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

Ans1.

spam=-1

assert spam>0, 'spam Integer is negative'

2. 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).

Ans2. assert eggs.lower() != bacon.lower(), 'The eggs and bacon variables are the same!'

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

Ans3. Assert False

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

Ans4.

import logging

logging.basicConfig(level=logging.DEBUG, format = ‘%(asctime)s - %(levelname)s - %(message)s’)

5. 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?

Ans5.

import logging

logging.basicConfig(filename = ‘progrmLog.txt’, level=logging.DEBUG, format = ‘%(asctime)s - %(levelname)s - %(message)s’)

6. What are the five levels of logging?

Ans6. INFO, DEBUG, WARNING, ERROR, CRITICAL

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

Ans7. logging.disable(logging.CRITICAL)

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

Ans8.

1. Logging message provides a time stamp, when the log was triggered and the line number where log has occurred.
2. It can provide process ID of the place where log happened
3. The biggest advantage is instead of just printing the errors from print statement logging can disable the output and sav it to a file as well.

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

Ans9. The Step In buttons will move the debugger into a function call, Step Over button will executes the function call quickly without even stepping into it and Step Out button will execute the rest of the code until the currently execute function implementation is returned.

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

Ans 10. After we click continue it will run the program continuously until it reach the end of the code or reaches to a different source line.

11. What is the concept of a breakpoint?

Ans11. Breakpoint is set on a line of a code will stop or pause the code once program execution reaches to the end of the line.