

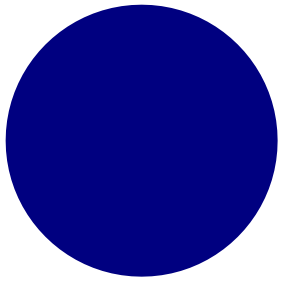


GEOG 178/258:

Conceptual Modeling and Programming for the Geo-Sciences

mike johnson



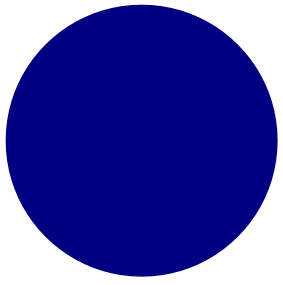


Week

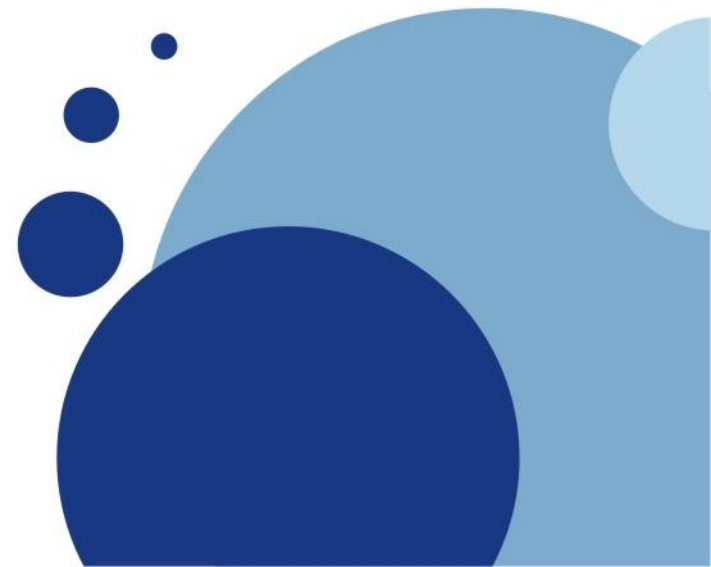
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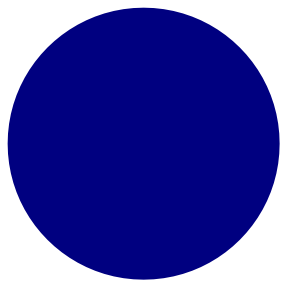
Logistics

- **Instructor:** Krzysztof Janowicz
 - Lecture/Lab: Thursdays 12:30 – 3:15
 - Ellison 2610
- **TA:** Mike Johnson
 - Section: Tuesday 2:00 – 3:00
 - Ellison 2610
 - Office hours: _____
 - Ellison 1715
 - jmj00@ucsb.edu
- **Class Website:**
 - <https://mikejohnson51.github.io/geog178>



1. Getting set up on lab machines...





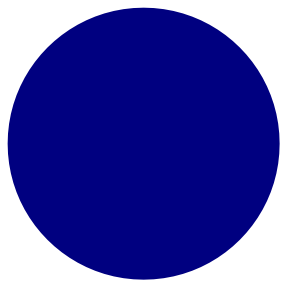
Writing, compiling and executing a Program

Week

1

Getting Started with Eclipse

- There are two methods for compiling and running a Java Program
1. Using a text editor such as Atom or Notepad, and your Terminal (Mac) / Powershell (Windows)
 - This is the approach the textbook takes
 2. Using a dedicated platform such as Eclipse
 - That is the approach we will use in this class
 - This is a IDE which stands for an **I**ntegrated **D**evelopment **E**nvironment
 - IDE's provide tools for coding, building, running and debugging applications



