**PYTHON BASIC ASSIGNMENT\_3 - SUBMITTED BY SAMUEL DEVDAS**

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

Ans. Functions help to solve problems by acting in place of long and complex code to provide a simpler, clearer, more readable and non duplicate or reusable alternative.

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

Ans. Function runs when it has been previously defined and needs to be called with the original name it was first defined with. Eg. def func(): will be called when needed as func() .

3. What statement creates a function?

Ans. Function can be created using statement: def function(): where ‘def’ is the keyword to define the function and ‘function’ is the given name by the user. After the initialising the function and defining the name, the space under the statement can be used to define what operation or logic the function performs.

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

Ans. Function is the code which runs behind the scenes whereas function call is the way to use the function name and pass arguments into the function using parenthesis to return a result.

Eg. def function(a,b): (Function name and the code is defined here)

x=a+b

return x

function(1,2) (Function is called here and arguments are passed as 1 and 2)

Output: 3 (The output declared in the console is the result of the function)

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

Ans. There is only one global scope for any variable in a python program. There can be ‘n’ number of local scopes for a python program with ‘n’ number of functions defined with their own variables, even with same variable name.

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

Ans. When the function call returns, the variable will take the local variable value declared within the function. If there is a variable with the same name declared outside of the function block, the function call will default the value of the local variable in the function.

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

Ans. ‘Return’ is a keyword which can be used inside a function to give back the result of the function back to the user in the console. ‘Return’ cannot be used outside of a function for any expression and if used results in an error message in console.

eg. x=100

return x

**SyntaxError:** 'return' outside function

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

Ans. If a function does not have a return statement, the return value of call to that function results in no output given back in the console.

Eg. def myfunc(a):

a=100

myfunc(1)

Output: Blank

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

Ans. By using ‘global’ keyword before declaring a variable inside a function makes the variable available as a global variable.

Eg. print(x)

def myfunc():

x = 300

Output: 300

10. What is the data type of None?

Ans. The datatype of none is NoneType. The None keyword is used to define a null value, or no value at all.

Eg. type(NoneType)

output: NoneType

11. What does the sentence import areallyourpetsnamederic do?  
 Ans. It gives the following error in the console.

**ModuleNotFoundError**: No module named 'areallyourpetsnamederic'

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

Ans. Import spam

spam.bacon()

After importing ‘spam’ module, bacon feature is called by following spam with ‘.bacon’ and parenthesis.

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

Ans. When a block of code is errorneous or gives unexpected results, it can be tested for errors and handled by using exception handling methods, which will allow the errors to be handled safely without risking the whole following code to not work, leading the program to crash. Some exception handling clauses are try, except, else etc.

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

Ans. ‘try’ clause is used to test a block of code which might have errors.

‘except’ clause is used to handle the error for the code that runs through the ‘try’ block. When the ‘try’ block identifies an error, then only the ‘except’ block will execute.