CS101 Introduction to Interactive Graphical Applications using Processing

Introducing Processing

Processing is a programming framework that makes it 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 Processing & Eclipse

Here's a quick guide to setting up your environment:

Download the file core.jar for the course website:

Next, open Eclipse

Create a new Java Project (File --> New --> Java Project) (or use an existing project which contains the files that use processing).

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

Method 1: Drag and drop

>   Open 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 do the following instead:

– 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 Processing

Now you can attempt to run a "Hello World" program to see if things are set up correctly. Create a new class inside your "src" folder called "ProcessingTest" and paste in the following code. Run your code and you should see little white circles appearing randomly on a graphical canvas

```java
import processing.core.PApplet;

public class ProcessingTest extends PApplet
{
    public void setup()
    {
        size(500,500);
    }

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