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

- assert(spam >= 0, 'The spam variable 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).

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

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

- assert(False, 'This assertion will always throw an assertion error. Kya coder banega re tu???')

4. 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')

These two lines of codes are must in order to be able to call logging.debug().

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?

- import logging logging.basicConfig(filename='programLog.txt', level=logging.DEBUG, format=' %(asctime)s - %(levelname)s - %(message)s')

6. What are the five levels 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 using logging messages better than using print() to display the same message?

- It is better because one can create logging messages. Also there is a timestamp associated with logging messages.

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

- Step over- A given line is stepped over without debugging. But the lines are executed and if there is a function present then it is executed and return value is returned.

Step in- In a given method, step by step debugging is carried out

Step out- It is an action to call in the debugger to the position from which the current function is being called.

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

- The debugger will stop after the complete execution of the program or until the next breakpoint is reached.

11. What is the concept of a breakpoint?

- When the line of execution reaches the breakpoint, then the debugger pauses.