

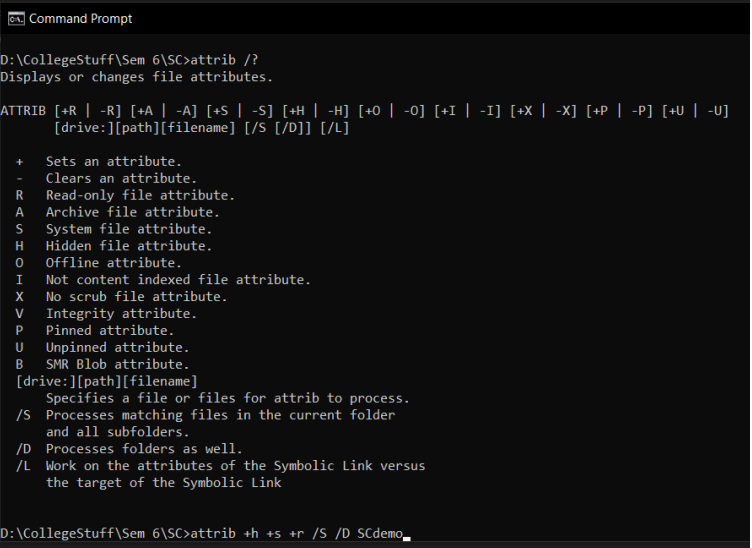
Secure Coding

Lab 4

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1. Attrib command:

Name	Date modified	Type	Size
Lab	20-02-2021 18:52	File folder	
replicationdelete.bat	20-02-2021 19:07	Windows Batch File	1 KB
SCdemo	05-03-2021 18:28	File folder	



```
D:\CollegeStuff\Sem 6\SC>attrib /?
Displays or changes file attributes.

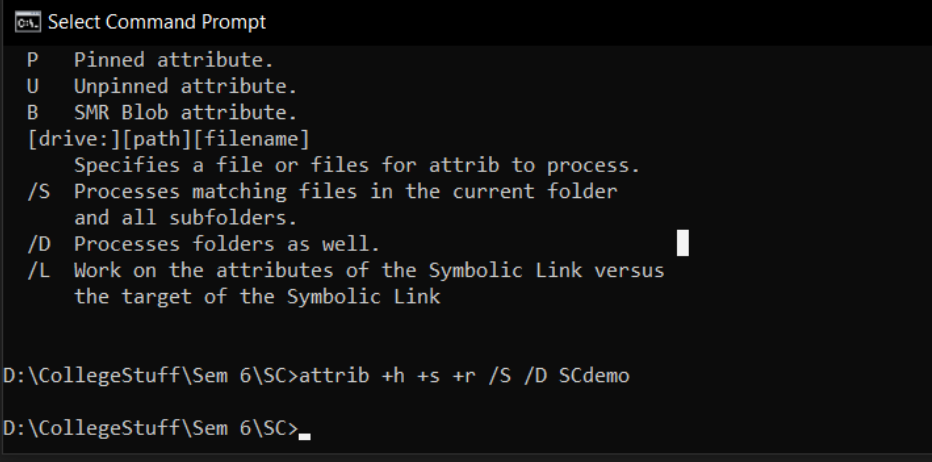
ATTRIB [+R | -R] [+A | -A] [+S | -S] [+H | -H] [+O | -O] [+I | -I] [+X | -X] [+P | -P] [+U | -U]
[drive:][path][filename] [/S [/D]] [/L]

+ Sets an attribute.
- Clears an attribute.
R Read-only file attribute.
A Archive file attribute.
S System file attribute.
H Hidden file attribute.
O Offline attribute.
I Not content indexed file attribute.
X No scrub file attribute.
V Integrity attribute.
P Pinned attribute.
U Unpinned attribute.
B SMR Blob attribute.
[drive:][path][filename]
Specifies a file or files for attrib to process.
/S Processes matching files in the current folder
and all subfolders.
/D Processes folders as well.
/L Work on the attributes of the Symbolic Link versus
the target of the Symbolic Link

D:\CollegeStuff\Sem 6\SC>attrib +h +s +r /S /D SCdemo_
```

