Computer Science 134C
Introduction to Computer Science, in Python
Lecture #28 (Java I)
November 19, 2018

Keywords
compile, Java, private, public, static

Our first sip of Java.

1. Questions?
2. Finishing with 20 questions, more or less.
3. 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 nl at end, automatically
  }
}
```

   The program is *compiled* into an *object file*, using the Java compilere, `javac`:

```
javac first.java
```

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

```
java first
```

4. 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.
5. A few example programs.

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