Setting up a Workspace

Week

1

Getting Started with Eclipse

- On your flash drive create a new folder called

GEOG_178

- In that folder create a sub-folder called

Week0

- And one another called


Week1

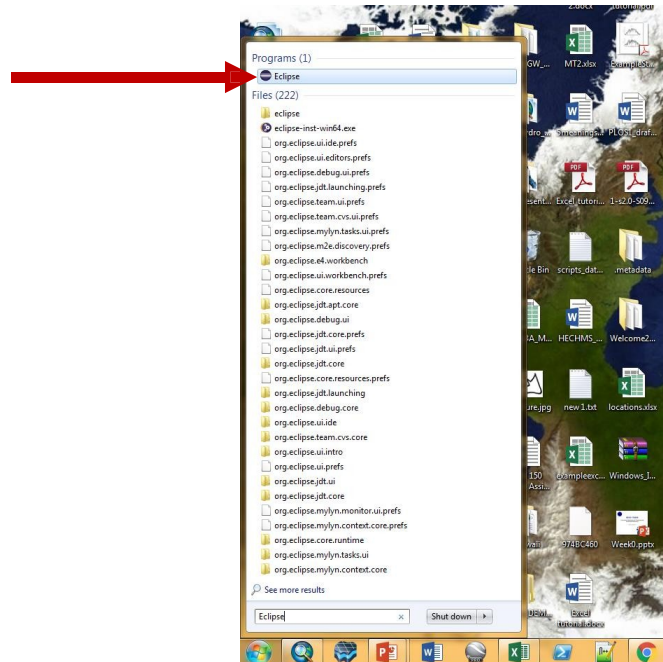
Opening Eclipse in the Lab

Week

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Getting Started with Eclipse

- On the lab machines, hit the home button 
- Type 'Eclipse' in the search bar
- Click on the Eclipse Program File



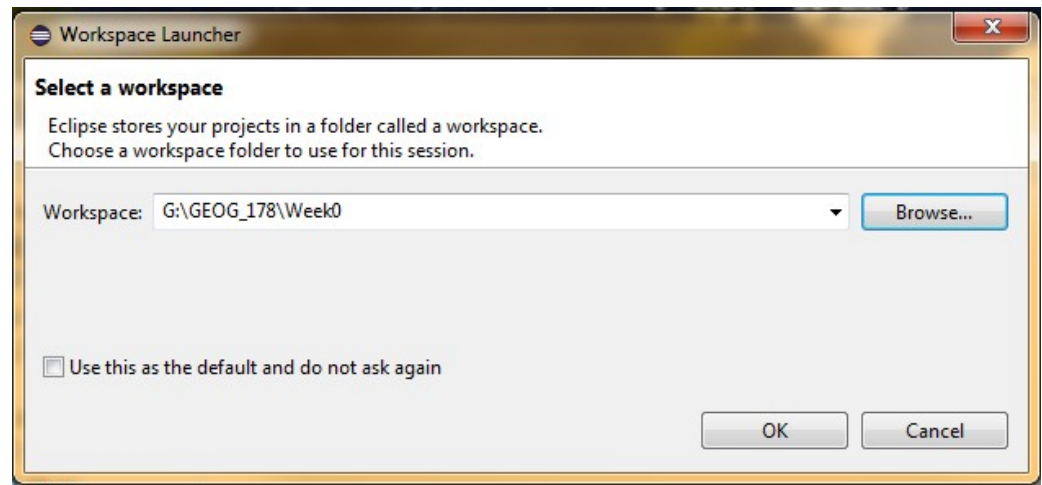
Starting a New Project:

Week

1

Getting Started with Eclipse

- When you launch Eclipse it will ask you to define a **workspace**.
- A **workspace** is where your source code and output will be stored
- Direct your workspace to Week0 using the '*Browse...*' button



- Hit '**OK**' when you are done.

