Arrays. Reading: Secs 8.1, 8.2, 8.3

100: 04 A+ ****
95-99: 07 A ********
90-94: 08 A ********
85-89: 15 A ***************
80-84: 17 B+ ***************
75-79: 21 B *****************
70-74: 15 B ****************
65-69: 16 C+ ***************
60-64: 26 C *****************
55-59: 16 C ***************
50-54: 16 C– ***************
45-49: 08 D ********
40-44: 03 D– ***

Quote for the Day: Computer science has its field of computational complexity. Mine is computational simplicity. Gries
Computational simplicity

If you are writing too much code --it gets longer and longer, with no end in sight: stop and look for a better way.

If your code is getting convoluted, and you have trouble understanding it: stop and look for a better way.

Learning to keep things simple, to solve problems in a simpler way, sometimes requires a different way of thinking.

I am trying to teach not just Java but how to think about problem solving.

Make everything as simple as possible, but no simpler. Einstein
Computational simplicity

// Precondition: n > 0, n: 1, 2, 3, 4, 5
b = 1;
// invariant: b is a power of 2 and b <= n
while (n >= 2*b) {
    b = 2*b;
}
// postcondition: b is a power of 2 and b <= n and n < 2*b

b 1  2  4
n 5
public class Fraction {
    private int numerator;
    private int denominator;  // Always > 0!!!

    // Constructor: the fraction a/b. Precondition: b != 0
    public Fraction(int a, int b) {
        if (b < 0)
            { a= -a; b= -b; }
        numerator= a;
        denominator= b;
    }
}

Polya (How to Solve it): USE ALL THE DATA

a / b = -a / -b

New topic: Arrays

This is the last new Java feature that you will be studying in this course.

Chapters 8 and  cover arrays. Start studying it. Chapter 8 of the class text.

Most of what we did was on the blackboard.