Outline

- Java Environment
- Eclipse Tutorial
History of Java

- Java was created by Sun Microsystems
  - First version 1.0 was released in 1996
- Sun Microsystems was bought by Oracle in 2010
- Java has gone through numerous major and minor releases
  - Current major version is Java 10, released in 2018 with few updates since
- Java is open source
- http://java.sun.com
Java has a motto of “write once, run anywhere”

- When code is compiled, it produces byte code instead of a binary executable
- The Java Virtual Machine (JVM) is compiled for a specific operating system, then allowing for the byte code to run on any operating system (for which there is a JVM)
- Since the JVM is written in a native language, there may be subtle, or not-so-subtle, differences when run on different JVMs

Java may run slightly slower than compiled native languages
Command Line

- You can write with any text editor you want and compile it from a command line that has the Java Development Kit (JDK) installed.
There are many Integrated Development Environments to use:

- Eclipse
- NetBeans
- IntelliJ
- Visual J++
- Others?
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• Java Environment
• Eclipse Tutorial
Downloading Eclipse

- Go to http://www.eclipse.org
Downloading Eclipse

- Click Downloads
Downloading Eclipse

- Select your OS (if not already selected) then click the version for the Eclipse IDE for Java Developers
Downloading Eclipse

- Click the green arrow next to the selected mirror
Downloading Eclipse

- Save the zip file
Downloading Eclipse

- Open the zip file and drag the “eclipse” directory to your Desktop (or another directory of your choosing)
After the zip file finishes extracting, open the “eclipse” directory and run the eclipse executable.
Running Eclipse

- Select a workspace directory
  - The workspace directory will be the one that contains all of your projects, code, and compiled files
Creating a Project

- Go to File->New->Java Project
Create a Project

- Type a name for the Project and click Finish
  - This has nothing to do with the code, but it should be descriptive enough for you to know what code is in the project
Create a Class

- Expand the Project by clicking the arrow next to the name of the project you just created
Create a Class

- Right-click on “src” and go to New->Class
Create a Class

- Type a name for the class and uncheck all other boxes (unless you want Eclipse to generate code for you), then click Finish
Write Some Code

- You should now have a nearly-blank file and can begin writing code
Write Some Code

- Type the following code into the HelloCSCI201.java file

```java
public class HelloCSCI201 {
    public static void main(String [] args) {
        System.out.println("Hello CSCI 201");
    }
}
```
Running the Code

▪ Click the green play button at the top to run your code
  › If your code doesn’t compile, you will have error messages at the bottom of the screen
  › If your code compiles, your output will be at the bottom of the screen