On your way in...

Pick-up
1. HW10
2. Lecture 28 Notes
3. Graded HW8 (front seats)
INTELLIGENT NARRATIVE-CENTERED LEARNING ENVIRONMENTS

JAMES LESTER
(North Carolina State University)

artificial intelligence, intelligent agents, serious games, educational games

Today at 2:35p in Wege (here)
LAB 7 (IMAGES) IS GRADED.

1. cd ~/cs134/lab7
2. git pull
3. emacs GradeSheet.txt
Final Exam 5/19 1:30pm in TCL 123
Welcome to CS 134!

Introduction to Computer Science
Iris Howley

- JAVA -
JAVA

A programming language for when rules are needed.
HOW DOES JAVA DIFFER FROM PYTHON?
Our First Java Program

- `public class first {
  public static void main(String[] args) {
    // Comment! Do something
    }
  }
  }`
Java – Things to Notice

• Everything is in a class. No scripts!
• Public/private is declared explicitly
  ▪ Those rules can’t be broken, unlike _variableName
• One-line comments: //
• If something is returned, specify what it is: void or int, etc.
• Open/Close curly brackets instead of colons for functions
• Parameter types are specified: String[ ] etc.
Our First Java Program

- public class first {
  - public static void main(String[] args) {
    System.out.println("Hello, world.");
  }
}

Java – Things to Notice

- Print with `System.out.println("Hello, world.");`
- Lines that aren’t curly brackets end with semi-colon
- Whitespace doesn’t matter, just semi-colons and `{}`
Running a Java Program vs. Python

1. Compile the java program into machine code
   - `javac first.java`
   - This produces `first.class`

2. Run the machine code
   - `java first`
   - Java Virtual Machine runs the code

1. Call python
   - `python3 first.py`
   - Python turns code into bytecode and interpreter interprets it to the machine
Loops

• for (int i=0; i < 11; i++) {
  ▪ System.out.println("Count is: " + i);
}

• For..loop syntax is similar, but different
  ▪ (Need to declare variable type, name, starting value
  ▪ ; Then what value for variable to stop at
  ▪ ; How much to increment by)
    ○ i++ is the same as i+=1

• We can concatenate strings and integers!

Output:
Count is: 0
Count is: 1
Count is: 2
Count is: 3
Count is: 4
Count is: 5
Count is: 6
Count is: 7
Count is: 8
Count is: 9
Count is: 10
Java – Primitive Types

• Everything is **not** an object in Java! Unlike python
• Primitive types (don’t have methods, etc.)
  ▪ int, boolean, double, char, float, etc.
Conditionals

- `int testscore = 84;`
- `char grade;`

- `if (testscore >= 90) {`
  - `grade = 'A-ish';`
- `} else if (testscore >= 80) {`
  - `grade = 'B';`
- `} else {`
  - `grade = 'O';`
- `}

- `System.out.println("Grade is: " + grade);`
Java – Things to Notice

• Single-quotes for a character, Double-quotes for a String. It matters!
• >=, >, <, <= are still the same
• If statements use curly braces instead of colon
• else if instead of elif
• Parentheses around the conditional
Example Code

- cd ~/cs134/shared/examples/04.26
- git pull
- emacs first.java
QUESTIONS?