Assignment-3

1. Why are functions advantageous to have in your programs?
   Functions are advantageous to have in programs because they help with code useability, and you need not write the same code again and again. This is time-efficient.

2. When does the code in a function run: when it's specified or when it's called?
   The code in a function runs only when the function is called.

3. What statement creates a function?
   Function is created using 'def' word which is defining a function.

4. What is the difference between a function and a function call?
   Function is what you define and write code within it. Whereas function call is when you want to use the function and get some result

5. How many global scopes are there in a Python program? How many local scopes?
   There's only one global scope per module in python. There can be multiple local scopes, depending on how many functions or blocks of code are defined within a program.

6. What happens to variables in a local scope when the function call returns?
   When a function call returns, the local scope created for that function is destroyed and all the variables defined within the function's local scope are lost.

7. What is the concept of a return value? Is it possible to have a return value in an expression?
   A return value is a value that a function returns to the calling statement or expression. Yes, it is possible to have a return value in an expression.

8. If a function does not have a return statement, what is the return value of a call to that function?
   If a function does not have a return statement, the return value of a call to that function in Python is None.

9. How do you make a function variable refer to the global variable?
   To make a function variable refer to a global variable with the same name, you can use the global keyword. When a variable is declared inside a function, Python considers it to be a local variable by default. If you have a global variable with the same name as the local variable, and you want to modify the global variable inside the function, you need to use the global keyword to inform Python that you are referring to the global variable and not creating a new local variable.

10. What is the data type of None?
    The data type of None is None Type. None Type is a built-in data type that has only one value, which is None.

11. What does the sentence import areallyourpetsnamederic do?
    Python will attempt to find a module named areallyourpetsnamederic, but since this module does not exist in the standard Python library or any third-party libraries, Python will raise a ModuleNotFoundError exception and will result in an error.

12. If you had a bacon() feature in a spam module, what would you call it after importing spam?
    After importing the spam module in Python, you can call the bacon() feature by using the dot notation to access it as an attribute of the spam module.

13. What can you do to save a programme from crashing if it encounters an error?
    Exception handling can be used to prevent a program from crashing when it encounters an error.

14. What is the purpose of the try clause? What is the purpose of the except clause?
    Try and except clause is a fundamental part of exception handling in Python, allowing you to write robust, reliable code that can handle errors and prevent the program from crashing.