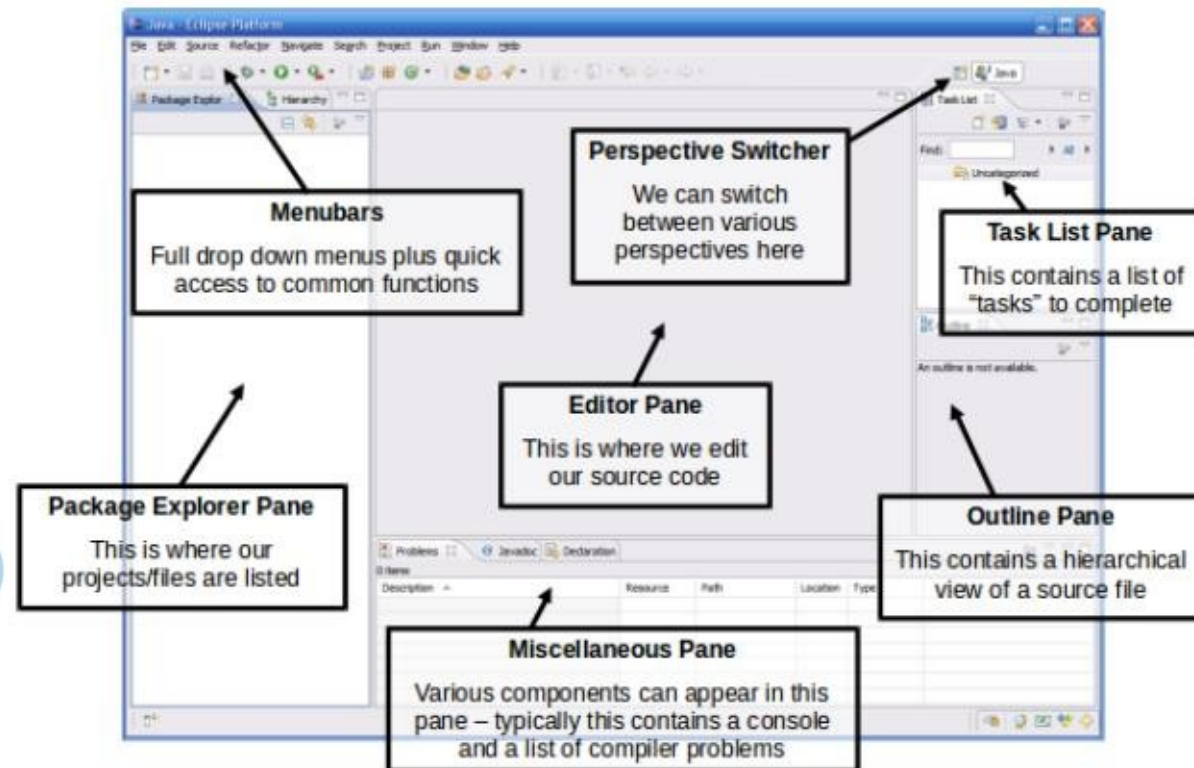
IDE Components:

Week

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Getting Started with Eclipse

- When your workspace is loaded, you will be presented with the following interface:



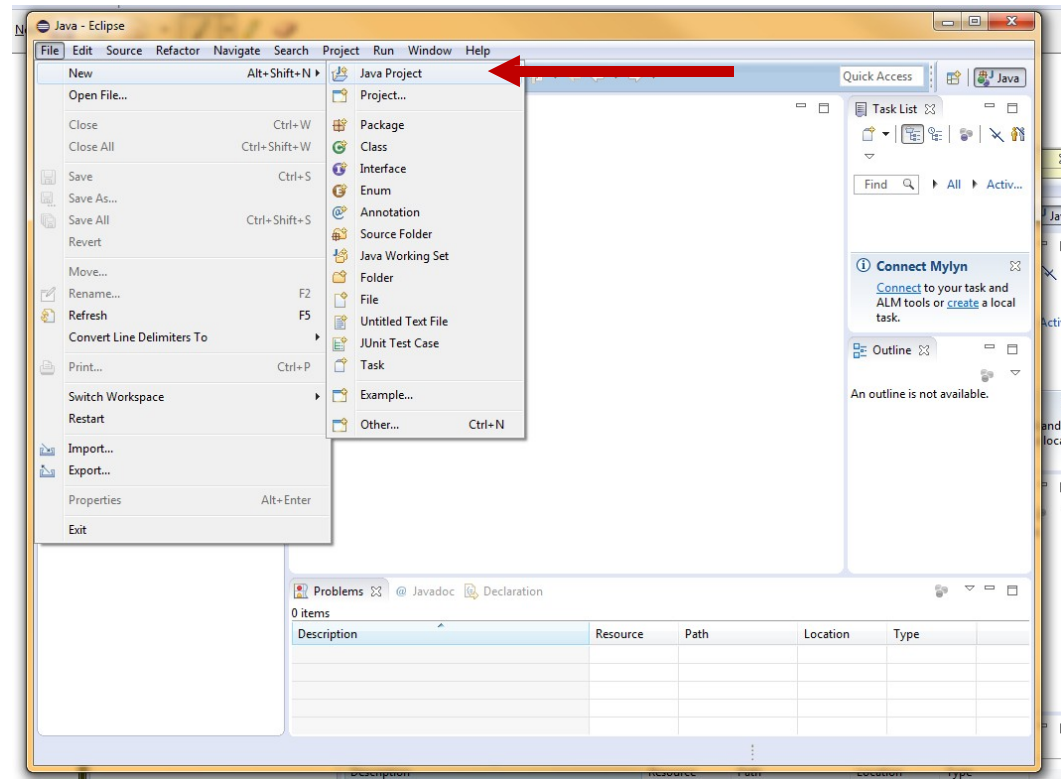
Create a new project

Week

1

Getting Started with Eclipse

- All code in Eclipse needs to live under a project
- To create a project: File → New → Java Project



