NETWORKZ SYSTEMS

AN ISO 9001:2015 CERTIFIED COMPANY

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PYTHON FUNCTIONS

A function is a block of code which only runs when it is called.

You can pass data, known as parameters, into a function.

Creating a Function

In Python a function is defined using the ’def ’keyword.

```
def my_function():
        print("Hello from a function")
```

Calling a Function

```
def my_function():
        print("Hello from a function")

my_function()
```

Parameters

Information can be passed to functions as parameter.

Parameters are specified after the function name, inside the parentheses.

You can add as many parameters as you want, just separate them with a comma.

```
def my_function(a,b):
        print(a+b)
my_function(2,5)
my_function(“pqr")
my_function(“xyz")
```

Parameter VS Argument

A parameter is the variable listed inside the parentheses in the function definition.
An argument is the value that is sent to the function when it is called.

Default Parameter Value

```
def my_function(country = "Norway"):
                print("I am from " + country)

my_function("Sweden")
my_function("India")
my_function()
my_function("Brazil")
```

eg.1

```
def myfunc():
        print("Hello Python Lovers")
myfunc()
```

eg.2

```
def details(name,userid,country):
    print('Name :- ', name)
    print('User ID is :- ', userid)
    print('Country :- ',country)

details('Asif' , 'asif123' , 'India')
```

eg.3

```
def even_odd (num):
 """ This function will check whether a number is even or odd"""
        if num % 2 ==0:
              print (num, ' is even number')
       else:
              print (num, ' is odd number')


even_odd(3)
even_odd(4)
```

eg.4

```
def fullname (firstname , middlename ,lastname): #Concatenate Strings
        fullname1 = "{} {} {}".format(firstname,middlename,lastname)
        print (fullname1)

fullname('Asif' , 'Ali' , 'thrissur')
```

Return Values

```
def my_function(x,y=2):
    return 5 * x*y

print(my_function(3,2))

print(my_function(5))

print(my_function(9))
```

Scope of Variables

The scope of a variable determines the portion of the program where you can access a particular identifier. There are two basic scopes of variables in Python −

- **Global variables**
- **Local variables**

Variables that are defined inside a function body have a local scope, and those defined outside have a global scope.

This means that local variables can be accessed only inside the function in which they are declared, whereas global variables can be accessed throughout the program body by all functions

Recursion

Python also accepts function recursion, which means a defined function can call itself.

```
def recur_factorial(n):
    if n == 1:
        return n
    else:
        return n*recur_factorial(n-1)
num = int(input("Enter a number: “))
if num < 0:
    print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    print("The factorial of",num,"is",recur_factorial(num))
```

Python Modules

A file containing a set of functions you want to include in your application.

Create a Module

To create a module just save the code you want in a file with the file extension .py

Example

Save this code in a file named mymodule.py

```
def greeting(name):
        print("Hello, " + name)
```

Use a Module

Import the module named mymodule, and call the greeting function.

Example

```
import mymodule
mymodule.greeting("Jonathan")
```

THANK YOU

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