

Secure Coding (CSE 2010)

LAB Experiment:

Done by,

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SLOT: L23+L24

Question 1:

Find the five processes using the most memory.

```
Windows PowerShell
PS C:\Users\91630> ps | sort -p ws | select -last 5
```

Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
627	59	775248	271752		5308	0	oracle
1845	148	196440	273968	12.47	11752	1	SearchApp
839	43	462800	296784	114.50	15380	1	Teams
474	151	305104	323136	110.03	5076	1	Teams
526	127	281612	347100	97.02	4964	1	Teams

```
PS C:\Users\91630>
```

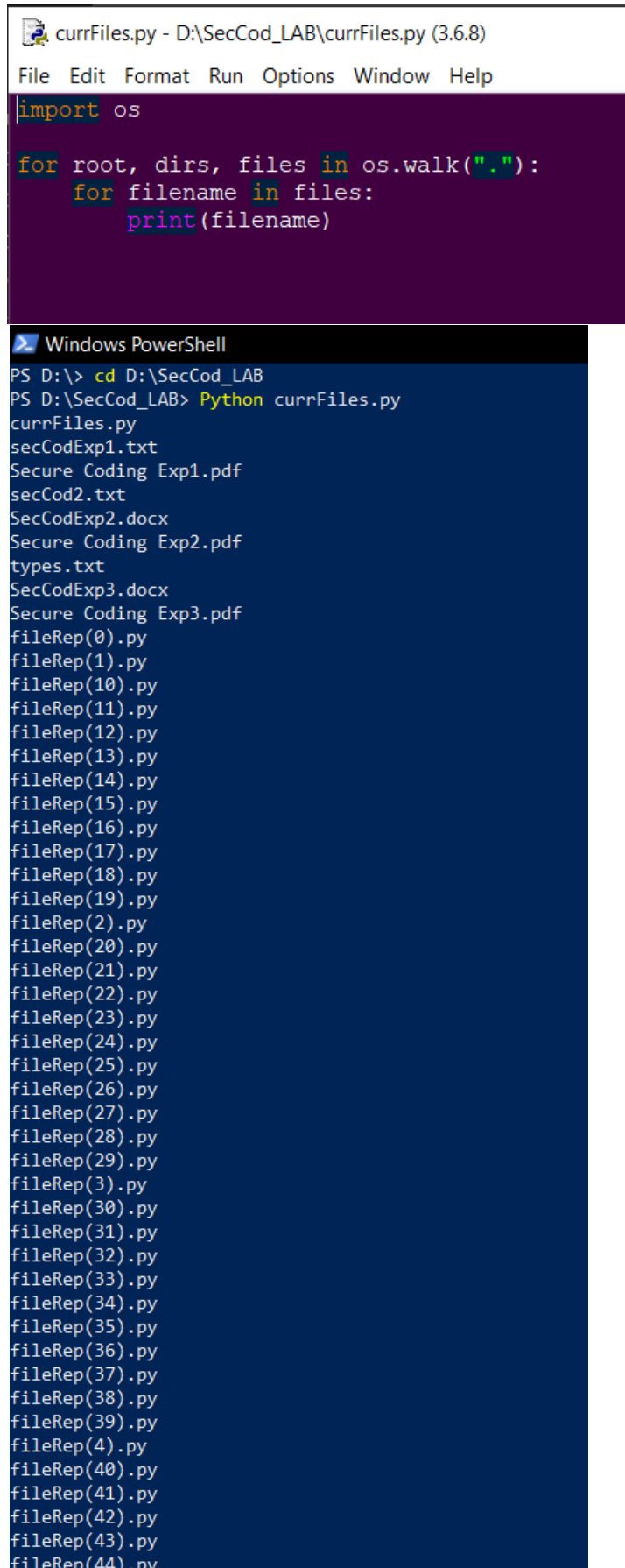
Question 2:

Assignment

- Write a python script to get all the file names in the current directory
- Write a python script to get all the directory names in the current directory
- Write a python script to get all the directory and subdirectory names in the current directory
- Write a python script to get all the file name, directory and all the subdirectory names (recursively) in the current directory
- 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.
- Write a python script which creates four new files in the current directory using Powershell.

