121 Discussion #3 – October 1 – Looping & Conditionals

Announcements: Program 3 due tonight. Look at Whiz Quizzes in Ch 4 in summary. Online exam next week – release is Wed evening.

Lecture Summary: ch 4, most attention to for loops, conditionals. Math class, random(), static methods introduced in text.

1. Today is Monday, October 1, 2012. The fact that 365%7 = 1 and that 2013 is not a leap year means that October 1 will fall on what day of the week in 2013?

2. This loop does what? On average, about how many print statements are executed?

   ```java
   for(int j = 0; j < 20; j++){
       double r = Math.random();
       if ((r < .2) || (r > .8)) System.out.println(r);
   }
   ```

3. This loop does what?

   ```java
   int sum = 0;
   for(int j = 70; j < 77; j = j + 2){
       sum = sum + j;} // or: sum += j;
   System.out.println(sum);
   ```

4. What is the value of ch after the two lines of code below execute?

   ```java
   int n = (int)'a' + (int)'b' + (int)'c';
   char ch = (char)(n/3);
   ```

6. If s is a String, write a loop that prints the characters in s in a column. Now change it so that it prints only the lower case letters in a column, taking no action with other chars. (see hint in #7)

7. Write a complete program that reads in a whole line of text, and then reports the number of lower case letters in the entered line. (use this test in an if statement:  (‘a’ <= ch) && (ch <= ‘z’)

8. Write a complete program that reads in a String, say s, and then an int, say k. If s has a character at position k your program should print that character; otherwise your program should print “no char”. Thus if s is “monkey”, k is 5, print y; but if k is 50 print “no char”.

9. Write a complete program that reads in two strings, and if they are of different lengths, just print “different lengths”; otherwise print a single string with the two entered strings merged, character by character. Example: if strings are: “boy”, “dig”, then print bdoiyg

10. Write a complete program that reads in a positive integer N, then generates N random numbers between 0 and 1, and finally prints the largest of the N numbers that has been generated. And a variant: program should print true if at least one of the N > .95; else false.