Hiding folder:

Name	Date modified	Type	Size
Lab	20-02-2021 18:52	File folder	
replicationdelete.bat	20-02-2021 19:07	Windows Batch File	1 KB
SCdemo	05-03-2021 18:28	File folder	



```
Select Command Prompt

P Pinned attribute.
U Unpinned attribute.
B SMR Blob attribute.
[drive:][path][filename]
Specifies a file or files for attrib to process.
/S Processes matching files in the current folder
and all subfolders.
/D Processes folders as well.
/L Work on the attributes of the Symbolic Link versus
the target of the Symbolic Link

D:\CollegeStuff\Sem 6\SC>attrib +h +s +r /S /D SCdemo

D:\CollegeStuff\Sem 6\SC>
```

Folder is hidden. Visible due to settings.

Reverting hidden attribute:

Name	Date modified	Type
Lab	20-02-2021 18:52	File folder
replicationdelete.bat	20-02-2021 19:07	Windows Batch file
SCdemo	05-03-2021 18:28	File folder


```
C:\> Command Prompt

B   SMR Blob attribute.
[drive:][path][filename]
    Specifies a file or files for attrib to process.
/S   Processes matching files in the current folder
    and all subfolders.
/D   Processes folders as well.
/L   Work on the attributes of the Symbolic Link versus
    the target of the Symbolic Link

D:\CollegeStuff\Sem 6\SC>attrib +h +s +r /S /D SCdemo

D:\CollegeStuff\Sem 6\SC>attrib -h -s -r /S /D SCdemo

D:\CollegeStuff\Sem 6\SC>
```

2. Powercfg command:

Battery report:

Name	Date modified	Type	Size
Lab	20-02-2021 18:52	File folder	
SCdemo	05-03-2021 18:28	File folder	
battery-report.html	05-03-2021 18:36	Chrome HTML Do...	51 KB

Command Prompt	
/LASTWAKE	Reports information about what woke the system from the last sleep transition.
/WAKETIMERS	Enumerates active wake timers.
/REQUESTS	Enumerates application and driver Power Requests.
/REQUESTSOVERRIDE	Sets a Power Request override for a particular Process, Service, or Driver.
/ENERGY	Analyzes the system for common energy-efficiency and battery life problems.
/BATTERYREPORT	Generates a report of battery usage.
/SLEEPSTUDY	Generates a diagnostic system power transition report.
/SRUMUTIL	Dumps Energy Estimation data from System Resource Usage Monitor (SRUM).
/SYSTEMSLEEPDIAGNOSTICS	Generates a diagnostic report of system sleep transitions.
/SYSTEMPOWERREPORT	Generates a diagnostic system power transition report.
/POWERTHROTTLING	Control power throttling for an application.


```

D:\CollegeStuff\Sem 6\SC>powercfg /BATTERYREPORT
Battery life report saved to file path D:\CollegeStuff\Sem 6\SC\battery-report.html.

