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COURSE: CYBERSECURITY & ETHICAL HACKING
SMARTBRIDGE EXTERNSHIP PROGRAM

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ASSESSMENT – 1

FILE AND DIRECTORY OPERATIONS

1. ls (list files and directories)

```
(kali㉿kali)-[~]  
$ ls  
cert.der  Downloads  ex20  ex4  Music  Public  takeover2  usernames.txt  
Desktop  ex        ex21  ex5  passwords.txt  scan.txt  takeover3  Videos  
Documents ex2       ex3   get-request-from-burp-sqli.txt  Pictures  takeover  Templates
```

2.cd (change directory)

```
(kali㉿kali)-[~]  
$ cd /
```

3.pwd (print working directory)

```
(kali㉿kali)-[/]  
$ cd home  
  
(kali㉿kali)-[/home]  
$ pwd  
/home
```

4.mkdir(make directory)

```
(kali㉿kali)-[/]  
$ sudo mkdir assign1  
[sudo] password for kali:  
  
(kali㉿kali)-[/]  
$ ls  
0      boot  home  lib  libx32  mnt  root  srv  tmp  vmlinuz  
assign1 dev  initrd.img  lib32  lost+found  opt  run  swapfile  usr  vmlinuz.old  
bin    etc  initrd.img.old  lib64  media  proc  sbin  sys  var
```

5.touch (create an empty file)

```
(kali㉿kali)-[/]
$ sudo touch learn.txt

(kali㉿kali)-[/]
$ ls
0      boot  home      learn.txt  lib64      media  proc  sbin  sys  var
assign1 dev  initrd.img  lib        libx32     mnt    root  srv  tmp  vmlinuz
bin    etc  initrd.img.old  lib32      lost+found  opt    run   swapfile  usr  vmlinuz.old
```

6.cp (copy files and directories)

```
(kali㉿kali)-[/]
$ sudo cp /etc/passwd .

(kali㉿kali)-[/]
$ ls
0      boot  home      learn.txt  lib64      media  passwd  run  swapfile  usr  vmlinuz.old
assign1 dev  initrd.img  lib        libx32     mnt    proc    sbin  sys  var
bin    etc  initrd.img.old  lib32      lost+found  opt    root    srv  tmp  vmlinuz
```

7.mv (move or rename files and directories)

```
(kali㉿kali)-[/assign1]
$ ls
learn.txt

(kali㉿kali)-[/assign1]
$ sudo mv learn.txt linux.txt

(kali㉿kali)-[/assign1]
$ ls
linux.txt
```

8.rm (remove files and directories)

```
(kali㉿kali)-[~/ABHIRUP]
$ ls
fast.txt

(kali㉿kali)-[~/ABHIRUP]
$ rm fast.txt

(kali㉿kali)-[~/ABHIRUP]
$ ls
```

9.find (find for files and directories)

```
(kali㉿kali)-[/home]
$ find / -name *.txt -type f 2>/dev/null
/opt/zaproxy/.install4j/i4j_extf_18_1bmhzww.txt
/opt/zaproxy/license/hypersonic_lic.txt
/opt/zaproxy/license/RSyntaxTextArea.License.txt
/opt/zaproxy/license/lgpl-3.0.txt
/opt/zaproxy/license/OFL.txt
/opt/zaproxy/license/gpl-2.0.txt
/opt/zaproxy/license/hsqldb_lic.txt
/opt/zaproxy/license/ApacheLicense-2.0.txt
/opt/microsoft/powershell/7/ThirdPartyNotices.txt
/opt/microsoft/powershell/7/Modules/PSReadLine/License.txt
/opt/microsoft/powershell/7/Modules/PSReadLine/Changes.txt
/opt/microsoft/powershell/7/LICENSE.txt
/opt/microsoft/powershell/7/en-US/default.help.txt
/opt/nessus/var/nessus/report-engine/xmlgraphics-commons.NOTICE.txt
/opt/nessus/var/nessus/report-engine/xmlgraphics-commons.LICENSE.txt
/opt/nessus/var/nessus/report-engine/README.txt
/opt/nessus/var/nessus/report-engine/batik.NOTICE.txt
/opt/nessus/var/nessus/report-engine/xerces.LICENSE.txt
/opt/nessus/var/nessus/report-engine/xercesImpl.NOTICE.txt
/opt/nessus/var/nessus/report-engine/batik.LICENSE.txt
/opt/nessus/var/nessus/report-engine/xml-apis-ext.LICENSE.dom-software.txt
/opt/nessus/var/nessus/report-engine/xml-apis.NOTICE.txt
```

FILE VIEWING AND EDITING

1.cat (concatenate and display content)

```
(kali㉿kali)-[/home]
$ sudo cat /etc/passwd
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mail List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:irc:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
systemd-timesync:x:997:997:systemd Time Synchronization:/:/usr/sbin/nologin
messagebus:x:100:107::/nonexistent:/usr/sbin/nologin
tss:x:101:109:TPM software stack,,,:/var/lib/tpm:/bin/false
strongswan:x:102:65534::/var/lib/strongswan:/usr/sbin/nologin
```

2. less (view file content with pagination)

less /etc/passwd

```
(kali㉿kali)-[/home]
$ sudo less /etc/passwd
```

3.head (display the beginning of a file)

