

a given programme any number of times.

The Syntax of a function () looks as follows :-

`def func1():`] declaration
`print("Hello")`
 Keyword

Function Call :-

Whenever we want to call a function we put the name of the function followed by brackets as follows -

`func1()`

function definition :-

The part containing the exact set of instructions which are executed during the function call.

Q.1 WAP to greet a user with "good day" Name using function?

→

```
def name(name1):
    print("Good day" + name1)
name1 = input("Enter user name ")
name(name1)
```

Output :- Enter user Name :- Sakshi
Good day Sakshi

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Types of function :-

There are two :-

- 1 Built in ()
- 2 User defined ()

Example of Built in

`len()`, `print()`

* function With Argum

Some values

We can put this

→ A function ca

```
def greet():
    gr = "Hello"
    return gr
a = greet(" ")
print(a)
```

* Default Param

default a

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Types of function in python.

There are two types of function in python.

1. Built in () — Already present in python
2. User defined () — define by the user.

Example of Built in () into →

len(), print(), range() etc-

function
followed

* function With Argument :-

A function can accept some values it can work with.

We can put this values in parenthesis {}

the code
executed

→ A function can also return values as on below.

```
def greet(name):  
    gr = "Hello" + name  
    return gr
```

function declaration
block

```
a = greet("Meera")  
print(a)
```

function Call

name using

are")

* Default Parameter value :-

We can have a value as default argument in a function

aski

If is Specify

Name = "Stranger"
in the line containing def. this value is used
when new argument are passed.

```
def greet (Name = "Stranger")
    gr = "Hello" name
    print(gr)
a = greet ("Meera")
```

Output :-

* **Recursion :-** Recursion is a function which call itself it is used to directly use mathematically formula as a function.

factorial :-

$$2! / 2 = 1 \times 2 = 2$$

$$3! = 1 \times 2 \times 3 =$$

$$4! = 1 \times 2 \times 3 \times 4 =$$

$$\text{fact}(n-1) \times n$$

$\text{fact}(n) = \text{fact}(n-1) \times n$

$$0! = 1$$

$$1! = 1$$

$\text{def function}(n)$
 $n \times \text{fact}(n-1)$
 $4 \times \text{fact}(3)$
 $4 \times 3 \times \text{fact}(2)$
 $4 \times 3 \times 2 \times \text{fact}(1)$
 $4 \times 3 \times 2 \times 1 \times \text{fact}(0)$
 $4 \times 3 \times 2 \times 1 \times 0 \times \text{fact}(0-1)$

$\frac{1}{2} *$ $\text{def recur_factorial}(n):$
 $\text{if } n == 1:$
 $\text{return } n$
 else:
 $\text{return } n * \text{recur_factorial}(n-1)$
 $\text{num} = 4$
 $\text{if } \text{num} < 0:$
 $\text{print}(\text{"Sorry, factorial does not exist for negative numbers"})$
 $\text{elif } \text{num} == 0:$
 $\text{print}(\text{"The factorial of 0 is 1"})$
 else:
 $\text{print}(\text{"The factorial of "}, \text{num}, \text{" is "}, \text{recur_factorial}(\text{num}))$

Output :-



Chapter - 6 Practice Set

1 Write a program to find Greatest of four numbers entered by the user?

