Other Announcements

- Project #1 (Orioles Baseball) has been posted.
  - Common errors
  - Style
Recall: “else if” style

One more example:

• Cascading3.java
Programming Errors

• Syntax Errors
• Semantic Errors
• Logical Errors

• Debugging
  • Later we’ll learn the “debugger”
  • For now, lot’s of “trace outputs”

• Advice: Write code incrementally and test, test, test!
Scope of Local Variables

• Local variables have “block scope”. What is this?

• Will the following work?

```java
if (x < y) {
    int z = 4;
}
if (y < 12) {
    z = 8;
}
```
Regarding Initialization of Variables

Examples:

- Initialization1.java
- Initialization2.java
- Initialization3.java
Java Identifiers

Rules

• Can only use: A–Z a–z 0–9 _ $
• Cannot begin with a digit (0–9)
• Must avoid keywords

Style

• For variables, methods, and packages use “lower camel case”
  
  numberOfCats, ambientTemperature, rows, centerOfGravity…

• For classes and interfaces use “upper camel case”
  
  InputStream, Scanner, String, StringBuffer…
Choosing Meaningful Identifiers

Identifier should be made of English word(s) describing the role of the entity

• Can we abbreviate?
• Can we ever use single-letter identifiers (i, j, x, y)?
• Can we be too verbose?
Named Constants

• What is a “named constant”?

• When should we use them (and why is this important)?

• Style:
  MAX_WEIGHT, PI, SPEED_OF_LIGHT, ...

• final variables

Examples: WithoutNamedConstants.java,
          WithNamedConstants.java
See: www.whereisroadster.com
Style Requirements for Project #1

• Good variable names
  • Meaningful identifiers
  • Camel Case for conventional variables
• Symbolic constants
  • Well-chosen
  • Named correctly
• Proper braces
• Proper indentation
• No lines longer than 80 characters! (Sorry.)

• Try to eliminate duplicative code. (You will not be penalized for it yet, but try.)
Repetition

Why do we need this?

Two basic techniques:
• Loops (starting today)
• Recursion (later)