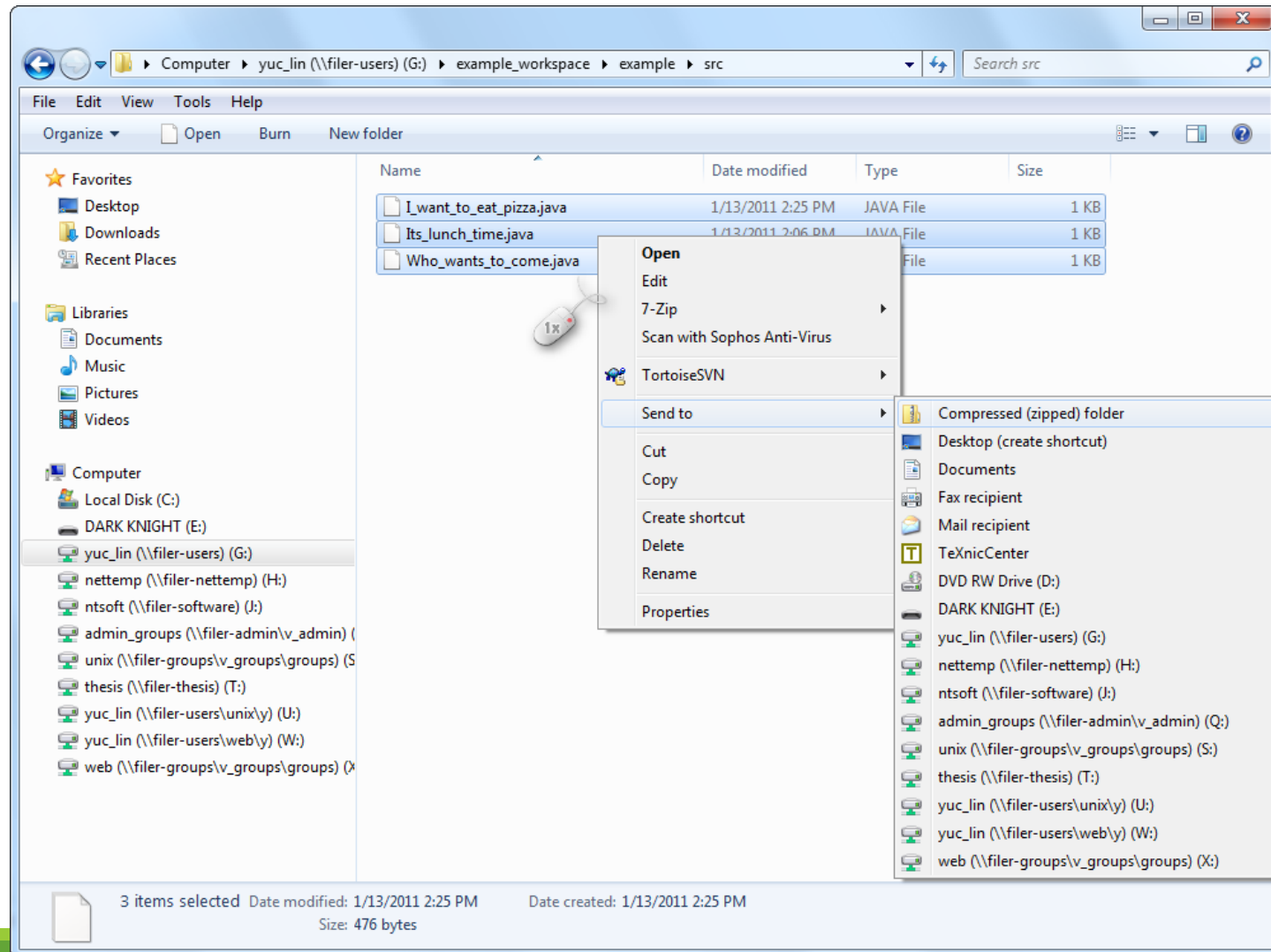
# Submission of Assignments and Lab Exercises

- Go to the EAS system website @ <https://fis.encs.concordia.ca/eas/>
- Login with your ENCS username and password
- Click on the "Student" category
- You would expect to see a list of courses you are currently taking
- Scroll down and you will see "Expectations of originality," select "I agree" and continue
- For "Current term course sections," choose COMP248 for this course
- Browse your compressed file (containing your Java files)
- To submit an assignment: select the "submission type" as "programming\_assignment"
- To submit a lab exercises: select the "submission type" as "quiz"