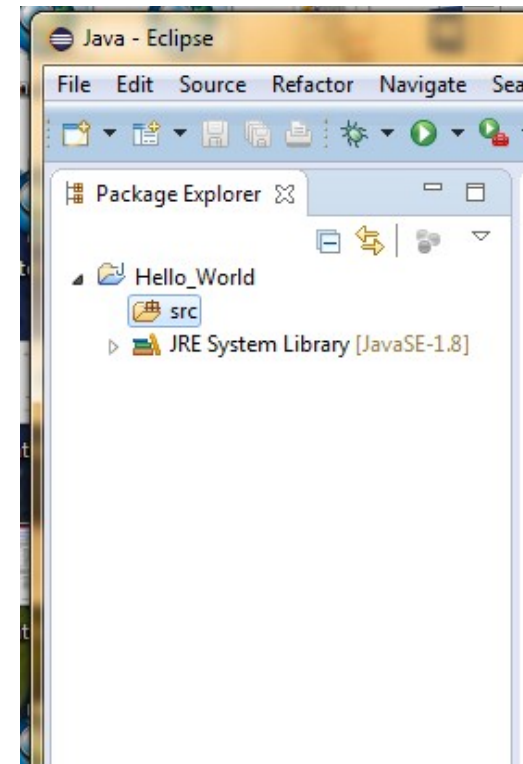
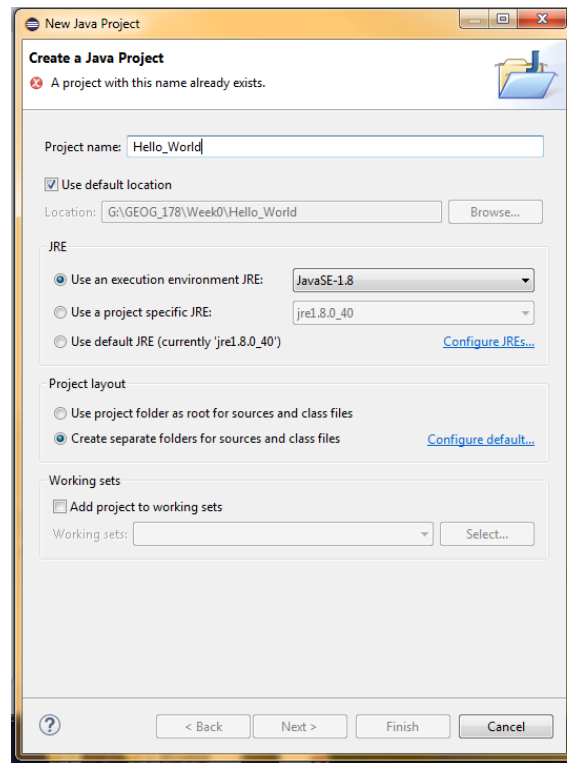
Create a new project

Week

1

Getting Started with Eclipse

- Enter a Name for the Project (**Hello_World**)
- Click “*Finish*”
- The new Project will appear in the **Package Explorer**



