

## Python Essentials | Jan 2021 Batch 1 | Day 4 Overview

### DAY 04 AGENDA | Total Duration 1:36:14

- Function
- Scope of variables
- Recursion & Anonymous function
- File handling

*And, to understand in detail please go through the below TIMESTAMPS*

## Day 4 | Jan 2021 Batch 1 | LetsUpgrade - Python Essentials

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TIMESTAMP for EACH TOPIC:  
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02:12 - Function

03:46 - Scope of variable

17:49 - Recursion function

27:00 - Lambda function

33:06 - Module

42:55 - Package

58:44 - pip installation

1:09:05 - File handling

1:23:54 - Sending a mail from Python  
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### Function:

The function is a block of code that only runs when it is called.

#### Syntax:

```
def function_name(para1,para2,...para-n):  
    #block  
function_name(arg1,arg2,...arg-n)
```

#### Example:

```
def greet( ):
```

```
    print("Hello world")
greet( )
```

**Output:** Hello world

## Scope of variables:

**A variable is only available from inside the region it is created. This is called scope.**

- Local scope- A variable created inside a function belongs to the local scope of that function, and can only be used inside that function.
- Global scope- Variables that are created outside of a function are known as global **variables**. It can be used both inside and outside of a function.

**Example:**

```
v=15 #global variable
def greet( ):
    n=10 #local variable
    m=13
    v=n+m
    print("Result",v)
greet( )
```

**Output:** Result 23

## Recursion function:

A function call itself is called recursion function.

**Example:**

```
def fact(x):
    if n == 0:
        return 1
    return (n * factorial(n-1))
fact = 5
```

**Output:** 120

## Anonymous function:

The anonymous function is a function that is defined without a name. While normal functions are defined using the def keyword in Python, anonymous functions are defined using the lambda keyword. They are also called lambda functions.

Example:

```
Z= lambda a,b:a+b
print (Z(4,6))
```

**Output:** 10

## Module:

- Module is a python files with a .py extension.

- A python module can have a set of functions, classes or variables defined and implemented.

### Package:

A package is basically a directory with python files and a file with name `__init__.py`

### File handling:

A file is some information or data which stays in the computer storage device. Python gives you easy ways to manipulate these files.

#### File operation:

- Open ("o") - opens a file
- Read operation ("r")- opens a file for reading, error if the file does not exist.
- Write("w")- opens a file for writing, creates the file if it does not exist
- Append ("a")- opens a file for appending, creates the file if it does not exist.

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 Assignment and Materials for the day have been uploaded in the drive.

 Attendance Form: <https://forms.gle/jfwVSC8WbFjApZqw6>

 Assignment Submission Form: <https://forms.gle/NC2UA5pHGXveETbu7>

 Assignment and Materials

Details: <https://drive.google.com/drive/folders/1MfQblaTxWfG9qah86bzkjPox-QRnzRIO?usp=sharing>

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## Batch 1 | All Details | Python Essentials JAN 2021