

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

functions make code short and perform specific task.We call function again and again so we do not need to write code again and again

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

function code run when its called

```
In [25]: 1 def fun(a,b):
        2     return a+b
        3

In [26]: 1 fun(5,5)           # function called

Out[26]: 10
```

## 3. What statement creates a function?

def with function name and argument these things are used in function creation

```
In [27]: 1 def fun_name(a): # a is argument of function.This is single argument function
        2     return a
```

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

function is a bock of code perform specific task.It perform task and return result function call is basically a calling of function body to perform task and return result

```
In [31]: 1 def fun1(a,b,c): # function body contain specific line of code for task
        2     return (a+b)/c
        3

In [33]: 1 fun1(5,7,3)       # here is calling of funtion

Out[33]: 4.0
```

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

There are one global scope and one local scope in python program global scope means variable outside the function i.e called global variable local scope means variable inside the function i,e called local variable

```
In [54]: 1 a = 10             # global variable
        2 def test16(c , d ):
        3     c = 5             # Local variable
        4     return c+d

In [55]: 1 test16(a,500)

Out[55]: 505
```

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

local variable destroyed when function call returns.There is no scope of local variable outside the function

```
In [60]: 1 c = 10             # global variable
        2 def test16(c , d ):
        3     c = 5             # Local variable
        4     return c+d
        5 print(test16(c,60))
        6 print(" value of c is ",c) # c=5 has local scope so it destroy

65
value of c is  10
```

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

A return value is the value that is evaluating by function body , 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

function does not have a return statement , it return value is none

```
In [62]: 1 def EvenOddFunc(num):
2         for i in range(1, num + 1):
3             if i % 2 == 0:
4                 print('Even number: ',i)
5                 continue
6             print('Odd number:',i)
7 num = int(input('enter the value'))
8 EvenOddFunc(num) # no return value for this function
```

```
enter the value20
Odd number: 1
Even number: 2
Odd number: 3
Even number: 4
Odd number: 5
Even number: 6
Odd number: 7
Even number: 8
Odd number: 9
Even number: 10
Odd number: 11
Even number: 12
Odd number: 13
Even number: 14
Odd number: 15
Even number: 16
Odd number: 17
Even number: 18
Odd number: 19
Even number: 20
```

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

A global statement will force a variable in a function to refer to the global variable.

```
In [64]: 1 a = 10 # global variable
2 def test16(c , d ):
3     c = 5 # local variable
4     return c+d
5 print(test16(a,60))
6 print(" value of c is ",c) # c=5 has local scope so it destroy
```

```
65
value of c is 10
```

## 10. What is the data type of None?

The data type of None is NoneType.

## 11 What does the sentence import areallyourpetsnamederic do?

That import statement imports a module named areallyourpetsnamederic.

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

function call with spam.bacon()

```
In [65]: 1 import math
2 print(math.pow(2,4))
```

```
16.0
```

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

Place the line of code that might cause an error in a try clause

In [67]:

1

2

3

4

5

6

```
try: # try block has an error because x is not defined
    print(x)
except:
    print("An exception occurred")
```

An exception occurred

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

The try block lets you test a block of code for errors.

The except block lets you handle the error.

In [ ]:

1