```

Power states over the last 3 days

START TIME	STATE	SOURCE	CAPACITY REMAINING	
2021-03-02 19:27:00	Active	AC	72 %	34,654 mWh
20:13:48	Suspended		72 %	34,633 mWh
2021-03-03 11:26:40	Active	Battery	70 %	33,905 mWh
13:34:12	Suspended		5 %	2,574 mWh
14:58:16	Active	Battery	69 %	33,612 mWh
14:58:16	Active	AC	69 %	33,612 mWh
17:21:19	Suspended		80 %	38,825 mWh
18:49:18	Active	AC	82 %	39,748 mWh
20:00:18	Suspended		82 %	39,737 mWh
20:43:17	Active	AC	82 %	39,845 mWh
20:43:51	Suspended		82 %	39,845 mWh
21:34:16	Active	AC	82 %	39,856 mWh
23:52:07	Suspended		82 %	39,845 mWh
2021-03-04 12:16:04	Active	Battery	81 %	39,368 mWh
13:34:22	Active	AC	40 %	19,385 mWh
13:46:25	Active	Battery	49 %	23,957 mWh
13:56:05	Suspended		47 %	22,741 mWh
15:24:04	Active	AC	59 %	28,442 mWh
15:36:28	Suspended		68 %	33,166 mWh
16:03:55	Active	Battery	81 %	39,281 mWh
16:41:38	Active	AC	57 %	27,454 mWh
17:29:35	Suspended		82 %	39,672 mWh
17:44:48	Active	AC	82 %	39,672 mWh
19:08:22	Suspended		82 %	39,672 mWh
20:49:45	Active	AC	82 %	39,650 mWh
20:49:45	Suspended		82 %	39,650 mWh

Lastwake:

```
D:\CollegeStuff\Sem 6\SC>powercfg /BATTERYREPORT
Battery life report saved to file path D:\CollegeStuff\Sem 6\SC\battery-report.html.

D:\CollegeStuff\Sem 6\SC>powercfg /lastwake
Wake History Count - 1
Wake History [0]
Wake Source Count - 1
Wake Source [0]
Type: Device
Instance Path: HID\PNP0C50&Col01\4&726ba71&1&0000
Friendly Name:
Description: HID-compliant mouse
Manufacturer: Microsoft

D:\CollegeStuff\Sem 6\SC>
```

Energy consumption report:

```
Select Administrator: Command Prompt
Microsoft Windows [Version 10.0.18363.1379]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>powercfg /energy
Enabling tracing for 60 seconds...
Observing system behavior...
Analyzing trace data...
Analysis complete.

Energy efficiency problems were found.

12 Errors
14 Warnings
57 Informational

See C:\Windows\system32\energy-report.html for more details.

C:\Windows\system32>
```

Hibernate:

```
C:\Users\santhosh>powercfg /hibernate on
Unable to perform operation. An unexpected error (0x65b) has occurred: Function failed during execution.

C:\Users\santhosh>powercfg /hibernate off
Unable to perform operation. An unexpected error (0x65b) has occurred: Function failed during execution.
```

Available sleep states:

```
C:\Users\santhosh>powercfg /a
The following sleep states are available on this system:
    Standby (S3)
    Hibernate
    Hybrid Sleep
    Fast Startup

The following sleep states are not available on this system:
    Standby (S1)
        The system firmware does not support this standby state.













    Standby (S2)
        The system firmware does not support this standby state.

    Standby (S0 Low Power Idle)
        The system firmware does not support this standby state.
```