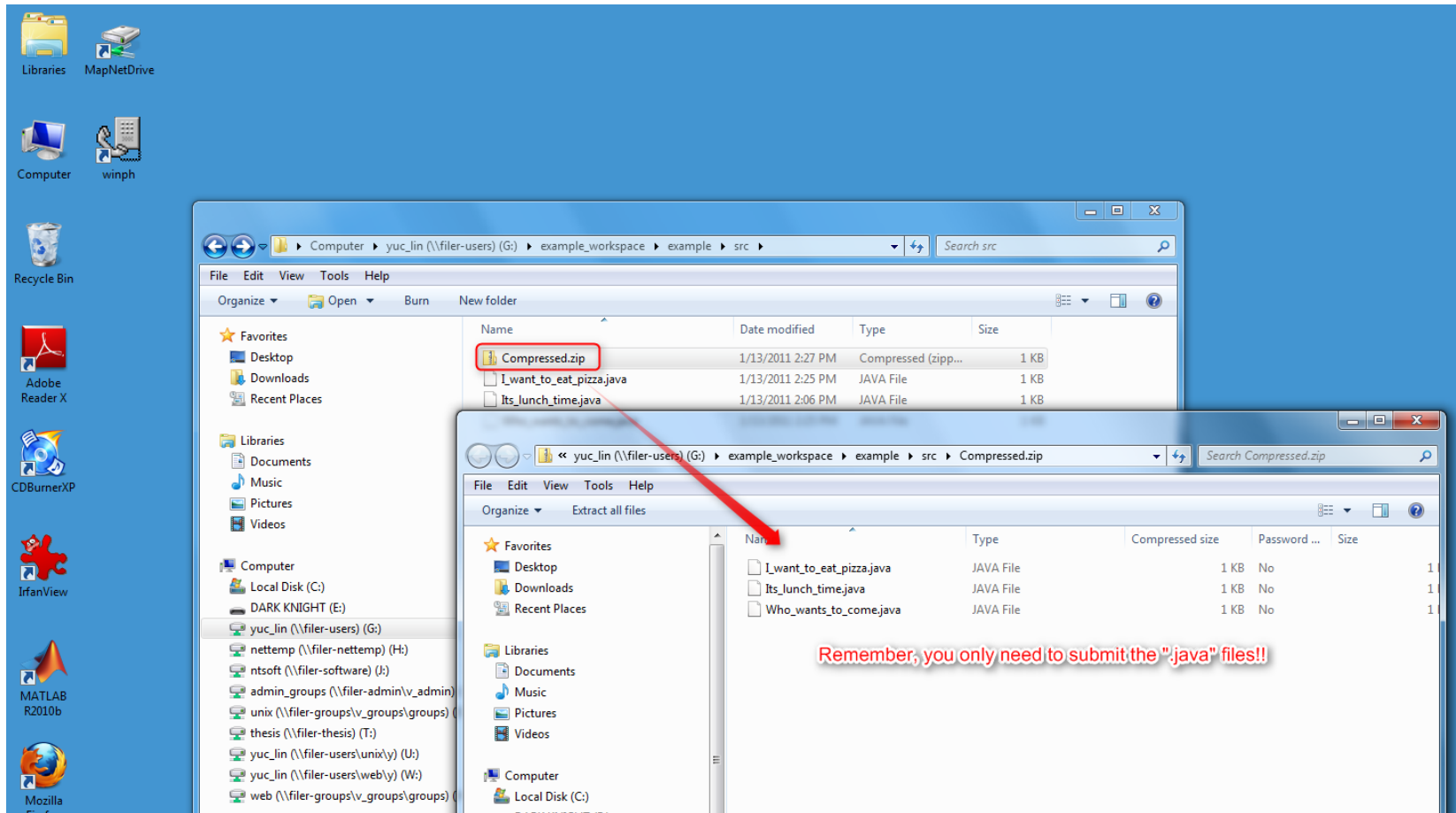
# How to compress files



# How to compress files



# How to compress files



# Assignment submission

- Caution --- For "submission number," please be sure to select accordingly
  - assignment #1 please select "1"
  - assignment #2 please select "2"
  - assignment #3 please select "3"
  - etc.