Defining Functions in Python

Defining Functions in Python

Keyword def

Function name

Parameters inside( )
are x, y

```
def sum (x, y) :
    s = x + y
    return s
```

Function Header
(ends with a colon :)

Function Body (indented)

(See all statements in function body
are at same level of indentation.)

Function may or may not have a return statement

Keyword def

Function name

Parameters inside( );
no argument here

```
def greet( ) :
    print("Good Morning!")
```
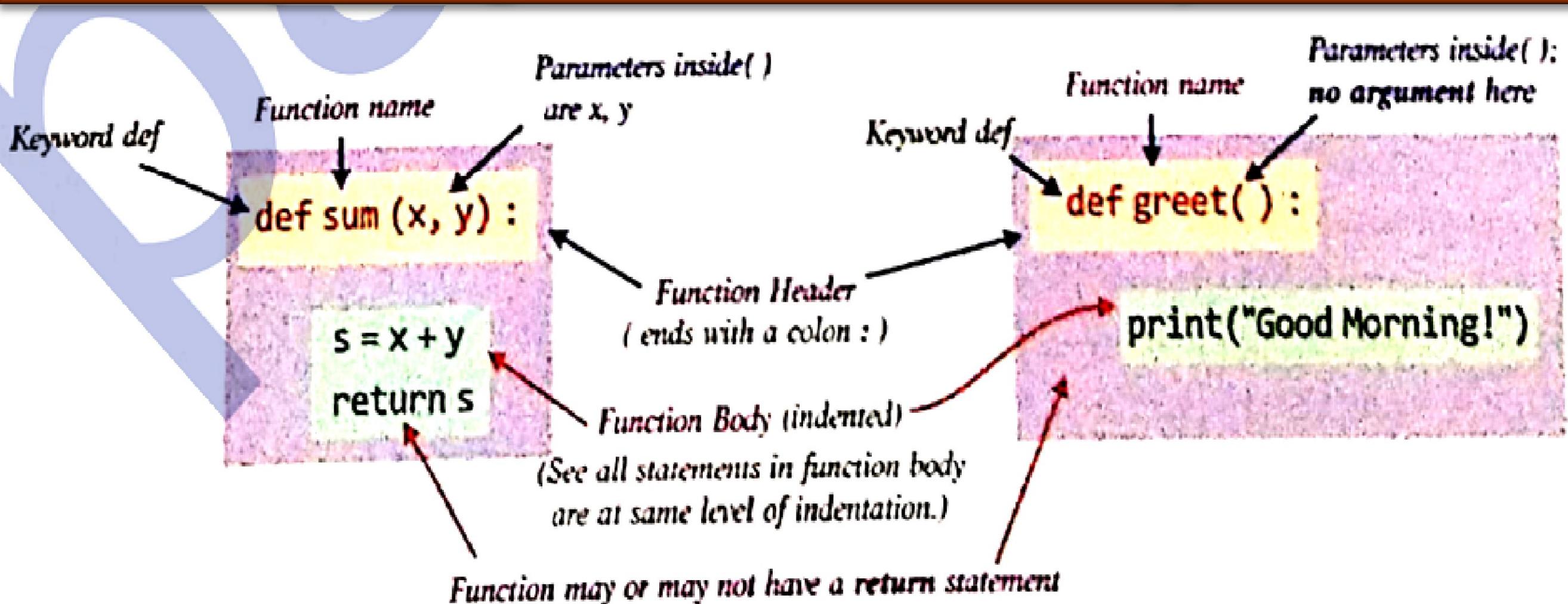
008 SIMPLE PROGRAM

```python
def calcsum(x,y):    1 usage
        sum= x+y

        return sum
```

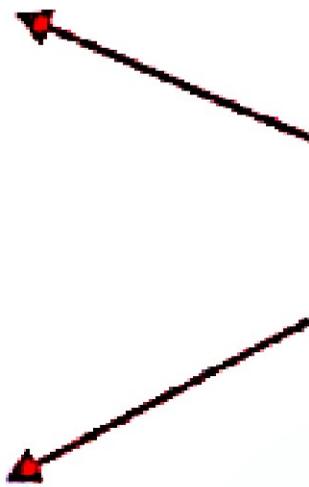# *Defining Functions in Python*

➢ **Define these terms formally :**

```python
# Sample Code 1

def sumOf3Multiples1( n ) :
    s = n * 1 + n * 2 + n * 3
    return s
```

*Both these functions are doing the same thing BUT first one is **returning** the computed value using return statement and*

second function is printing the computed value using print( ) statement

```python
# Sample Code 2
def sumOf3Multiples2( n ) :
    s = n * 1 + n * 2 + n * 3
    print(s)
```

009 RETURNING STATEMENTS

```python
def sumof3multiples1(n): 1 usage
    s=n*1+n*2+n*3

    return s

print(sumof3multiples1(5))
```

Defining Functions in Python

```python
# Sample Code 3
def areaOfSquare ( a ) :
    return a * a
```

```python
# Sample Code 4
def areaOfRectangle ( a, b) :
    return a * b
```

```python
# Sample Code 5
def perimeterCircle( r ) :
    return (2 * 3.1459 * r)
```

```python
# Sample Code 6
def perimeterRectangle( l, b) :
    return 2 * ( l + b )
```

```python
# Sample Code 7
def Quote( ) :
    print("\t Quote of the Day")
    print("Act Without Expectation!!")
    print("\t -Lao Tzu")
```

010 AREA OF A SQUARE

```python
def areaofsquare(a):  1 usage
    return a*a
print(areaofsquare(2))
```

011 PERIMETER OF A CIRCLE

```python
def perimetercircle(r):  1 usage
    return(2*3.1459*r)

print(perimetercircle(2))
```

012 QUOTE

```python
def quote():  2 usages
    print(" quote of the day")
    print("act without expectation! !")
    print("- lao tzu")
    return quote()
print(quote())
```

013 AREA OF A RECTANGLE

```python
def areaofractangle(a,b): 1 usage
    return a*b
print(areaofractangle(a: 2, b: 3))
```

014 PERIMETER OF A RECTANGLE
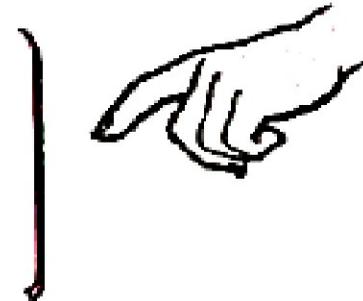
```python
def perimeterrecatangle(l,b): 1 usage
    return 2*(l+b)
print(perimeterrecatangle(l: 2,b: 5))
```

Defining Functions in Python

```
def greet( ) :
    print("Hi there!")


print("At the top-most level right now")
print("Inside" , __name__)
```

The top-level statements, i.e., the __main__ segment of this Python program. Python will start execution of this program from the segment.

Upon executing above program, Python will display :

```
At the top-most level right now

Inside __main__
```

Notice word ' __main__ ' in the output by Python interpreter. This is the result of statement :

print(..., __name__)

015 DEFINING FUNCTIONS IN PYTHON

```python
def greet():   1 usage
    print("hi there")


print("at the top - most level right now ")
print(greet())
```