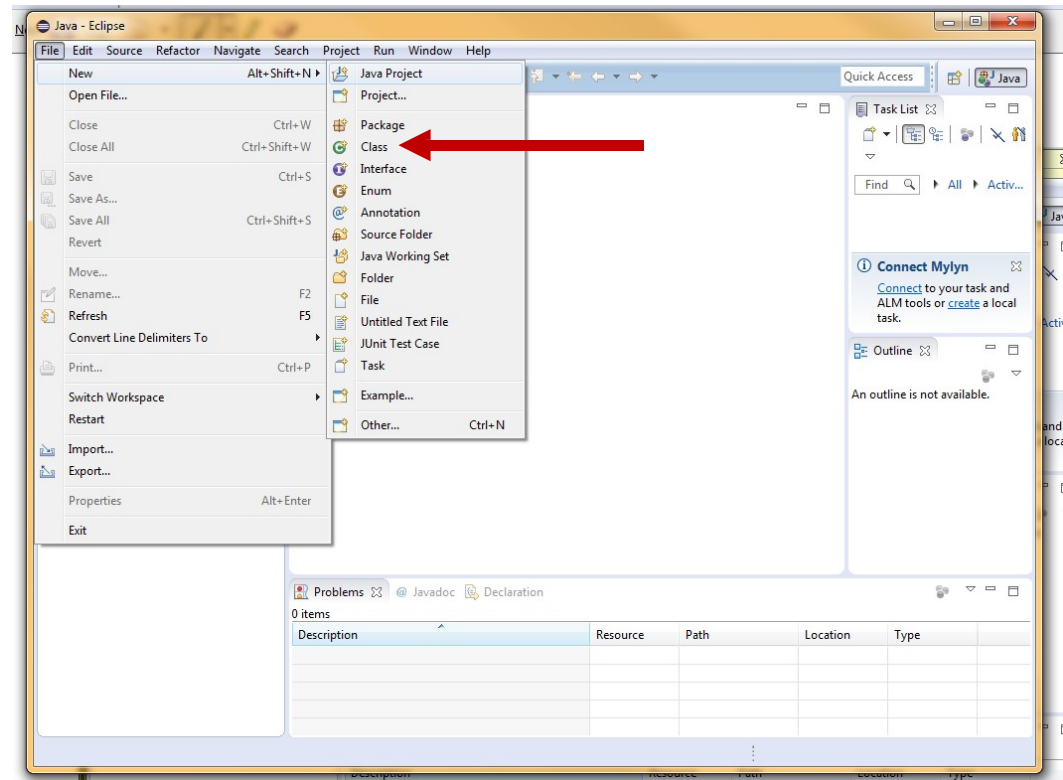
Create a new class

- You will now create your first class within the Java Project

Week

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Getting Started with Eclipse



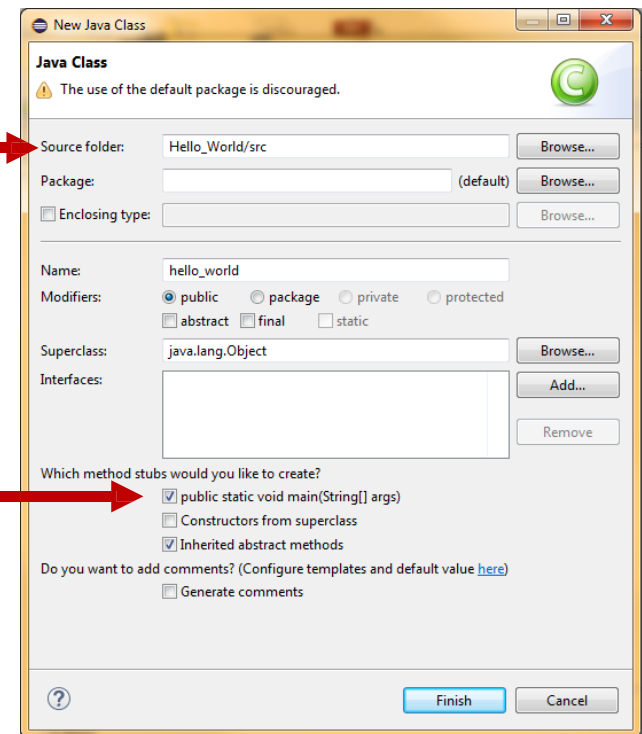
Create a new Class

Week

1

Getting Started with Eclipse

- Enter a Name for the class (**hello_world**)
- You can also specify:
 - package
 - Superclass
 - Whether or not to include a main
 - Etc..
- Fill in necessary information
- Click “Finish”



