

### Assignment 3

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

Reduced Redundancy

Precision

Ease of repeatability

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

when it's called

#### 3. What statement creates a function?

def

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

**Function** is the set of predefined instructions, specified by the user.

**Function call** is a call/signal to execute the predefined instructions that are in function.

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

One Global Scope in a Python program. One or More Local Scopes in a Python program.

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

In a local space, Variable value inside the function will be used for executing the commands within the function.

```
In [1]: r=10 #GLOBAL variable
def test1(a,b):
    r = a/b #LOCAL variable
    print(r)

test1(10,1)

10.0
```

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

- To end the execution of Function
- While defining a function, if any line of code is written after return, that will not be executed.
- If return is used in place of "print", the datatype is retained. But the print will convert any datatype to "Nontype" datatype

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

None() or Nonetype()

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

First, function variable needs to be declared globally before the function. And then, by calling it without assigning a new value to it.

10. What is the data type of None?

NoneType

11. What does the sentence `import areallyourpetsnamederic` do?

It will show `ModuleNotFoundError`

```
In [2]: import areallyourpetsnamederic

-----
ModuleNotFoundError                                Traceback (most recent call last)
Cell In[2], line 1
----> 1 import areallyourpetsnamederic

ModuleNotFoundError: No module named 'areallyourpetsnamederic'
```

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

`Import spam`

`spam.bacon()`

```
In [3]: import spam          #module
        spam.bacon()         # "bacon()" is the Function

-----
ModuleNotFoundError                                Traceback (most recent call last)
Cell In[3], line 1
----> 1 import spam          #module
      2 spam.bacon()

ModuleNotFoundError: No module named 'spam'
```

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

To avoid crashing of the program, introduce Try and Except Clauses

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

Try Clause:

- Its purpose is to find out whether a block of code is throwing an error or not.

- If there is no Error, code in the 'try block' is executed.
- If the Error exists, code in the 'try block' is terminated and is passed on to the Except Clause

**Except Clause:**

- Its purpose is to handle the execution (i.e Error) by executing the user defined Except Clause, thereby avoiding the crashing of the code/program.