

Lecture-22

Splitting Pathnames in Python :

os.path.split() method in Python is used to Split the path name into a pair *head* and *tail*. Here, *tail* is the last path name component and *head* is everything leading up to that.

For example consider the following path name:

```
path name = '/home/User/Desktop/file.txt'
```

In the above example '*file.txt*' component of path name is *tail* and '*/home/User/Desktop/*' is head. The tail part will never contain a slash; if name of the path ends with a slash, tail will be empty and if there is no slash in path name, head will be empty.

Example:

| path | head | tail |
|-------------------------------|-----------------------|------------|
| '/home/user/Desktop/file.txt' | '/home/user/Desktop/' | 'file.txt' |
| '/home/user/Desktop/' | '/home/user/Desktop/' | {empty} |
| 'file.txt' | {empty} | 'file.txt' |

Syntax: `os.path.split(path)`

Parameter:

path: A path-like object representing a file system path. A path-like object is either a str or bytes object representing a path.

Return Type: This method returns a tuple that represents head and tail of the specified path name.

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Code 1: Use of os.path.split() method

```
# Python program to explain os.path.split() method
```

```
# importing os module
```

```
import os
```

```
# path
```

```
path = '/home/User/Desktop/file.txt'
```

```
# Split the path in
```

```
# head and tail pair
```

```
head_tail = os.path.split(path)
```

```
print(head_tail)
```

```
# print head and tail
```

```
# of the specified path
```

```
print("Head path'=% s:" %head_tail[0])
```

```
print("Tail path ='% s'" %head_tail[1])
```

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OUTPUT:

```
('/home/User/Desktop', 'file.txt')
```

```
Head path'=/home/User/Desktop:'
```

```
Tail path ='file.txt'
```



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Course Code : BSCM 304

Course Name: Programming Using Python

Code:2

```
import os
# path
path = '/home/User/Desktop/'
# Split the path in
# head and tail pair
head_tail = os.path.split(path)
print(head_tail)
# print head and tail
# of the specified path
print("Head path'=% s:" %head_tail[0])
print("Tail path ='% s'" %head_tail[1])
```



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Name of the Faculty: Dr. O P Verma

Program Name: B.Sc. (Mathematics)

OUTPUT:

```
'/home/User/Desktop', '')  
Head path='/home/User/Desktop:'  
Tail path =''
```



List Directories and Files

All files and sub-directories inside a directory can be retrieved using the `listdir()` method.

This method takes in a path and returns a list of subdirectories and files in that path. If no path is specified, it returns the list of subdirectories and files from the current working directory.



Example:

```
import os
test=os.listdir("D:\\Python directory" )
print(test)
```

OUTPUT:

```
['12.py', '12345.py', 'abj.txt', 'Arti.txt', 'foo.txt', 'Love', 'naman.txt', 'pawan.py',  
'pawan.txt', 'rr.py']
```

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Example:

```
Import os  
test=os.listdir("D:\\Python directory\\Love" )  
print(test)
```

OUTPUT:

```
['abj.txt', 'above.txt']
```



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References:

1. Introduction to Computation and Programming using Python, by John Guttag, PHI Publisher
2. Fundamentals of Python first Programmes by Kenneth A Lambert, Copyrighted material Course Technology Inc. 1 st edition (6th February 2009)
3. <https://www.geeksforgeeks.org/python-programming-language>
4. <https://www.w3schools.com/python/>

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*****END OF THE LECTURE*****

*****THANK YOU*****

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