CSCI 1300

Intro to Computing

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Lecture 21 March 4, 2013

Java Intro, Part 2

Lecture Goals

1. Test 2 Results
2. Java

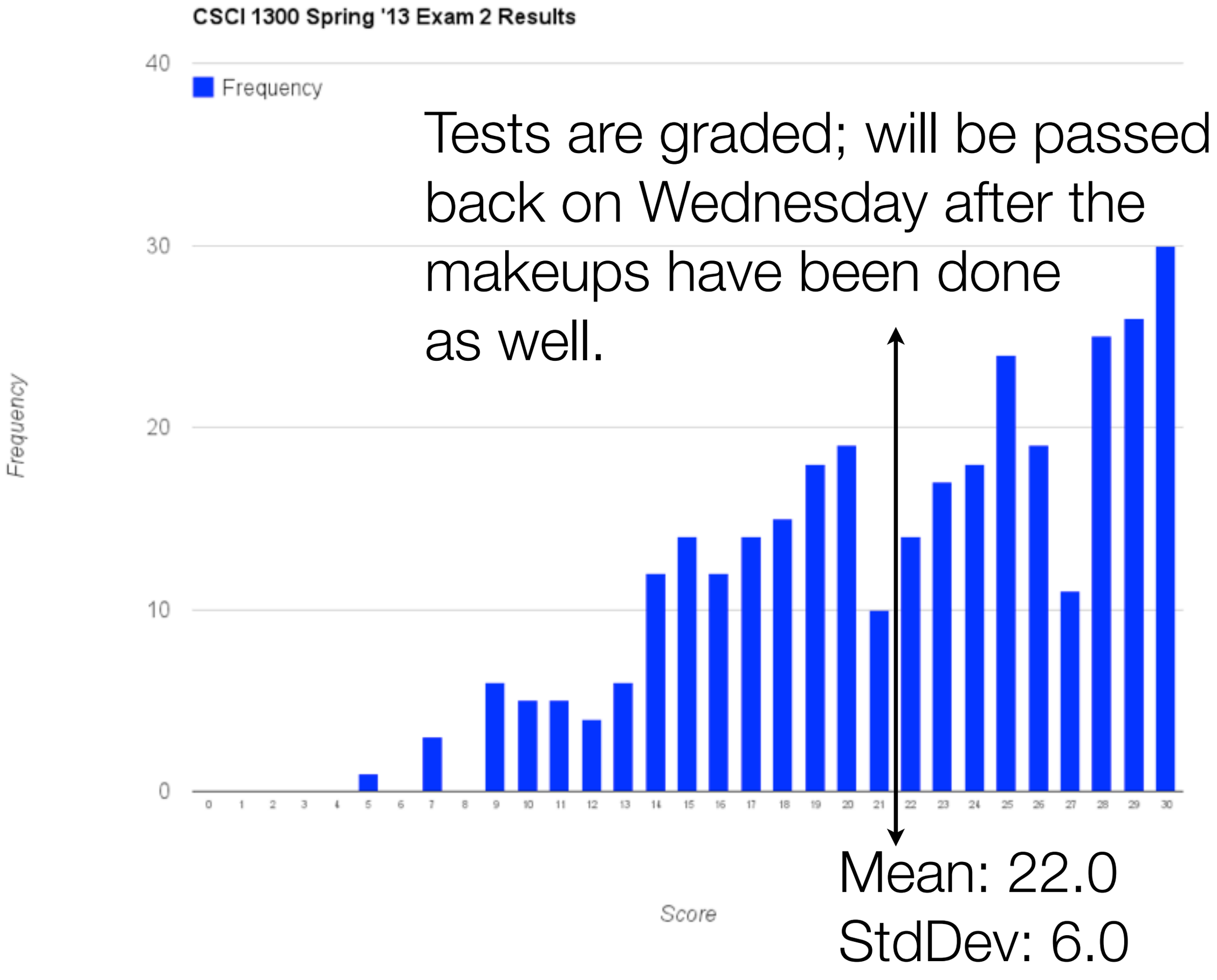
Upcoming Homework Assignment

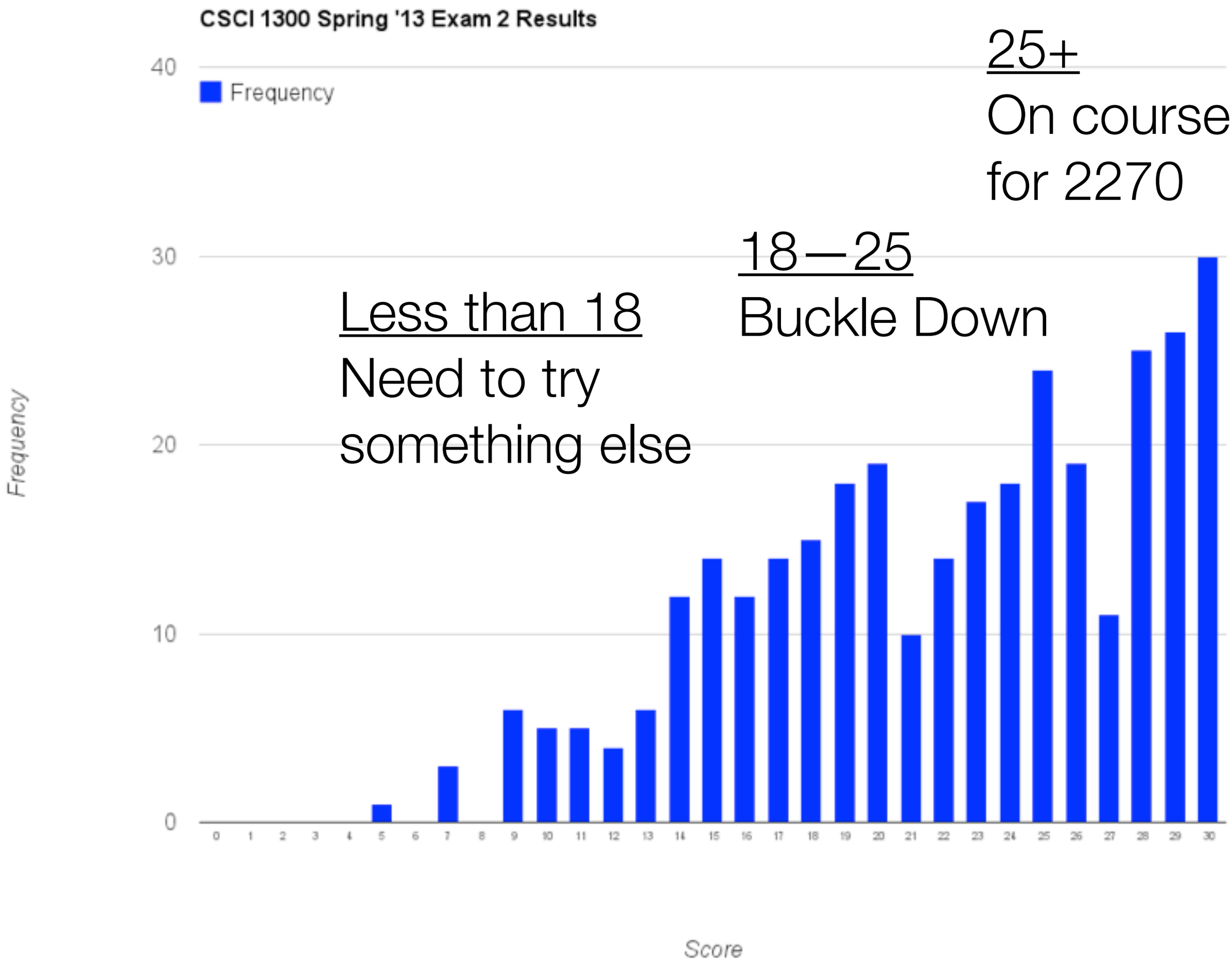
HW #5 **Due: Friday, Mar 8**

Slug Race!

This is the first HW since we've started to learn Java. You can turn this in in any language---remember you get extra credit for the other languages!

You fill in a 'Slug' subclass to compete against others. May the best slug win.


CSCI 1300 Spring '13 Exam 2 Results
Frequency
40
30
20
10
0
Frequency
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Score
Tests are graded; will be passed back on Wednesday after the makeups have been done as well.
Mean: 22.0
StdDev: 6.0



Less than 18
Need to try something else

18—25
Buckle Down

25+
On course for 2270


You don’t get
awesome at something
by passive exposure
You have to practice
CONSTANTLY.

Project Euler

This is a good source of little puzzles that can be solved with code. Example:

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23. Find the sum of all the multiples of 3 or 5 below 1000.

Another (Harder) Puzzle

http://projecteuler.net/problem=112

Working from left-to-right if no digit is exceeded by the digit to its left it is called an increasing number; for example, 134468.

