

Secure Coding

Lab-6

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1. Python script to get file names in directory

```
Q1.py > ...
1  import os
2  basepath = 'D:\CollegeStuff\Sem 6\SC\Lab'
3  for entry in os.listdir(basepath):
4      if os.path.isfile(os.path.join(basepath,entry)):
5          print(entry)
6
```

PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell
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Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS D:\CollegeStuff\Sem 6\SC\Lab> python -u "d:\CollegeStuff\Sem 6\SC\Lab\Q1.py"
FileRep.class
FileRep.java
Q1.py
PS D:\CollegeStuff\Sem 6\SC\Lab>

2. Script to get all directory names

```
Q1.py > ...
1  import os
2  basepath = 'D:\CollegeStuff\Sem 6\SC\Lab'
3  for entry in os.listdir(basepath):
4      if os.path.isdir(os.path.join(basepath,entry)):
5          print(entry)
6
```

PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL

PS D:\CollegeStuff\Sem 6\SC\Lab> python -u "d:\CollegeStuff\Sem 6\SC\Lab\Q1.py"
Lab4
PS D:\CollegeStuff\Sem 6\SC\Lab>

3. Get all directories and sub-directories

```
Q1.py > ...
1  import os
2
3  for dirpath,dirnames,files in os.walk('.'):
4      print('found directory:' + dirpath)
5
6
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL

```
PS D:\CollegeStuff\Sem 6\SC\Lab> python -u "d:\CollegeStuff\Sem 6\SC\Lab\Q1.py"
found directory:.
found directory:.\Lab4
found directory:.\Lab4\build
found directory:.\Lab4\build\script
found directory:.\Lab4\dist
found directory:.\Lab4\ScriptForLocking
found directory:.\Lab4\__pycache__
PS D:\CollegeStuff\Sem 6\SC\Lab>
```

4. Get all directories, sub-directories, and files recursively

Q1.py > ...

```
1  import os
2
3  for dirpath,dirnames,files in os.walk('.'):
4      print('found directory:' + dirpath)
5
6      for file_name in files:
7          print(file_name)
8
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL

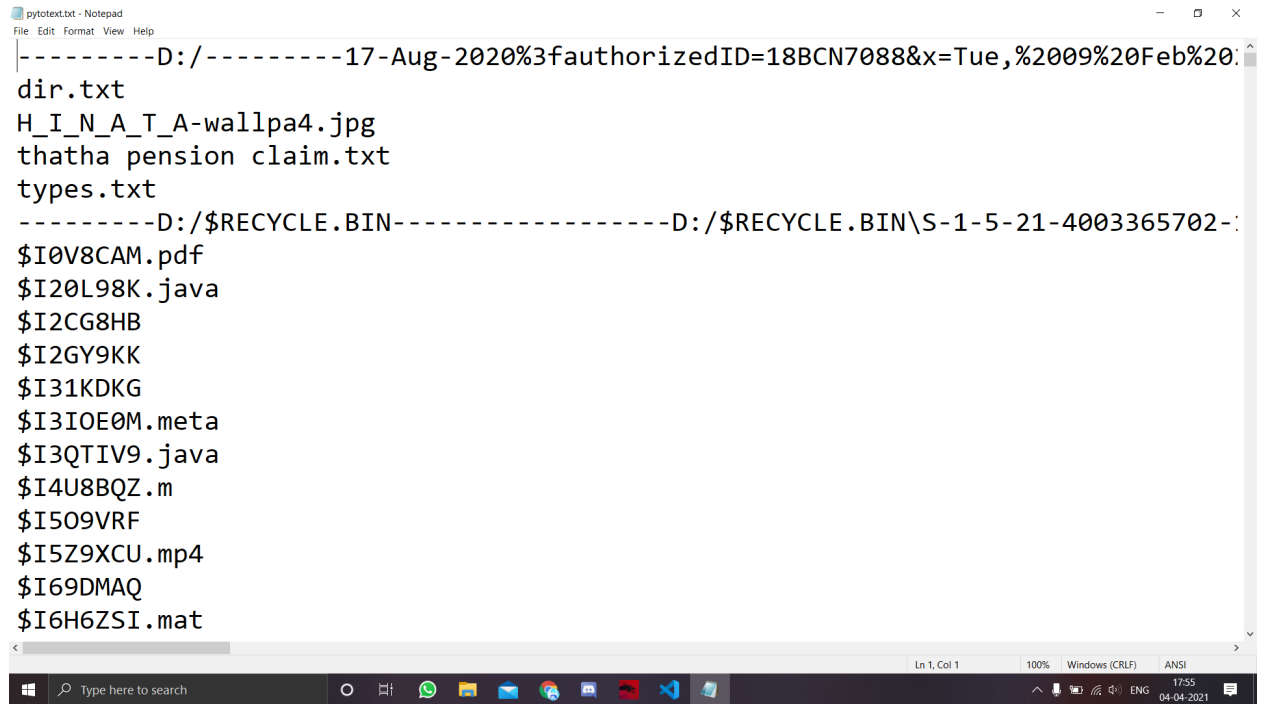
```
found directory:.\Lab4
script.py
script.spec
setup.py
found directory:.\Lab4\build
found directory:.\Lab4\build\script
Analysis-00.toc
base_library.zip
EXE-00.toc
PKG-00.pkg
PKG-00.toc
PYZ-00.pyz
PYZ-00.toc
script.exe.manifest
warn-script.txt
xref-script.html
found directory:.\Lab4\dist
library.zip
pyexpat.pyd
python36.dll
script.exe
select.pyd
unicodedata.pyd
_bz2.pyd
_ctypes.pyd
_hashlib.pyd
_lzma.pyd
_socket.pyd
_ssl.pyd
found directory:.\Lab4\ScriptForLocking
found directory:.\Lab4\__pycache__
script.cpython-36.pyc
PS D:\CollegeStuff\Sem 6\SC\Lab> |
```

