Setup Eclipse to Run Processing

What is Processing?

Processing is a programming framework that makes it fairly easy to create interactive graphical applications. It was originally developed to help artists with no prior programming experience in experimenting with computational media.

"Under the hood" it is nothing more than a Java class, but because it was designed for artists with little exposure to computer programming it does obfuscate some of the inner workings of the language.

It's an open source project and is available for download via this site: http://processing.org/

Setting Up java 8

Processing needs java 8 to run (currently you have installed Java 9 or 10). Download and install the JDK for java 8 form Java 8 download

Open Eclipses' preferences and go Java —> Installed JRE. Double click on the existing one (if it is java 8 skip this step) and copy the JRE home path, then cancel.

Click on the add button, select Standard VM and next. Under JRE home paste the previously copied path then **press Directory**. Navigate a couple of folder up until you see a folder name like "jdk1.8.0_191" then navigate inside the subfolder to replicate the other path.
Example:
Java 9 path:
`/Library/Java/JavaVirtualMachines/jdk-9.0.4.jdk/Contents/Home`
Java 8 path:
`/Library/Java/JavaVirtualMachines/jdk1.8.0_191.jdk/Contents/Home`

If the path is correct the JRE system libraries should fill up. Finally Give a JRE name something like Java 8 and press Finish.

Setting Up Processing & Eclipse

Here's a quick guide to setting up your environment:
Download the file core.jar for the course website: core.jar

Next, open Eclipse
Create a new Java Project (File —> New —> Java Project)
Important: select "use a project specific JRE" and select Java 8.

Now you have to get the file core.jar into your Eclipse project. There are two ways

METHOD 1: DRAG AND DROP
- Open up the folder that contains the "core.jar" file
- Arrange the folder so that you can see it and Eclipse at the same time
- Drag the "core.jar" file into your newly created Java Project in Eclipse (drag and drop it over the name of the project, not into src or any other folder inside).

METHOD 2: IMPORT
- Click on this project in your Package Explorer so that it is highlighted
- Click on the File menu and select Import
- Under the "General" menu select "File System" – click Next
- Browse and find the folder into which you downloaded core.jar file. Highlight it and click "Open"
- Put a checkmark next to the folder and next to the "core.jar" file that appear in the panels.
- Click Finish

Once you have the "core.jar" file imported into Eclipse you need to activate it so that you have access to the classes that it contains. To do this simply right--click on the "core.jar" file and select "Build Path" --> "Add to Build Path".

If you do not have a "Build Path" option when you right click on the "core.jar" file you can:
- Right click on your Java Project in Eclipse
- Select Properties
- Click on the Java Build Path option
- Select the Libraries tab
- Click on the Add JARs button o Add the core.jar file

Testing it
Now you can attempt to run a "Hello World" program to see if things are set up correctly.
Create a new class called `TestProcessing` and paste in the following code.
Run your code and you should see little white circles appearing randomly

```
import processing.core.PApplet;

public class TestProcessing extends PApplet {

    public static void main(String[] args) {
        PApplet.main("TestProcessing");
    }

    public void settings() {
        size(500, 500);
    }

    public void draw(){
        ellipse(random(0,500),random(0,500),10,10);
    }
}
```