Announcements:
Next OWL assignment up, due next Tuesday
Next programming assignment up today, due next Friday.
Midterm: Tuesday, 10/16, 7-8:15 Bartlett 65

Lecture Summary: talked about arithmetic, most attention to /, %. Then if stmts, for loops, and finally Math class, random().

Some arithmetic: what are the values of these expressions?
(119 / 10)
(119 % 10)
(5/4/3/2)
(4/2 == 2)
((5/3 > 2) || (11 % 7 > 3))
((7%2 != 4) && (6/5 <= 2))

What’s printed here:

int k = 5;
if (k >= 5) System.out.println(9/k);
if ((k < 6) && (k > 5)) System.out.println(5%3);

Below do an accurate trace of everything that happens during the execution of this loop:
for(int j = 0; j < 2; j++){
    if (j % 2 == 0) System.out.println(j);
}

public static void main(String[] args){
    // this does what?
    for( int j = 0; j < 5; j++){
        System.out.println(j);
        System.out.println(j*j);  // or: sum += j;
    }
    System.out.println(sum);
}

public static void main(String[] args){
    // this does what?
    for (int n = 0; n < 50; n++){
        // this does what?
        if ((n % 3 == 2) && (n % 5) == 0)
            System.out.println(n);
    }
    double r = 2.0;
    for (int n = 0; n < 5; n++){
        // this does what?
        r = Math.sqrt(r);
        System.out.println(r);
    }

}
Create a class that includes a main method and works as follows: You should create two Infant objects in the application, myKid and yourKid. Use a Scanner object to read in the name field for each object. For the age field, generate a “month” for each kid using Math.random() [note: this is a little tricky]. Finally, print the age of the older kid.

Look over this program:

```java
import java.util.*;
public class FractionTest{
    public static void main(String[] args){
        Scanner s = new Scanner(System.in);
        System.out.println("Enter a number of trials");
        int trials = s.nextInt();
        double target = 11.0/17.0;
        int below = 0;
        for (int n = 0; n < trials; n++)
            if (Math.random() < target) below++;
        System.out.println("target: " + target);
        System.out.println ("target est: " + ((double)below)/trials));
    }
}
```

Some questions: why the import statement? If trials = 170, what’s a good guess for the final value of “below”? What’s the type of the expression (Math.random() < target)? What are the types of the operands of the very last division?

What happens if the last print statement, above, is simply

```java
System.out.println ("target est: " + below/trials);
```