1. Watch the videos in Topic 1 While Loops and Topic 2 For Loops. Answer the following questions. (60 points)
   * How does a Loop Control Variable function?
     1. A loop control variable determines whether a loop will continue by using a boolean function or statement.
   * How does the placement of the Loop Control Variable update affect a while loop?
     1. It can determine if a function executes the correct amount of times.
   * What are two ways we can update a while loop to prevent infinite loops?
     1. Iteration of variables and boolean expression checks can prevent infinite loops.
   * What are the three parts of a for loop and how do they work together?
     1. The three parts of a for loop include, initialization, condition (boolean expression), and increment (update). Initialization creates the variable which is checked in the condition to see if the loop should continue. The increment determines how many times the loop will be continued once initialized by changing the loop control variable.
   * What are three things to consider when choosing between a for loop and a while loop?
     1. When deciding between using a for loop and a while loop, determine whether you need incrementation or simply a conditional check. If only a conditional check is needed, then a while loop will suffice, otherwise use a for loop.
   * What is an "off by one" error and how do you prevent it?
     1. When a loop iterates one too many times or one too few times.
2. Watch the Topic 4 Nested Iteration videos and answer the questions. (40 points)
   * The outer loop only iterates when what happens?
     1. The outer loop only iterates once the inner loop has executed and the outer loop conditional statement is still valid.
   * What happened when the inner and outer for loop headers were switched in the counting example from video 1? Why?
     1. The loop order reversed and so was the result. This happens because the execution order happens in reverse since the iterations are now starting from the last loop and iterating backwards.
   * What happens when you switch the nesting while loop headings in video 3? Why?
     1. The loop stays the same. This is because only the variable names are changed, but the declarations of their values are the same.