Python

By

Dr. rabih ali sbera

Department of Computer Engineering Techniques-2 nd

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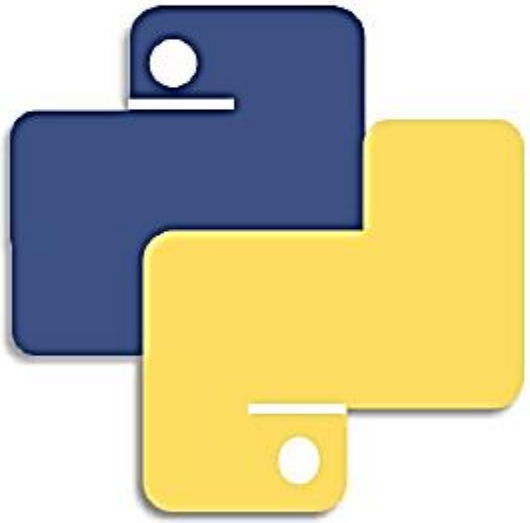

Python Programming

Functions

Functions

Functions and its use: Function is a group of related statements that perform a specific task.

Functions help break our program into smaller and modular chunks. As our program grows larger and larger, functions make it more organized and manageable. It avoids repetition and makes code reusable.

Basically, we can divide functions into the following two types:

2. **User-defined functions -** Functions defined by the users themselves.

```
def add_numbers(x,y):
   sum = x + y
    return sum
print("The sum is", add_numbers(5, 20))
```

Output:

The sum is 25

Functions

Example:

```
#here a and b are parameters

def add(a,b): #//function definition
 return a+b

#12 and 13 are arguments
#function call
result=add(12,13)
print(result)
```

Output:
25

```
def add(x,y):

    c=x+y

    return c

print(add(5,4))
```

Output:

9

```
def add_sub(x,y):

    c=x+y

    d=x-y

    return c,d

print(add_sub(10,5))
```

Output:

(15, 5)

Functions

```
def hello_f():
    return "hellocollege"
print(hello_f().upper())
```

Output:

HELLOCOLLEGE

```
# Passing Arguments
def hello(wish):
    return '{}'.format(wish)
print(hello("mrcet"))
```

Output:

mrcet

```
def wish(name,msg):
    """This function greets to
    the person with the provided message"""
        print("Hello",name + '  ' + msg)
wish("MRCET","Good morning!")
```

Output:

Hello MRCET Good morning!

Functions

```
def func(a, b=5, c=10):
  print ('a is', a, 'and b is', b, 'and c is', c)
func(3, 7)
```

```
a is 3 and b is 7 and c is 10
```

```
func(3, 7)
func(25, c=24)
func(c=50, a=100)
```

```
a is 3 and b is 7 and c is 10
a is 25 and b is 5 and c is 24
a is 100 and b is 5 and c is 50
```

```
def print_name(name1, name2):
 print (name1 + " and " + name2 + " are friends")
print_name(name2 = 'A',name1 = 'B')
```

```
B and A are friends
```

```
def wish(*names):
# names is a tuple with arguments
 for name in names:
  print("Hello",name)
wish("MRCET","CSE","SIR","MADAM")
```

```
Hello MRCET
Hello CSE
Hello SIR
Hello MADAM
```

Functions

#Program to find area of a circle using function use single return value function with argument.

```
pi=3.14
def areaOfCircle(r):

    return pi*r*r
r=int(input("Enter radius of circle"))

print(areaOfCircle(r))
```

```
pi=3.14
def areaOfCircle(r):
 return pi*r*r
r=int(input("Enter radius of circle"))
print(areaOfCircle(r))
```

```
Enter radius of circle 4
50.24
```

Functions

#program to find biggest of two numbers using functions.

```
def biggest(a,b):
    if a>b :
        return a
    else :
        return b


a=int(input("Enter a value"))
b=int(input("Enter b value"))
 #function call
big= biggest(a,b)
print("big number= ",big)
```

```
def biggest(a,b):
 if a>b :
  return a
 else :
  return b
a=int(input("Enter a value"))
b=int(input("Enter b value"))
#function call
big= biggest(a,b)
print("big number= ",big)
```

```
Enter a value 5
Enter b value 6
big number=  6
```

Functions

#Write a program to display mrecet cse dept 10 times on the screen. (while loop)

```
def usingFunctions():
    count =0
    while count<10:
        print("mrcet cse dept",count)
        count=count+1

usingFunctions()
```

```
def usingFunctions():
 count =0
 while count<10:
  print("mrcet cse dept",count)
  count=count+1
usingFunctions()
```

```
mrcet cse dept 0
mrcet cse dept 1
mrcet cse dept 2
mrcet cse dept 3
mrcet cse dept 4
mrcet cse dept 5
mrcet cse dept 6
mrcet cse dept 7
mrcet cse dept 8
mrcet cse dept 9
```