Our first sip of Java.

1. Questions?

2. The first Java program, saved in first.java:

```
// A first program.
public class first {
    public static void main(String[] args) {
        System.out.println("Hello, world."); // adds \n at end, automatically
    }
}
```

The program is compiled into an object file, using the Java compiler, javac:

```
javac first.java
```

This is then executed (as opposed to interpreted) using the Java virtual environment:

```
java first
```

3. Some features of Java programs (compared to Python):

(a) All code is part of some class. Most code is found within a class's method. Running a program causes a `main` method to be executed.

(b) Everything has a type. Primitive types include int, float, char, and boolean (true/false). Other types are classes of objects: String, arrays of other types, and Vectors. The non-reference indicator is `null`.

(c) You must declare the type of a variable or constant before it is defined.

(d) The primary for-like looping mechanism has a three expression form: the first expression is the loop variable initializer, the second is the condition, the third is a loop variable update that is executed between iterations.

(e) Within class definitions, there is an implied reference to the object, `this` (as opposed to `self`). The value of this is an implied parameter.

(f) There is no tuple type.

(g) There is no parallel assignment.