

Backup Files



What we did:

In last class we started learning about defining functions

In this class we to take backup of our files , we learned about os and shutil modules of python

How we did it:

We imported and used os module in python shell

```
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license"
>>> import os
>>>
```

We created a new folder using os module

```
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for
>>> import os
>>> os.mkdir("/home/rajeev/Videos/newFolder")
```

We also understood how we can check our current working directory.

```
>>> import os
>>> os.getcwd()
'/home/rajeev'
>>>
```

We also saw how we can check if the file path exists or not

```
>>> import os
>>>
... # Specify path
... path = '/usr/local/bin/'
>>>
... # Check whether the specified
... # path exists or not
... isExist = os.path.exists(path)
>>> print(isExist)
True
>>>
```

We saw how to use `splitext()`

```
>>> import os
>>>
... # path
... path = '/home/User/Desktop/file.txt'
>>>
... # Split the path in
... # root and ext pair
... root_ext = os.path.splitext(path)
>>>
... # print root and ext
... # of the specified path
... print("root part  ", root_ext[0])
root part  /home/User/Desktop/file
>>> print("ext part  ", root_ext[1], "\n")
ext part  .txt

>>>
...
```

We learned the usage of `os.listdir()`

```
>>> os.listdir()
['.config', 'question.md~', 'student02.png', '.crashlytics', 'Public', 'testCardSwap',
'.bash_logout', '.yarn', 'duet-jekyll-theme', '.viminfo', 'package-lock.json', 'tes',
't.js', '.hplip', 'jrnl', '.swp', '.bashrc', '.node_repl_history', '.bash_history', 't',
'estGit', '.git-credentials', 'node_modules', 'bedTimeStories', 'myStory', 'pixelStick',
'er.tex', '.test.js.un~', '.thumbnails', '.pixelSticker.tex.un~', 'hp-check.log', 'web',
'site', '.thunderbird', 'Music', 'pixelMath-teacher', '.httrack.ini', '.lessht', 'pix',
'elSticker.log', 'tutor', '.AndroidStudio3.5', 'pixelSticker2.tex', '.viminfz.tmp', 'S',
'hivam.png', '.react-native-cli', 'test', '.pki', '.java', '.yarnrc', 'tab-navigation',
'tar.xz', '.task', 'testFolder', '.gnome', 'firestoreScreenShots', '.gvfs', '..vimrc.u',
'n~', 'pixelSticker.aux', 'projectDictionary', '.ReviewJS.md.swp', 'quicklisp', '.andr',
'oid', 'buggy-project', '.viminfo.tmp', '.pixelSticker2.tex.swp', 'texmf', 'vimQuestio',
'nEditor', 'example.csv', '.vscode', 'grade 4 level breakdown 3', '.mozilla', 'snap',
```

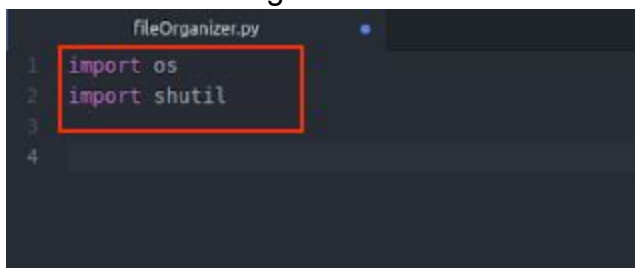
Then we saw the usage of shutil module

```
>>> # Source path
... source = "/home/rajeev/Documents/file.txt"
>>>
>>> # Destination path
... destination = "/home/rajeev/Documents/file1.txt"
>>>
>>> # Copy the content of
... # source to destination
... dest = shutil.copy(source, destination)
>>>
>>> # List files and directories
... # in "/home / User / Documents"
... print("After copying file:")
After copying file:
>>> print(os.listdir(path))
['book-santa-stage-7', 'Test', 'testingApi', 'png', 'barter-app-stage-5', 'pixelMath-teacher', 'book-santa-stage-8', 'pdf', 'book-santa-stage-10', 'Swapping_file', 'webinar_with_teachers', 'gettingFilesList', 'file.txt', 'xcf', 'MovingFile', 'book-santa-stage-13', 'Guessing_game', 'book-santa-stage-9', 'file1.txt', 'testfile', 'book-santa-stage-12', 'pixel-math', '.expo', 'book-santa-stage-11', 'Debug-C-37']
>>>
```

