بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيمِ

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Chapter-8
Function & Recursion

1. ## Function:
   1. A function is group of statements performing a specific task.
   2. A function can be reused by the performance in a given program any number.

2. ## Example:

```
python > 🐍 function.py > ❾ func1
  1   # function
  2   def func1():
  3    print("alia")
  4    #function cal
  5   func1()
```

Output:

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS D:\sofware h> python -u "d:\sofware h\python\function.py"
alia
```

2. ## Function call:

A callable object is an object that can accept some arguments (also called parameters) and possibly return an object (often a tuple containing multiple objects

- ## Syntax:
   Func1()

1. ## Example:

```
python > 🐍 function.py > ❾ func1
  4    #function cal
  5   func1()
  6   # sum
  7   def func1(a,b):
  8       print("sum is" ,a+b)
  9       func1(2+7)
```

✞ Types of function:

Two types of function in python are given:

1. Built in functions
2. User defined functions

➕ Example of built in:

len(), print(),range()

1. ### Example of user define:

func1(), funct2()

1. ## Function with Argument:

An argument is the value that are sent to the function when it is called.

➕ Example:

```
python > 🐍 function.py > ⊘ func1
    ⋮     ⋮  print( sum 15  ,a+b)
    7      #function argument
    8      def func1(a,b):
    9          divide= a/b
   10          #print(divide)
   11          return divide
   12      a = func1(15,5)
   13      print(a)
   14
```

Output :

```
PS D:\sofware h> python -u "d:\sofware h\python\function.py"
3.0
```