Solutions:-

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



The image shows a screenshot of a Python script and its execution. The top part is a code editor window titled 'currFiles.py - D:\SecCod_LAB\currFiles.py (3.6.8)'. It contains the following Python code:

```
import os

for root, dirs, files in os.walk("."):
    for filename in files:
        print(filename)
```

The bottom part is a Windows PowerShell window titled 'Windows PowerShell'. It shows the command 'cd D:\SecCod_LAB' and 'Python currFiles.py' being executed. The output lists all files in the current directory, including 'currFiles.py', 'secCodExp1.txt', 'Secure Coding Exp1.pdf', 'secCod2.txt', 'SecCodExp2.docx', 'Secure Coding Exp2.pdf', 'types.txt', 'SecCodExp3.docx', 'Secure Coding Exp3.pdf', and a series of 'fileRep' files with indices from 0 to 44.

```
PS D:\> cd D:\SecCod_LAB
PS D:\SecCod_LAB> Python currFiles.py
currFiles.py
secCodExp1.txt
Secure Coding Exp1.pdf
secCod2.txt
SecCodExp2.docx
Secure Coding Exp2.pdf
types.txt
SecCodExp3.docx
Secure Coding Exp3.pdf
fileRep(0).py
fileRep(1).py
fileRep(10).py
fileRep(11).py
fileRep(12).py
fileRep(13).py
fileRep(14).py
fileRep(15).py
fileRep(16).py
fileRep(17).py
fileRep(18).py
fileRep(19).py
fileRep(2).py
fileRep(20).py
fileRep(21).py
fileRep(22).py
fileRep(23).py
fileRep(24).py
fileRep(25).py
fileRep(26).py
fileRep(27).py
fileRep(28).py
fileRep(29).py
fileRep(3).py
fileRep(30).py
fileRep(31).py
fileRep(32).py
fileRep(33).py
fileRep(34).py
fileRep(35).py
fileRep(36).py
fileRep(37).py
fileRep(38).py
fileRep(39).py
fileRep(4).py
fileRep(40).py
fileRep(41).py
fileRep(42).py
fileRep(43).py
fileRep(44).py
```


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

```
currDir.py - D:/currDir.py (3.6.8)
File Edit Format Run Options Window Help
import os

for root, dirs, files in os.walk("."):
    for direct in dirs:
        print(direct)
```

```
Windows PowerShell
PS D:\SecCod_LAB> cd..
PS D:\> Python currDir.py
$RECYCLE.BIN
Business Analytics
Certificates
Computer Networks LAB(CSE3003)
Computer Networks(CSE3003)
Computer Organization and Architecture (ECE2002)
Database Management System(CSE2007)
DBMS LAB
EpicLibrary
EpicLibrary_tej
JavaP
LinearRegression-main
Machine Learning(CSE3008)
ML LAB
Movies
msdownld.tmp
plan
Recovery
SecCod_LAB
Secure Coding (CSE2010)
SEMESTER-3
Shabnam NEETPG
SteamLibrary
System Volume Information
TV Series
WATCH_DOGS2
S-1-5-21-3071136278-1406774557-1471719346-1001
PROJECT
lab1
lab2
lab3
lab4
LAB1
LAB2
LAB3
LAB4
AbsoluteDrift
Fortnite
HITMAN
Watchdogs2
.egstore
absolutedrift_Data
Pending
Managed
```

3. Write a python script to get all the directory and subdirectory names in the current directory.

 subdirs.py - D:/subdirs.py (3.6.8)

File Edit Format Run Options Window Help

```
import os

for root, dirs, files in os.walk("."):
    for direct in dirs:
        subdirs= [x[0] for x in os.walk('.')]
        print(direct)
        print(subdirs)
```

[illegible]