We saw a shutil program to move file


```
>>>
... # importing shutil module
... import shutil
>>>
... # path
... path = '/home/rajeev/Videos'
>>>
... # List files and directories
... # in '/home/rajeev/Videos/png'
... print("Before moving file:")
Before moving file:
>>> print(os.listdir(path))
['png', 'mp4']
>>>
...
... # Source path
... source = '/home/rajeev/Videos/mp4'
>>>
... # Destination path
... destination = '/home/rajeev/Videos/png'
>>>
... # Move the content of
... # source to destination
... dest = shutil.move(source, destination)
>>>
... # List files and directories
... # in "/home/rajeev/Videos"
... print("After moving file:")
After moving file:
>>> print(os.listdir(path))
['png']
```

We saw code to organize the files of a folder



```
fileOrganizer.py
1 import os
2 import shutil
3
4
```

```
fileOrganizer.py
import os
import shutil

# Write the name of the directory here,
# that needs to get sorted
# path = '/home/rajeev/Videos'
path = input("enter the name of the directory to be sorted :- ")
```

```
fileOrganizer.py
1 import os
2 import shutil
3
4 # Write the name of the directory here,
5 # that needs to get sorted
6 # path = '/home/rajeev/Videos'
7 path = input("enter the name of the directory to be sorted :- ")
8
9 # This will create a properly organized
10 # list with all the filename that is
11 # there in the directory
12 list_of_files = os.listdir(path)
13
14 # This will go through each and every file
15 for file in list_of_files:
16     name, ext = os.path.splitext(file)
17
18
```

```
FileOrganizer.py
8
9 # This will create a properly organized
10 # list with all the filename that is
11 # there in the directory
12 list_of_files = os.listdir(path)
13
14 # This will go through each and every file
15 for file in list_of_files:
16     name, ext = os.path.splitext(file)
17
18     # This is going to store the extension type
19     ext = ext[1:]
20
21     # This forces the next iteration,
22     # if it is the directory
23     if ext == '':
24         continue
25
26     # This will move the file to the directory
27     # where the name 'ext' already exists
28     if os.path.exists(path+'/'+ext):
29         shutil.move(path+'/'+file, path+'/'+ext+'/'+file)
30
31     # This will create a new directory,
32     # if the directory does not already exist
33     else:
34         os.makedirs(path+'/'+ext)
35         shutil.move(path+'/'+file, path+'/'+ext+'/'+file)
36
```

Then we wrote code to backup our files

```
backupFiles.py
1 import os
2 import shutil
3
4 source = input("enter source folder name:- ")
5 destination = input('enter destination folder name:- ')
6
7 source = source + '/'
8 destination = destination + '/'
9
10
11
```

```
backupFiles.py
1 import os
2 import shutil
3
4 source = input("enter source folder name:- ")
5 destination = input('enter destination folder name:- ')
6
7 source = source + '/'
8 destination = destination + '/'
9
10 list_of_files = os.listdir(source)
11 for file in list_of_files:
12     shutil.copy((source+file), destination)
13
```

```
fileOrganizer.py
1 import os
2 import shutil
3
4 # Write the name of the directory here,
5 # that needs to get sorted
6 # path = '/home/rajeev/Videos'
7 path = input("enter the name of the directory to be sorted :- ")
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15 for file in list_of_files:
16     name, ext = os.path.splitext(file)
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19     ext = ext[1:]
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21     # This forces the next iteration,
22     # if it is the directory
23     if ext == '':
24         continue
25
26
```

What's next?

In the next class, we will learn about classes in python.