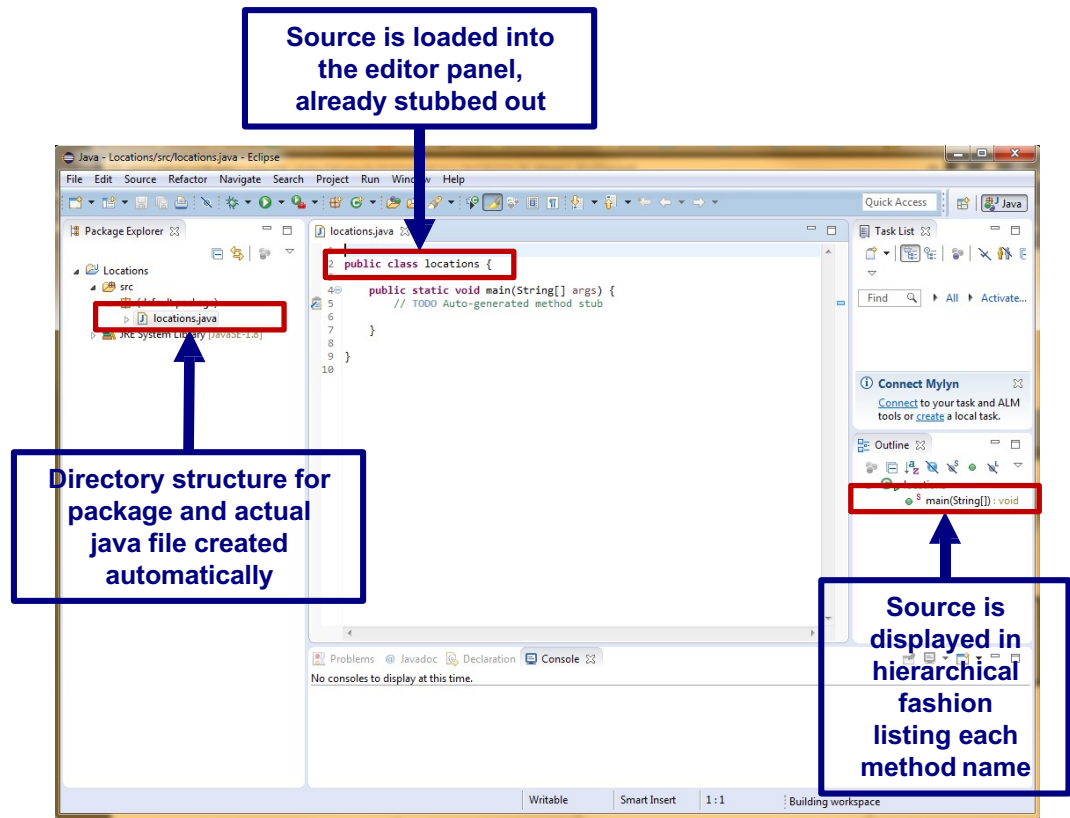
Interface:

- You should see the following

Week

1

Getting Started with Eclipse



- Be sure to always have your file name match the public class name!*

Enter Basic Command

- In your program type the command

System.out.print("Hello World!");

- It should look like this:

```
public class hello_world {  
    public static void main(String[] args) {  
        // TODO Auto-generated method stub  
        System.out.print( "Hello World!");  
    }  
}
```

- After typing the code, hit the 'run' button:

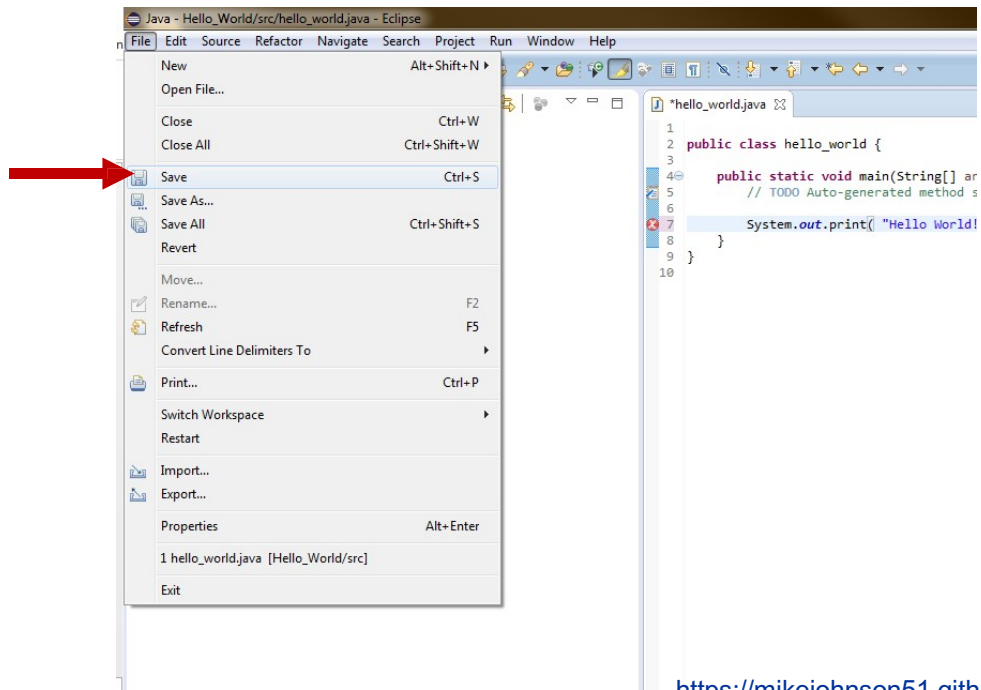


- You should see the following output!

```
<terminated> hello_world [Java Application] C:\Program Files (x86)\Java\jre1.8.0_40\bin\javaw.exe (Jan 10, 2017, 12:14:17 PM)  
Hello World!
```