5. Python script to get all file names and directories in a drive recursively and save to a text file

```
Q1.py > ...
1 import os
2 f=open("pytotext.txt","w+")
3
4 for dirpath, dirnames, files in os.walk('D:/'):
5     print('Found directory: '+dirpath)
6     f.write("-----"+dirpath+"-----")
7     for file_name in files:
8         print(file_name)
9         f.write(file_name+"\n")
10
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL

to-have-value.js
utils.js
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules/ansi-styles
index.d.ts
index.js
license
package.json
readme.md
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules/chalk
index.d.ts
license
package.json
readme.md
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules/chalk/source
index.js
templates.js
util.js
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules/color-convert
CHANGELOG.md
conversions.js
index.js
LICENSE
package.json
README.md
route.js
Found directory: D:/CollegeStuff/Sem 6/Cloud/chat-app/client/node_modules/@testing-library/jest-dom/node_modules/color-name
index.js
LICENSE



A screenshot of a Notepad window titled 'pytotext.txt - Notepad'. The window contains a list of files and directories. The first line is a long string: '-----D:/-----17-Aug-2020%3fauthorizedID=18BCN7088&x=Tue,%2009%20Feb%20:'. Below this are several file names: 'dir.txt', 'H_I_N_A_T_A-wallpa4.jpg', 'thatha pension claim.txt', and 'types.txt'. The next line is another long string: '-----D:/ \$RECYCLE.BIN-----D:/ \$RECYCLE.BIN\S-1-5-21-4003365702-:'. This is followed by a list of files: '\$I0V8CAM.pdf', '\$I20L98K.java', '\$I2CG8HB', '\$I2GY9KK', '\$I31KDKG', '\$I3IOE0M.meta', '\$I3QTIV9.java', '\$I4U8BQZ.m', '\$I509VRF', '\$I5Z9XCU.mp4', '\$I69DMAQ', and '\$I6H6ZSI.mat'. The window has a standard Windows taskbar at the bottom with various icons and a search bar.

```
-----D:/-----17-Aug-2020%3fauthorizedID=18BCN7088&x=Tue,%2009%20Feb%20:
dir.txt
H_I_N_A_T_A-wallpa4.jpg
thatha pension claim.txt
types.txt
-----D:/ $RECYCLE.BIN-----D:/ $RECYCLE.BIN\S-1-5-21-4003365702-:
$I0V8CAM.pdf
$I20L98K.java
$I2CG8HB
$I2GY9KK
$I31KDKG
$I3IOE0M.meta
$I3QTIV9.java
$I4U8BQZ.m
$I509VRF
$I5Z9XCU.mp4
$I69DMAQ
$I6H6ZSI.mat
```

6. Python script to create 4 new directories using powershell

Q1.py > ...

