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

assert spam >0, 'The spam is a negative integer.'

2. Create an assert statement that throws an AssertionError if the variables eggs and bacon contain strings that are the same, even if their cases are different (for example, 'hello' and 'hello' are considered the same, as are 'goodbye' and 'GOODbye').

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

assert False, 'This assertion always triggers.'

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

To be able to call logging.debug(), you must have these two lines at the start of your program:  
  
import logging  
logging.basicConfig(level=logging.DEBUG, format=' %(asctime)s -  
%(levelname)s - %(message)s')

5. What are the two lines that must be present in your software in order for it to log?Is it possible for logging.debug() to log a message to a file called programLog.txt?

To be able to send logging messages to a file named programLog.txt with logging.debug(), you must have these two lines at the start of your program:  
  
import logging  
  
logging.basicConfig(filename='programLog.txt', level=logging.DEBUG,  
  
format=' %(asctime)s - %(levelname)s - %(message)s')

6. What are the five stages of logging?

DEBUG, INFO, WARNING, ERROR, and CRITICAL

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

logging.disable(logging.CRITICAL)

8. Why is it easier to use logging messages instead of print() to show the same message?

You can disable logging messages without removing the logging function calls. You can selectively disable lower-level logging messages. You can create logging messages. Logging messages provides a timestamp.

9. What is the difference between the debugger's Step Over, Step In, and Step Out buttons?

The Step button will move the debugger into a function call. The Over button will quickly execute the function call without stepping into it. The Out button will quickly execute the rest of the code until it steps out of the function it currently is in.

10.When will the debugger stop after you press Continue?

After you click Go, the debugger will 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.

12. In Mu, how do you place a breakpoint on a line of code?

To set a breakpoint in IDLE, right-click the line and select Set Breakpoint from the context menu.