Similarly if no digit is exceeded by the digit to its right it is called a decreasing number; for example, 66420.

We shall call a positive integer that is neither increasing nor decreasing a "bouncy" number; for example, 155349.

Clearly there cannot be any bouncy numbers below one-hundred, but just over half of the numbers below one-thousand (525) are bouncy. In fact, the least number for which the proportion of bouncy numbers first reaches 50% is 538.

Surprisingly, bouncy numbers become more and more common and by the time we reach 21780 the proportion of bouncy numbers is equal to 90%.

Find the least number for which the proportion of bouncy numbers is exactly 99%.

Java Tutorials

There are lots of tutorials on Java on the Interwebs. The one by Sun (now Oracle) is among the best:

http://docs.oracle.com/javase/tutorial/

Start at the ‘Getting Started’ link.

We will quickly cover all the same concepts we did in Python, then start doing cool stuff.

Today's Java

- Recap of Java program structure
- Recap of compiling & running Java programs
- Typed Variables
- For-loops
- While-loops
- Function definitions
- Function calls

See if you have Java

Type these commands to see if you have Java installed, and to see which version it is.

```
$ which java
/usr/bin/java
$ java -version
java version "1.6.0_41"
Java(TM) SE Runtime Environment (build 1.6.0_41-b02-445-11M4107)
Java HotSpot(TM) 64-Bit Server VM (build 20.14-b01-445, mixed mode)
```