Assignment-3

1.Why are functions advantageous to have in your programs?

Ans1- a)Function allows you to break down your code into smaller , manageable units.

b) function make your code more readable by providing meaningful names for specific operation or task.

c)once you have defined function you can call it multiple times.

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

Ans2- The code in the function runs when it is called not when it is specified .

Ex- def my\_funct():

print(“hello”)

my\_funct()

in this example my\_funct is defined with print statement and then the my\_funct() is called.

3. What statement creates a function?

Ans3- in python def is used to define function . the functions code block is indented under the def statement and its enclosed within the function scope.

4. What is the difference between a function and a function call?

Ans4-

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| Function | Function call |
| It is reusable block of code performs specific tasks. | It is also known as invoking or executing a function is the action of telling the program to execute the code within a specific function. |
| It is typically defined using function declaration or definition , depending on the programming language. | When you call function you provide necessary arguments that the function expects and it processes those arguments using its code. |
| Functions are like blue prints or templates for performing particular task but do not execute automatically. | A function call is the mechanism that triggers the execution of the code inside the function. |

5. How many global scopes are there in a Python program? How many local scopes?

Ans5- there is only one global scope in python program .Variables defined in the global scope are accessible from any part of program ,including within functions.

Local scopes are created within function or code blocks such as loops or conditional statements .local variables are only accessible within the scope where they are defined.

6. What happens to variables in a local scope when the function call returns?

Ans6- when a function call returns in python the local variable within the function local scope are destroyed and their values are no longer accessible . this process is known as variable scope.

7. What is the concept of a return value? Is it possible to have a return value in an expression?

Ans7- A return value is the value that function provides as its output when it is called and executed. When you call function and it finishes its execution , it may or may not produce a return value . Yes it is possible to use return value in an expression . return value are crucial for function to provide meaningful results and interact with the rest of program.

8. If a function does not have a return statement, what is the return value of a call to that function?

Ans8-If a function in Python does not have a **return** statement, or if it has a **return** statement without a value (i.e., **return** without an expression), the function returns a special value called **None**. **None** is a built-in constant in Python that represents the absence of a value or a null value.

9. How do you make a function variable refer to the global variable?

Ans9- in python if we want to make function variable refer to global variable you can use ‘global’ keyword within the function .This tells python that you intend to work with global variables rather then creating a new local variable with same name.

Ex-

global\_variable = 10

def my\_function():

global global\_variable

global\_variable = 20

my\_function()

print(global\_variable)

10. What is the data type of None?

Ans10- In python ‘none’ is a special constant that represent the absence of value or null value.it is often used to indicate that a variable or expression does not have meaningful value.

11. What does the sentence import areallyourpetsnamederic do?

Ans11-The sentence "import areallyourpetsnamederic" is not a standard Python import statement, and it would typically result in a **ModuleNotFoundError** unless there is a custom module named "areallyourpetsnamederic" available in your Python environment

12. If you had a bacon() feature in a spam module, what would you call it after importing spam?

Ans12- after importing spam we will use dot operator and call bacon() function . such as:

import spam

spam.bacon()

13. What can you do to save a programme from crashing if it encounters an error?

Ans13- to prevent programme from crashing

1. we can use try and except blocks to catch and handle exceptions or errors.
2. Can use conditional statements (if,elif or else)
3. Logging can be used

14. What is the purpose of the try clause? What is the purpose of the except clause?

Ans14- purpose of try clause: it is used to enclose a block of code that might raise an exception.its purpose is to attempt to execute the code inside the try block.

Purpose of except clause: it is used to define how the program should respond when specific type of exception occurs within the associated try block.