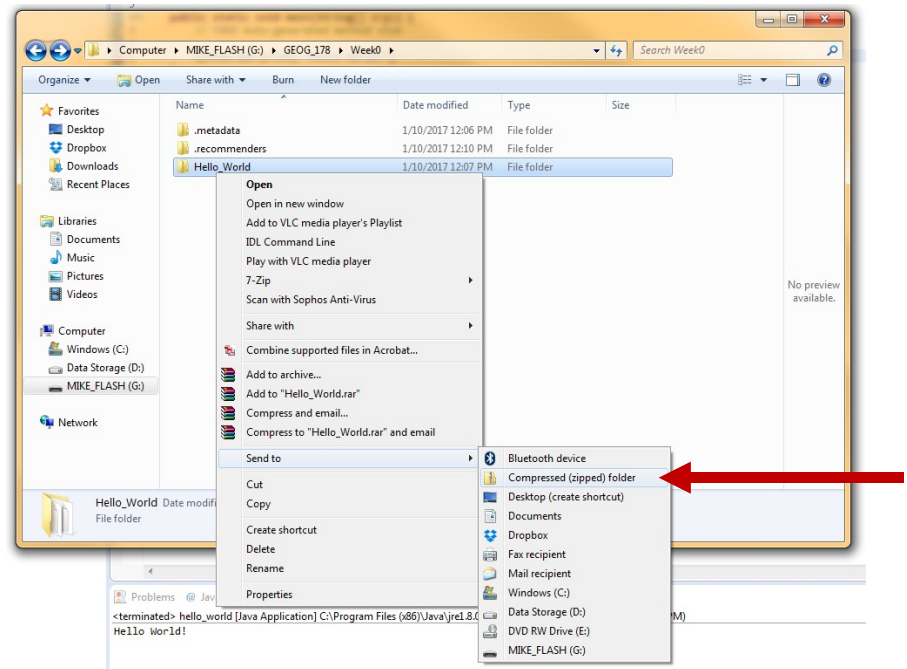
Saving your Program

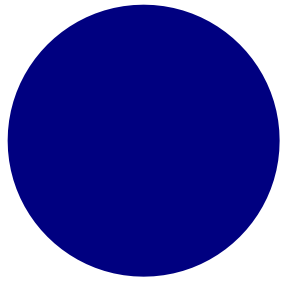
- Running your program will automatically save it
- In cases where you want to save manually go:
- File → Save



Zip Program Folder

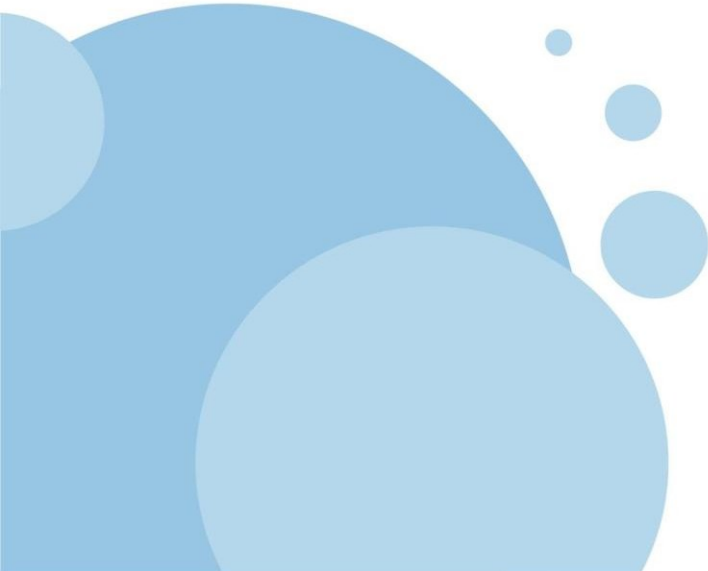
- Program files can be zipped to make them smaller and easier to share!
- ON WINDOWS:
 - Go to your flash drive → GEOG_178 → Week0
 - Right Click on the Folder 'Hello_World'
 - Click 'Send To' → 'Compressed (zipped) folder'

