Anatomy of a Class & Terminology

The Plan

• Go over MoveTest.java from Big Java
• Basic coding conventions
• Review with GreeterTest.java
• More terminology with Greeter.java
• Homework 0 reminder
• Homework 1 assigned (due in 1 week)

Why know the lingo?

• It’s difficult to read the textbooks if you don’t understand the words
• Your compiler error messages use specific words with specific meanings
• You need to be able to express your questions so others can understand them
• The answers you receive will use the lingo

Terminology to Know

• Package
• Class
• Import
• Keyword
• Public
• Object
• Identifier
• Declaration
• Definition
• Body
• Static
• Void
• Return
• Method

• Main
• Parameter
• String
• Array
• Type
• Variable
• Local
• Constructor
• Initialize
• Assign
• Arguments
• Comments
• Calling a method
• System.out.println
import java.awt.Rectangle;

public class MoveTest
{
    public static void main(String[] args)
    {
        Rectangle cerealBox = new Rectangle(5, 10, 20, 30);
        // move the rectangle
        cerealBox.translate(15, 25);
        // print the moved rectangle
        System.out.println(cerealBox);
    }
}

Prints
java.awt.Rectangle[x=20, y=35, width=20, height=30]
import java.awt.Rectangle;

public class MoveTest {
    public static void main(String[] args) {
        Rectangle cerealBox = new Rectangle(5, 10, 20, 30); // move the rectangle
        cerealBox.translate(15, 25);
        // print the moved rectangle
        System.out.println(cerealBox);
    }
}

Prints
java.awt.Rectangle[x=20, y=35, width=20, height=30]
import java.awt.Rectangle;

public class MoveTest
{
    public static void main(String[] args)
    {
        Rectangle cerealBox = new Rectangle(5, 10, 20, 30);
        // move the rectangle
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        // print the moved rectangle
        System.out.println(cerealBox);
    }
}

Prints
Java.awt.Rectangle[x=20, y=35, width=20, height=30]
MoveTest.java

```java
import java.awt.Rectangle;

public class MoveTest {
    public static void main(String[] args) {
        Rectangle cerealBox = new Rectangle(5, 10, 20, 30);
        // move the rectangle
        cerealBox.translate(15, 25);
        // print the moved rectangle
        System.out.println(cerealBox);
    }
}
```

Prints
```
java.awt.Rectangle[x=20, y=35, width=20, height=30]
```

Why know and follow the Java Coding Conventions

- Helps understand code
  - makes purpose of identifiers clear
  - delineates separate pieces of code
  - assists in avoiding syntax errors
- Expected if source code is to be viewed at any time by anyone other than the original author
- Helps standardize

Coding Conventions

- Capitalization
  - Class identifier
  - Variable identifier
  - Method identifier
- Indentation
  - Brackets
  - Body of code (also called a code block)
- See course webpage for a complete description
public class GreeterTest {
    public static void main(String[] args) {
        Greeter worldGreeter = new Greeter("World");
        System.out.println(worldGreeter.sayHello());

        Greeter daveGreeter = new Greeter("Dave");
        System.out.println(daveGreeter.sayHello());
    }
}

public class Greeter {
    public Greeter(String aName) {
        name = aName;
    }
    public String sayHello() {
        String message = "Hello, " + name + "!";
        return message;
    }
    private String name;
}

Homework

• Homework 0 due by 5pm today
• Homework 1 linked from website and due next week
• Keep up with the readings – should have already read first two chapters of Big Java