Just a little about Java

In today's recitation, we look at a "class" called First that contains two "methods":

1. A procedure main, which does not return a value.
2. A function radius, which does return a value.

We will see how to write this class in the IDE (Integrated Development Environment) Eclipse and how to execute the program –by executing a call on method main.


```
/** Class houses a static procedure main and a static procedure
 * for the area of a circle */
public class First {
   /** Print out "hello World and */
   public static void main(String[] pars) {
      System.out.println("Hello World");
      System.out.println("Area of circle with radius 5 is " +
           radius(5));
   }

   /** Return the area of a circle with radius r */
   public static double radius(double r) {
      return Math.PI * r * r;
   }
}
```


Download and install Java

Course website tells you how:
http://www.cs.cornell.edu/courses/CS2110/2014fa/resources.html#Java

JRE: Java Runtime Environment. A java program is compiled into the *Java Virtual Machine Language*, An "interpreter" interprets and actually runs your program.

JDK: Java Development Kit. Contains, among other things, the program that *compiles* a Java program.

Downloading and installing the JDK also installs the JRE.

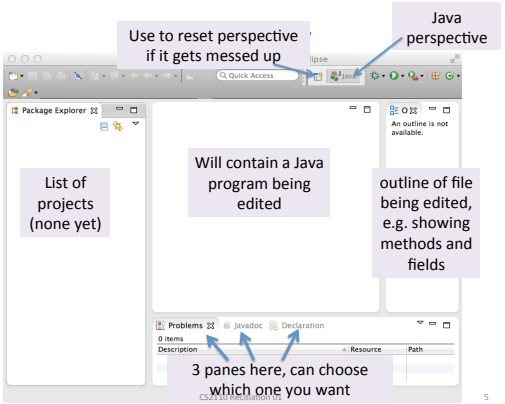
Download and install Eclipse

Eclipse: The IDE (Integrated Development Environment we use in this course to write, debug, run Java programs.

Course website tells you how to install:

http://www.cs.cornell.edu/courses/CS2110/2014fa/resources.html

and scroll down.



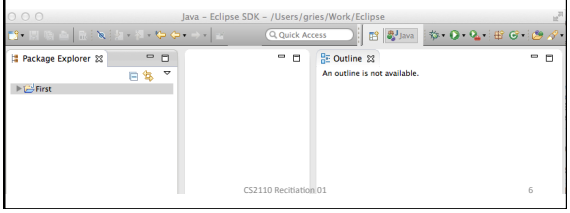
Add a project

Use menu item File -> New -> Java project.

Give it a name, First.

Note: You get to say where the project files go. We suggest putting them in the default place that Eclipse suggests.

Note: Always start a new program in a new project!

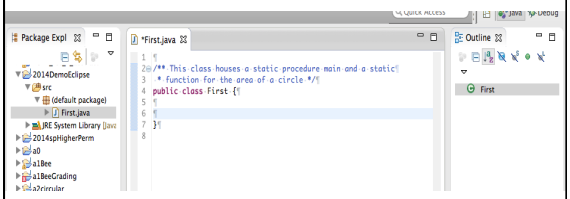


Add class First

Use menu item File -> New -> First.

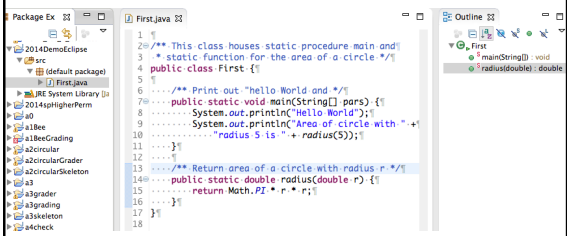
Give it a name, First.

Click button Finish



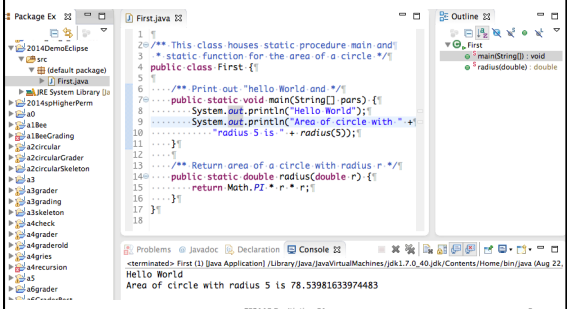
Put declarations into class Circle

Copy the declarations of components from slide 2 into class Circle in the middle pane.

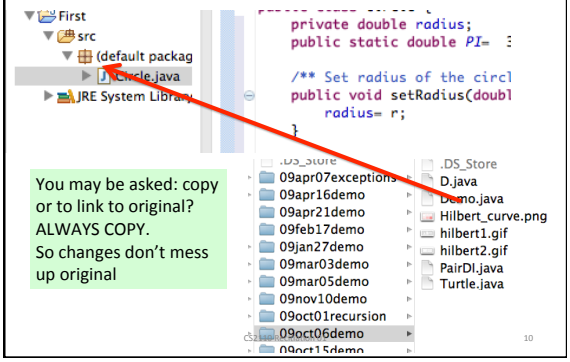


Running the program

Use menu item Run -> Run. It executes method main.



Add a .java file by dragging to left column



You may be asked: copy or to link to original? ALWAYS COPY. So changes don't mess up original