Python Functions

Functions

In Python, 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.
Furthermore, it avoids repetition and makes code reusable.

```
def function_name(parameters):
        statement(s)
        return
```

Keyword def marks the start of function header.

Example of Function

```
def welcome(name):
        print("Hello, " + name + ". Good Evening!")
```

Call a function in python—Once we have defined a function, we can call it from another function, program or even the Python prompt. To call a function we simply type the function name with appropriate parameters.

Welcome('Thanos')

Output: ?

Return Statement

The return statement is used to exit a function and go back to the place from where it was called.

This statement can contain expression which gets evaluated and the value is returned. If there is no expression in the statement or the return statement itself is not present inside a function, then the function will return the None object.

Variables In Function

Scope of a variable is the portion of a program where the variable is recognized. Parameters and variables defined inside a function is not visible from outside. Hence, they have a local scope.

```
def my_func():
        x = 10
        print("Value inside function:",x)

x = 20
my_func()
print("Value outside function:",x)
```

Types of Function

Built in function

The Python interpreter has a number of functions that are always available for use. These functions are called built-in functions. For example, print() function prints the given object to the standard output device (screen) or to the text stream file.

There are 68 built in functions in python 3.7

Types of Function

User Defined Function

Functions that we define ourselves to do certain specific task are referred as user-defined functions

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

num1 = 5
num2 = 6

print("The sum is", add_numbers(num1, num2))
```