**Brown ::CIS 25 Fall 2016:: Assignment 8 Modulus Escape Characters**

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What is the purpose of a loop in programming?   
A loop in programming allows you to run a block of code many times.

Loop- a statement or collection of programming statements (code block) that are intended to be run multiple times.

**for** ( initialization; loop control condition; iteration) {

Loop Code Block; }

Definite Loop

Initialization: Provides the starting point for the count of a loop

Loop control condition: Keeps track of when the loop stops. While the condition is true, the loop runs. When it is no longer true, the loop stops.

Iteration:

loop control variable-

while loop- Indefinite loop

Name 2 differences between a **for** loop and a **while loop**-

Definite Loop- A specific value is given for the number of times a loop runs

Indefinite Loop-

Infinite Loop- The loop has no end

What is the basic difference between a **do-while** loop and [**or/while]** loops?

A do-while loop will check if its conditional statement is true at the end of an iteration as opposed to the beginning of the loop.

How do **break** statements work in relation to **for, while,** and **do-while** loops?

Describe how an infinite **for** loop operates

**LAB ASSIGNMENT**

There are 6 different programs + output required for this assignment.

Please Have 6 Different snipping photos with programs and outputs.

Hint\*\* The programs should not be very long for each answer.

Use loop structures below to **print the even numbers 2 to 100. (2, 4, 6, 8, 10, etc) Each program will have the same output.** Write programs that print the same output as that program, but do it in the following ways:

1. Using a **for** loop that increments the loop control variable by 2 each iteration
2. Using a **for** loop whose loop control variable goes from 0 to 50.
3. Using a **for** loop whose loop control variable goes from 100 down to 0.
4. Using an infinite **for** loop with no conditional expression and exiting the loop with a **break** statement.
5. Using a **while** loop.
6. Using a **do-while** loop.

There should be 6 different Snipping photos. One photo for each program A – F.

**2nd Task-** Change Calculator

Write a program that directs a cashier how to give change. The program has two inputs: The amount due and the amount received from the customer. Display the dollars, quarters, dimes, nickels, and pennies that the customer should receive.