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

```
subdirs_recursive.py - D:/SEMESTER-3/subdirs_recursive.py (3.6.8)
File Edit Format Run Options Window Help
import os
for dirpath, dirs, files in os.walk("."):
    path = dirpath.split('/')
    print('|', (len(path))*'---', '[' ,os.path.basename(dirpath), ']')
    for f in files:
        print('|', len(path)*'---', f)
```

```
Windows PowerShell
PS D:\SEMESTER-3> Python subdirs_recursive.py
| --- [ . ]
| --- subdirs.py
| --- subdirs_recursive.py
| --- [ 19BCI7052_OOPS_lab ]
| --- lab10report.docx
| --- lab10_19BCI7052.pdf
| --- lab11report.docx
| --- lab11_19BCI7052.pdf
| --- lab12report.docx
| --- lab12_19BCI7052.pdf
| --- lab1_19BCI7052.pdf
| --- lab1_Report.docx
| --- lab2_19BCI7052.pdf
| --- lab2_Report.docx
| --- lab3_19BCI7052.pdf
| --- lab3_report.docx
| --- lab4_19BCI7052.pdf
| --- lab4_Report.docx
| --- lab5report.docx
| --- lab5_19BCI7052.pdf
| --- lab6_19BCI7052.pdf
| --- lab6_report.docx
| --- lab7Report.docx
| --- lab7_19BCI7052.pdf
| --- lab8Report.docx
| --- lab8_19BCI7052.pdf
| --- lab9report.docx
| --- lab9_19BCI7052.pdf
| --- [ LAB1 ]
| --- InchConversion.class
| --- InchConversion.java
| --- JobPricing.class
| --- JobPricing.java
| --- Lease.class
| --- Lease.java
| --- PaintCalculator.class
| --- PaintCalculator.java
| --- Percentages.class
| --- Percentages.java
| --- Percentages2.class
| --- Percentages2.java
| --- ShowStudent.class
| --- ShowStudent.java
| --- ShowStudent2.class
| --- ShowStudent2.java
| --- Student.class
| --- Student.java
| --- TestLease.class
| --- TestLease.java
| --- [ LAB10 ]
| --- JPhotoFrame$1.class
| --- JPhotoFrame.class
| --- JPhotoFrame.java
| --- JVacationRental$BedroomsListener.class
```

5. 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.

```
subdirs_recursive_txt.py - D:/SEMESTER-3/subdirs_recursive_txt.py (3.6.8)
File Edit Format Run Options Window Help
import os
import subprocess
for dirpath, dirs, files in os.walk("."):
    path = dirpath.split('/')
    print ('|', (len(path))*'---', ['|',os.path.basename(dirpath), '|'])
    for f in files:
        print ('|', len(path)*'---', f)

with open("output_recursive.txt", "w+") as output:
    subprocess.call(["python", "./script.py"], stdout=output);
```

```
Windows PowerShell
PS D:\SEMESTER-3> Python subdirs_recursive_txt.py
--- [ . ]
--- subdirs.py
--- subdirs_recursive.py
--- subdirs_recursive_txt.py
--- [ 19BCI7052_00PS_lab ]
--- lab10report.docx
--- lab10_19BCI7052.pdf
--- lab11report.docx
--- lab11_19BCI7052.pdf
--- lab12report.docx
--- lab12_19BCI7052.pdf
--- lab1_19BCI7052.pdf
--- lab1_Report.docx
--- lab2_19BCI7052.pdf
--- lab2_Report.docx
--- lab3_19BCI7052.pdf
--- lab3_report.docx
--- lab4_19BCI7052.pdf
--- lab4_Report.docx
--- lab5report.docx
--- lab5_19BCI7052.pdf
--- lab6_19BCI7052.pdf
--- lab6_report.docx
--- lab7Report.docx
--- lab7_19BCI7052.pdf
--- lab8Report.docx
--- lab8_19BCI7052.pdf
--- lab9report.docx
--- lab9_19BCI7052.pdf
--- [ LAB1 ]
--- InchConversion.class
--- InchConversion.java
--- JobPricing.class
--- JobPricing.java
--- Lease.class
--- Lease.java
--- PaintCalculator.class
--- PaintCalculator.java
--- Percentages.class
--- Percentages.java
--- Percentages2.class
--- Percentages2.java
--- ShowStudent.class
--- ShowStudent.java
--- ShowStudent2.class
--- ShowStudent2.java
--- Student.class
--- Student.java
--- TestLease.class
--- TestLease.java
--- [ LAB10 ]
--- JPhotoFrame$1.class
--- JPhotoFrame.class
--- JPhotoFrame.java
```