3. Scheduled Hello world python script:

Creating exe from python file:

```
Command Prompt
4056 INFO: Graph cross-reference written to D:\CollegeStuff\Sem 6\SC\Lab\Lab4\build\script\xref
4076 INFO: checking PYZ
4076 INFO: Building PYZ because PYZ-00.toc is non existent
4078 INFO: Building PYZ (ZlibArchive) D:\CollegeStuff\Sem 6\SC\Lab\Lab4\build\script\PYZ-00.pyz
4555 INFO: Building PYZ (ZlibArchive) D:\CollegeStuff\Sem 6\SC\Lab\Lab4\build\script\PYZ-00.pyz
4574 INFO: checking PKG
4575 INFO: Building PKG because PKG-00.toc is non existent
4576 INFO: Building PKG (CArchive) PKG-00.pkg
7055 INFO: Building PKG (CArchive) PKG-00.pkg completed successfully.
7059 INFO: Bootloader c:\users\santhosh\AppData\Local\programs\python\python36\lib\site-packages\
Windows-64bit\run.exe
7060 INFO: checking EXE
7060 INFO: Building EXE because EXE-00.toc is non existent
7060 INFO: Building EXE from EXE-00.toc
7134 INFO: Copying icons from ['c:\users\santhosh\AppData\Local\programs\python\python36\
nstaller\bootloader\images\icon-console.ico']
7203 INFO: Writing RT_GROUP_ICON 0 resource with 104 bytes
7203 INFO: Writing RT_ICON 1 resource with 3752 bytes
7205 INFO: Writing RT_ICON 2 resource with 2216 bytes
7207 INFO: Writing RT_ICON 3 resource with 1384 bytes
7207 INFO: Writing RT_ICON 4 resource with 37019 bytes
7208 INFO: Writing RT_ICON 5 resource with 9640 bytes
7208 INFO: Writing RT_ICON 6 resource with 4264 bytes
7209 INFO: Writing RT_ICON 7 resource with 1128 bytes
7214 INFO: Updating manifest in D:\CollegeStuff\Sem 6\SC\Lab\Lab4\build\script\run.exe.jbm0m_b
8067 INFO: Updating resource type 24 name 1 language 0
8081 INFO: Appending archive to EXE D:\CollegeStuff\Sem 6\SC\Lab\Lab4\dist\script.exe
8804 INFO: Building EXE from EXE-00.toc completed successfully.
```

	_bz2.pyd	24-12-2018 00:17	Python Extension ...	88 KB
	_ctypes.pyd	24-12-2018 00:17	Python Extension ...	130 KB
	_hashlib.pyd	24-12-2018 00:19	Python Extension ...	1,649 KB
	_lzma.pyd	24-12-2018 00:17	Python Extension ...	252 KB
	_socket.pyd	24-12-2018 00:17	Python Extension ...	72 KB
	_ssl.pyd	24-12-2018 00:19	Python Extension ...	2,092 KB
	library.zip	05-03-2021 19:13	WinRAR ZIP archive	3,270 KB
	pyexpat.pyd	24-12-2018 00:17	Python Extension ...	196 KB
	python36.dll	24-12-2018 00:17	Application extens...	3,536 KB
	script.exe	05-03-2021 19:15	Application	6,100 KB
	select.pyd	24-12-2018 00:17	Python Extension ...	27 KB
	unicodedata.pyd	24-12-2018 00:17	Python Extension ...	885 KB

```
C:\Users\santhosh>SCHTASKS /create /SC MONTHLY /MO first /D MON /TN PythonExecution /TR "D:\CollegeStuff\Sem 6\SC\Lab\La
b4\dist\script.exe"
SUCCESS: The scheduled task "PythonExecution" has successfully been created.

C:\Users\santhosh>
```

4. Intermediate tasks: executer1 and executer2 for calculator and notepad:

```
C:\Users\santhosh>schtasks /CREATE /SC MINUTE /MO 5 /TN EXECUTER /TR "C:\windows\System32\calc.exe" /ST 00:00
SUCCESS: The scheduled task "EXECUTER" has successfully been created.

C:\Users\santhosh>schtasks /CREATE /SC DAILY /TN EXECUTER2 /TR "C:\windows\System32\notepad.exe" /ST 17:00 /ET 17:40 /K
SUCCESS: The scheduled task "EXECUTER2" has successfully been created.
```

5. Advanced task: Disk defrag

```
Command Prompt
Microsoft Windows [Version 10.0.18363.1379]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\santhosh>schtasks /CREATE /SC DAILY /TN DEFRAGDISK /TR "C:\Windows\System32\Defrag.exe D:" /ST 00:00
SUCCESS: The scheduled task "DEFRAGDISK" has successfully been created.
```

6. Script to lock the computer:

```
Lock.bat - Notepad
File Edit Format View Help

@echo off
rundll32.exe user32.dll,LockWorkStation
cls
```

7. Script to empty recycle bin:

```
ClearRecycleBin.bat - Notepad
File Edit Format View Help

@echo off
rd /s %systemdrive%\$Recycle.bin
cls
```