CS-105 Assignment 7

Part 1

4.7: Examine the following for loops and determine the values of ires at the end of each of the loops and also the number of times each loop executes.

```
a. ires = 0;
   for index = -10:10
       ires = ires + 1;
   end
```

ran for index values of [-10,-9,-8,…,8,9,10]

ires=21

loops: 21 times

```
b. ires = 0;
   for index = 10:-2:4
       if ires == 6
           continue;
       end
    ires = ires + index
   end
```

ran for index values of [10,8,6,4]

ires=22

loops: 4 times

```
c. ires = 0;
   for index = 10:-2:4
       if index == 6
           break;
       end
       ires = ires + index
   end
```

ran for index values of [10,8,6,4]

ires=18

loops: 3 times

d.
```
ires = 0;
   for index1 = 10:-2:4
       for index2 = 2:2:index1
           if index2 == 6
               break
           end
           ires = ires + index2
       end
   end
```

ran for index1 values of [10,8,6,4]

ran for index2 values of [2,4,6] for index1 values of[10,8,6], and [2,4] for index1 values of [4]

ires=24

(outer) loops: 4 times

(inner) loops: 11 times

What I learned:

I learned that you have to be very careful when tracing a loop, and that tracing loops is a very tedious job. At first I was confused on how to execute the loop, but I looked it up, and after realizing that the index was basically just the number of times to run the for loop, it cleared up and I was able to figure out each of the following loops.