Interfaces Abstract Computation
(*or* "OOPs!")

1. Remember

    a. Sign up for lab sections on my door in TCL 308

    b. Get the textbook. Read the textbook

2. General- vs. Special-Purpose classes

3. Abstract and Concrete

    a. E.g.,

        i. A "vehicle" is abstract

        ii. "Jaguar XJ220 #1022" is concrete

    b. Interface and Implementation

        i. Interface: setDriver, getMaximumSpeed, getDriver, …

        ii. Implementation: setDriver(String d) { driver = d; } …

4. **Interfaces are Contracts**

5. Object Oriented Programming

    a. Inheritance

    b. Java Syntax

        i. public interface Vehicle { …

        ii. public class XJ220 implements Vehicle { …

        iii. public class SuperXJ220 extends XJ220 { …

6. Assertions

    a. **Failing fast is good**

    b. import structure5.*;

7. "Homework"

    a. Read the lab handout and assignment

    b. Read the Programmer's Toolkit handout

    c. Bring the signed New CS Account Guidelines to lab

A Word from our Sponsor (Williams College)

"Focus the Nation" is an event held tomorrow at Paresky, around campus, and on campuses throughout the country to discuss issues of sustainability and global warming. Here are two metaphors as arguments of why you should care about these issues.

1) "Let's sell all of our office equipment to make money," is not a sustainable business plan, since we'd just be eating up our capital for a short-term gain, with no plan for how to run things in the future. That's the problem with non-sustainable resources like oil, coal, and corn ethanol, and with over-consumption of potentially renewable resources. After 100 more years of today's practices there will likely be no usable oil or gas, no fish in the ocean, and no arable land in the Midwest.

2) Your entire family, and the only other members rest of humanity, are trapped on a space ship with no place to get off and a failing life support system. That ship is called "Earth." Many cities already have toxic air several days a year, much of the "fresh" water is not safe to drink, and many of our food sources are fragile and disease-prone due to monoculture.