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.

THURSDAY'S LECTURE INTRODUCES OBJECTS AND CLASSES CAREFULLY

```java
/**
 * 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