1. Create an assert statement that throws an AssertionError if the variable spam is a negative integer.

**spam = -1**

**assert spam > 0, 'Negative value.'**

1. Write an assert statement that triggers an AssertionError if the variables eggs and bacon contain strings that are the same as each other, even if their cases are different (that is, 'hello' and 'hello' are considered the same, and 'goodbye' and 'GOODbye' are also considered the same).

**eggs = "hello"**

**bacon = "Hello"**

**assert eggs.lower() != bacon.lower(), 'The eggs and bacon variables are the same'**

1. Create an assert statement that throws an AssertionError every time.

**assert False , 'The eggs and bacon variables are the same throws everytime'**

1. What are the two lines that must be present in your software in order to call logging.debug()?

**import logging**

**logging.basicConfig(level=logging.DEBUG, format=' %(asctime)s -**

**%(levelname)s - %(message)s')**

1. What are the two lines that your program must have in order to have logging.debug() send a logging message to a file named programLog.txt?

**import logging**

**>>> logging.basicConfig(filename='programLog.txt', level=logging.DEBUG,**

**format=' %(asctime)s - %(levelname)s - %(message)s')**

1. What are the five levels of logging?

**WARNING , CRITICAL , ERROR , INFO , DEBUG**

1. What line of code would you add to your software to disable all logging messages?

**logging.disable(logging.CRITICAL)**

**logging.disable(n)**

**logger.disabled = True**

8.Why is using logging messages better than using print() to display the same message?

**Log message contains Exact Timestamp , Able to trouble shoot the error using the log History , Able to Disable unwanted logs when required. Print is Bit hard to handle all these .**

1. What are the differences between the Step Over, Step In, and Step Out buttons in the debugger?

**Step over – An action to take in the debugger that will step over a given line. If the line contains a function the function will be executed and the result returned without debugging each line.  
http://fourkitchens.com/wp-content/uploads/2017/01/Screen%20Shot%202013-12-04%20at%209.54.54%20PM.png**

**Step into – An action to take in the debugger. If the line does not contain a function it behaves the same as “step over” but if it does the debugger will enter the called function and continue line-by-line debugging there.  
http://fourkitchens.com/wp-content/uploads/2017/01/Screen%20Shot%202013-12-04%20at%209.54.58%20PM.png**

**Step out – An action to take in the debugger that returns to the line where the current function was called.  
http://fourkitchens.com/wp-content/uploads/2017/01/Screen%20Shot%202013-12-04%20at%209.55.04%20PM.png**

10.After you click Continue, when will the debugger stop ?

**when it has reached the end of the program or a line with a breakpoint**

11. What is the concept of a breakpoint?

**A breakpoint is a setting on a line of code that causes the debugger to pause when the program execution reaches the line**