```
1 import os, subprocess, sys
2
3 f=open("D:\\pythonpowershell.ps1","w+")
4 f.write("D:;mkdir Folder1;mkdir Folder2;mkdir Folder3;mkdir Folder4")
5 f.close()
6
7 p = subprocess.Popen(["powershell.exe",
8     "D:\\pythonpowershell.ps1"], |
9     stdout=sys.stdout)
10 p.communicate()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell

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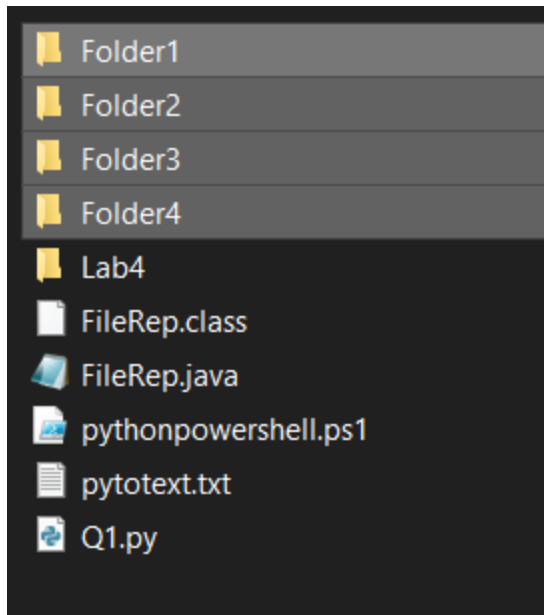
Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS D:\CollegeStuff\Sem 6\SC\Lab> python -u "d:\CollegeStuff\Sem 6\SC\Lab\Q1.py"

Directory: D:\CollegeStuff\Sem 6\SC\Lab

Mode	LastWriteTime		Length	Name
----	-----	-----	-----	----
d-----	04-04-2021	22:55		Folder1
d-----	04-04-2021	22:55		Folder2
d-----	04-04-2021	22:55		Folder3
d-----	04-04-2021	22:55		Folder4

PS D:\CollegeStuff\Sem 6\SC\Lab>



7. Powershell 5 most memory consuming processes

```
PS C:\Users\santhosh> Get-Process | Sort-Object -Descending WS | Select -first 5
```

Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
492	148	319084	336180	153.91	16960	17	Teams
1744	174	206480	279868	15.58	19028	17	SearchUI
996	101	353924	260644		4512	0	MsMpEng
825	39	343844	242288	26.97	6776	17	chrome
2152	71	120748	207532	55.03	12612	17	chrome

```
PS C:\Users\santhosh> ps | sort -p ws | -last 5
```

-last : The term '-last' is not recognized as the name of a cmdlet, function, script

At line:1 char:19

+ ps | sort -p ws | -last 5

+

+ CategoryInfo : ObjectNotFound: (-last:String) [], CommandNotFoundException

+ FullyQualifiedErrorId : CommandNotFoundException

```
PS C:\Users\santhosh> ps | sort -p ws | --last 5
```

At line:1 char:21

+ ps | sort -p ws | --last 5

+

Missing expression after unary operator '--'.

At line:1 char:19

+ ps | sort -p ws | --last 5

+

Expressions are only allowed as the first element of a pipeline.

At line:1 char:21

+ ps | --last 5

+

Unexpected token 'last' in expression or statement.

+ CategoryInfo : ParserError: (:) [], ParentContainsErrorRecordException

+ FullyQualifiedErrorId : MissingExpressionAfterOperator

```
PS C:\Users\santhosh> ps | sort -p ws | select -last 5
```

Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
2143	70	119408	206508	55.52	12612	17	chrome
827	39	295528	242740	27.50	6776	17	chrome
1005	101	354420	274120		4512	0	MsMpEng
1744	174	206480	279868	15.58	19028	17	SearchUI
492	149	321596	338464	156.67	16960	17	Teams