output_recursive - Notepad

File Edit Format View Help

```
--- [ . ]
--- subdirs.py
--- subdirs_recursive.py
--- subdirs_recursive_txt.py
--- [ 198CI7052_OOPS_lab ]
--- lab10report.docx
--- lab10_198CI7052.pdf
--- lab11report.docx
--- lab11_198CI7052.pdf
--- lab12report.docx
--- lab12_198CI7052.pdf
--- lab1_198CI7052.pdf
--- lab1_Report.docx
--- lab2_198CI7052.pdf
--- lab2_Report.docx
--- lab3_198CI7052.pdf
--- lab3_report.docx
--- lab4_198CI7052.pdf
--- lab4_Report.docx
--- lab5report.docx
--- lab5_198CI7052.pdf
--- lab6_198CI7052.pdf
--- lab6_report.docx
--- lab7Report.docx
--- lab7_198CI7052.pdf
--- lab8Report.docx
--- lab8_198CI7052.pdf
--- lab9report.docx
--- lab9_198CI7052.pdf
--- [ LAB1 ]
--- InchConversion.class
--- InchConversion.java
--- JobPricing.class
--- JobPricing.java
--- Lease.class
--- Lease.java
--- PaintCalculator.class
--- PaintCalculator.java
--- Percentages.class
--- Percentages.java
--- Percentages2.class
--- Percentages2.java
--- ShowStudent.class
--- ShowStudent.java
--- ShowStudent2.class
--- ShowStudent2.java
--- Student.class
--- Student.java
--- TestLease.class
--- TestLease.java
--- [ LAB10 ]
--- JPhotoFrame$1.class
--- JPhotoFrame.class
--- JPhotoFrame.java
--- JVacationRental$BedroomsListener.class
--- JVacationRental$ListenerLoc.class
--- JVacationRental$ListenerMeals.class
--- JVacationRental$ListenerRooms.class
--- JVacationRental$LocationsListener.class
--- JVacationRental$MealsListener.class
--- JVacationRental.class
--- JVacationRental.java
--- [ LAB11 ]
```


6. Write a python script which creates four new files in the current directory using Powershell.

```
Windows PowerShell
PS D:\SEMESTER-3> ni file_1, file_2, file_3, file_4

Directory: D:\SEMESTER-3

Mode                LastWriteTime         Length Name
----                -
-a----          11-03-2021   08:22 AM             0 file_1
-a----          11-03-2021   08:22 AM             0 file_2
-a----          11-03-2021   08:22 AM             0 file_3
-a----          11-03-2021   08:22 AM             0 file_4

PS D:\SEMESTER-3> █
```

Name	Date modified	Type	Size
19BCI7052_OOPS_lab	25-12-2020 05:11 PM	File folder	
AI CSE3002 lab	12-12-2020 08:28 PM	File folder	
AppliedStat	10-01-2021 11:35 AM	File folder	
AppliedStats MAT1011 LAB	12-12-2020 08:50 PM	File folder	
CG CSE2006 lab	08-12-2020 10:52 AM	File folder	
DMS MAT1003	05-01-2021 08:39 PM	File folder	
Misll	09-01-2021 09:14 AM	File folder	
OOPS CSE2005 materials	21-11-2020 10:35 AM	File folder	
Optimization MAT2003 lab	12-12-2020 08:49 PM	File folder	
file_1	11-03-2021 08:22 AM	File	0 KB
file_2	11-03-2021 08:22 AM	File	0 KB
file_3	11-03-2021 08:22 AM	File	0 KB
file_4	11-03-2021 08:22 AM	File	0 KB
output_recursive	11-03-2021 08:12 AM	Text Document	16 KB
subdirs	11-03-2021 07:23 AM	Python File	1 KB
subdirs_recursive	11-03-2021 07:55 AM	Python File	1 KB
subdirs_recursive_txt	11-03-2021 08:09 AM	Python File	1 KB

- To create .txt files, add .txt extension at the end of the command.

```
Windows PowerShell
PS D:\SEMESTER-3> ni file_1, file_2, file_3, file_4.txt

Directory: D:\SEMESTER-3

Mode                LastWriteTime         Length Name
----                -
-a-----         11-03-2021   08:25 AM             0 file_1
-a-----         11-03-2021   08:25 AM             0 file_2
-a-----         11-03-2021   08:25 AM             0 file_3
-a-----         11-03-2021   08:25 AM             0 file_4.txt

PS D:\SEMESTER-3> 
```