EECE.2160: ECE Application Programming Spring 2018

Lecture 11: Key Questions February 16, 2018

- 1. Explain how while loops can be used:
- a. When number of iterations is dependent on a variable (flexible limit) (while2.c)

b. When you want to repeat an operation until a given value (sentinel) is entered (while3.c)

2. What is the difference between a while loop and a do-while loop?

3. Show the difference between the outputs of the loops below

x = 7; do { printf("%d",x); x = x + 1; } while (x < 3); x = x + 1; } x = x + 1; } x = x + 1; }
x = 7; while (x < 3) printf("%d",x); x = x + 1; }

4. Recall the example for using a while loop with a sentinel value in the grade average program and show that loop written as a do-while loop.

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- 5. **Example:** Write a while or do-while loop for each of the following tasks:
- a. Print all multiples of 3 between 0 and 100 (including 0)

b. Given two variables, x and y, repeatedly increment x by 1 and decrement y by 1 until x is greater than y. Print the initial values of x and y before the loop starts. Also, count the number of iterations this loop takes and print that number when the loop is done

c. Repeatedly prompt for and read a single non-space character into a variable, cmd, until the user enters either 'X' or 'x'.