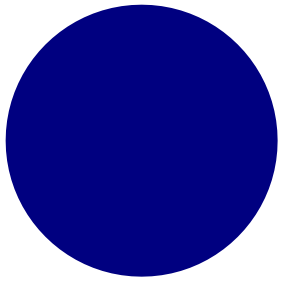




Zip Program Folder

- ON MAC:
 - Go to your flash drive → GEOG_178 → Week0
 - Right Click on the Folder 'Hello_World'
 - Click 'Compress "Hello_World"'
- You now have a zipped folder that will be easier to share with others!





2. Getting set up on your machines...



Necessary Downloads:

Week

1

Getting Started with Eclipse

- All necessary download files for Windows and Mac can be found on the [course website](#) under Week 0



3. Weekly Info:

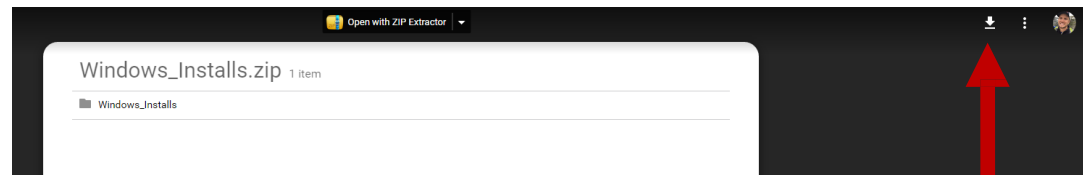
Week 0: Installs

[Windows Install Files](#) (Eclipse and Java JDK Bu112)

[Mac Install Files](#) (Eclipse and Java JDK Bu112)



- From your machine select the appropriate file and download the .zip file.



- Save this folder to your desktop

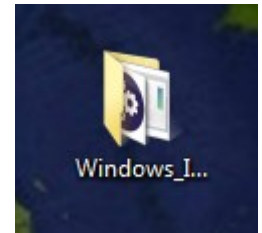
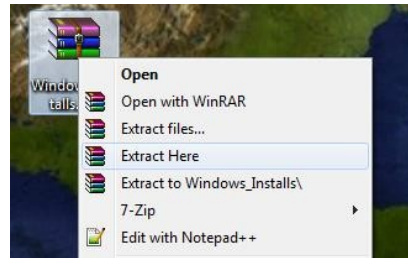
Unzipping the folder

Week

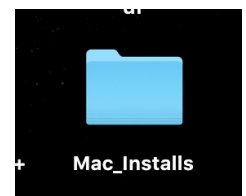
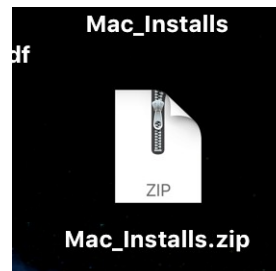
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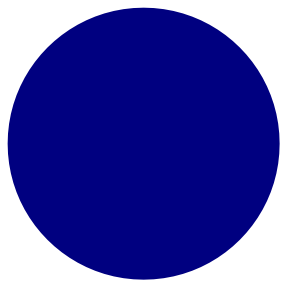
Getting Started with Eclipse

- ON WINDOWS:
 - Right click on the icon
 - Select 'Extract Here'



- ON MAC:
 - Double click on the icon





Installing

Week

1

Getting Started with Eclipse

- From the unzipped folder try and install Eclipse
 - On Windows → select the 'eclipse-inst-win64.exe' file
 - On Mac → select the 'eclipse-inst-mac64.tar.gz' file
- Follow all instructions
- Eclipse is written in Java so you may need to download the **Java SE JDK**** if it is not already on your machine
- If needed, from the unzipped folder...
 - On Windows → select the 'jdk-8u112-windows-x64.exe' file
 - On Mac → select the 'jdk-8u112-macosx-x64.dmg' file
- Follow all instructions then install Eclipse ...

**JDK: Java Development Toolkit which includes JRE (Java Runtime Environment), an interpreter/loader (java), a compiler (javac), an archiver (jar) and a documentation generator (javadoc)



Necessary Downloads:

Week

1

Getting Started with Eclipse

1. If the files from the class site do not work for your machine alternatives can be found here:

2. Eclipse:

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

3. Java JDK 8____:

<http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html>