Lab 6 – Powershell & Automation

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Find the first five processes using the most memory

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

Handles  NPM(K)    PM(K)      WS(K)     CPU(s)      Id  SI ProcessName
-------  ------    -----      -----     ------      --  -- -----------
   1110      67   163828     215412                18088  21 Teams
    439      34   185696     217872                17192  21 chrome
   2700     164   197228     239276                23096  21 SearchUI
    492      37   233004     292096      43.67     23508  20 chrome
    482     155   329088     322188                10260  21 Teams
```

Write a python script to get all the file names in the current directory

```
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> from os import listdir
>>> from os.path import isfile, join
>>> mypath=os.getcwd()
>>> files = [f for f in listdir(mypath) if isfile(join(mypath, f))]
>>> print(files)
['lab3.pdf', 'lab4.pdf', 'LBA2.pdf']
```

- ***Write a python script to get all the directory names in the current directory***

```
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> mypath=os.getcwd()
>>> print([ dir for dir in os.listdir(mypath) if os.path.isdir(os.path.join(mypath, dir)) ])
['task1']
>>>
```

- ***Write a python script to get all the directory and subdirectory names in the current directory***

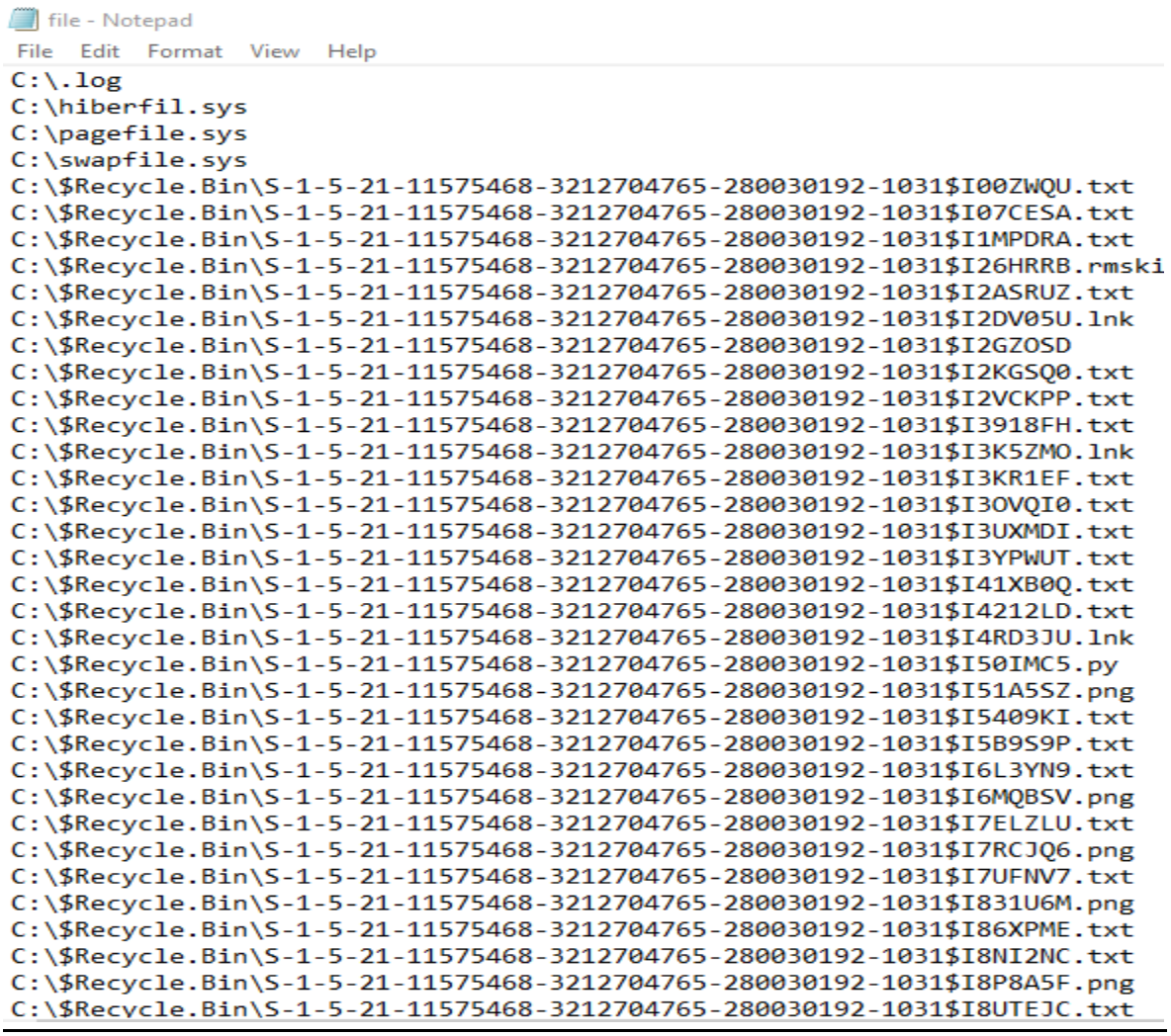
```
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> for root, dirs, files in os.walk(".");
...     for dirname in dirs:
...         print(dirname)
...
task1
task2
>>>
```

- ***Write a python script to get all the file name, directory and all the subdirectory names (recursively) in the current directory***

```
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> path=os.getcwd()
>>> filelist = []
>>> for root, dirs, files in os.walk(path):
...     for file in files:
...         filelist.append(os.path.join(root,file))
...
>>> for name in filelist:
...     print(name)
...
C:\Users\chait\OneDrive\Documents\secure_coding\lab3.pdf
C:\Users\chait\OneDrive\Documents\secure_coding\lab4.pdf
C:\Users\chait\OneDrive\Documents\secure_coding\LBA2.pdf
C:\Users\chait\OneDrive\Documents\secure_coding\task1\1.txt
C:\Users\chait\OneDrive\Documents\secure_coding\task1\2.txt
C:\Users\chait\OneDrive\Documents\secure_coding\task1\3.txt
C:\Users\chait\OneDrive\Documents\secure_coding\task1\task2\4.txt
```

- ***<u>Write a python script to get all the file name, directory and all the subdirectory names (recursively) in the current drive and write it to a text file.</u>***

```
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> import pathlib
>>> drive = pathlib.Path.home().drive
>>> path = drive+"\\"
>>> with open("file.txt", "w", encoding="utf-8") as filewrite:
...     for r, d, f in os.walk(path):
...         for file in f:
...             filewrite.write(f"{r + file}\n")
...
```



- ***<u>Write a python script which creates four new files in the current directory using Powershell.</u>***

```
PS C:\Users\chait> cd C:\Users\chait\OneDrive\Documents\secure_coding
PS C:\Users\chait\OneDrive\Documents\secure_coding> python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import os
>>> path = os.getcwd()
>>> for x in range(1,5):
...     with open(path+"\{}.txt".format(x), "w") as f:
...           f.write("\n this my files ")
...
16
16
16
16
>>>
```