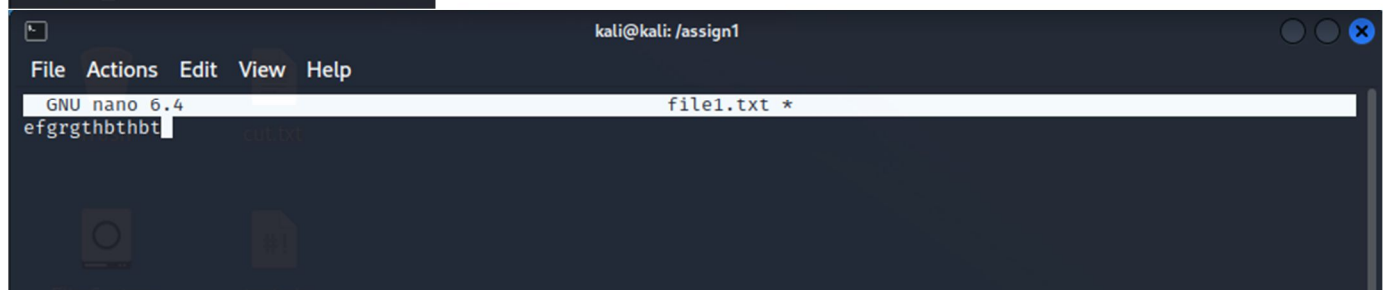
```
(kali㉿kali)-[/assign1]
$ sudo head /etc/passwd
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
```

4.tail (display the end of a file)

```
(kali㉿kali)-[/assign1]
$ sudo tail /etc/passwd
iodine:x:124:65534::/run/iodine:/usr/sbin/nologin
miredo:x:125:65534::/var/run/miredo:/usr/sbin/nologin
statd:x:126:65534::/var/lib/nfs:/usr/sbin/nologin
redis:x:127:134::/var/lib/redis:/usr/sbin/nologin
postgres:x:128:135:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
mosquitto:x:129:136::/var/lib/mosquitto:/usr/sbin/nologin
inetsim:x:130:137::/var/lib/inetsim:/usr/sbin/nologin
_gvm:x:131:139::/var/lib/openvas:/usr/sbin/nologin
king-phisher:x:132:140::/var/lib/king-phisher:/usr/sbin/nologin
kali:x:1000:1000::,/home/kali:/usr/bin/zsh
```

5.nano (text editor for creating and editing files)

```
(kali㉿kali)-[/assign1]
$ sudo nano file1.txt
```



- [illegible]

FILE PERMISSIONS

- ### 1.chmod (change file permissions)

```
PowerShell 7.1.3
kali@kali:~$ cd /tmp/
kali@kali:~/tmp$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root    0 May 28 06:38 learn.txt

kali@kali:~/tmp$ sudo chmod +x learn.txt

kali@kali:~/tmp$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 12288 May 28 06:30 .file1.txt.swp
-rwxr-xr-x  1 root root    0 May 28 06:38 learn.txt
```


2.chown(change file owner)

```
(kali㉿kali)-[/assign1]
└─$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rwxr-xr-x  1 root root     0 May 28 06:38 learn.txt

(kali㉿kali)-[/assign1]
└─$ sudo chown kali learn.txt

(kali㉿kali)-[/assign1]
└─$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rwxr-xr-x  1 kali root     0 May 28 06:38 learn.txt
```

3.chgrp (change file group)

```
(kali㉿kali)-[/assign1]
└─$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rwxr-xr-x  1 kali root     0 May 28 06:38 learn.txt

(kali㉿kali)-[/assign1]
└─$ sudo chgrp kali learn.txt

(kali㉿kali)-[/assign1]
└─$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:38 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rwxr-xr-x  1 kali kali     0 May 28 06:38 learn.txt
```

FILE COMPRESSION AND ARCHIVING

1. tar (archive files)

```
(kali㉿kali)-[/assign1] operations
└─$ ls -la
total 20
drwxr-xr-x  2 root root  4096 May 28 06:46 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root    0 May 28 06:46 learn2.txt
-rwxr-xr-x  1 kali kali    0 May 28 06:38 learn.txt

(kali㉿kali)-[/assign1]
└─$ sudo tar -cvf archive1.tar learn.txt learn2.txt
learn.txt
learn2.txt

(kali㉿kali)-[/assign1]
└─$ ls -la
total 32
drwxr-xr-x  2 root root  4096 May 28 06:47 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 10240 May 28 06:47 archive1.tar
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root    0 May 28 06:46 learn2.txt
-rwxr-xr-x  1 kali kali    0 May 28 06:38 learn.txt
```

2.gzip (compress files)

```
(kali㉿kali)-[/assign1]
└─$ ls -la
total 32
drwxr-xr-x  2 root root  4096 May 28 06:47 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 10240 May 28 06:47 archive1.tar
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root    0 May 28 06:46 learn2.txt
-rwxr-xr-x  1 kali kali    0 May 28 06:38 learn.txt

(kali㉿kali)-[/assign1]
└─$ sudo gzip learn2.txt

(kali㉿kali)-[/assign1]
└─$ ls -la
total 36
drwxr-xr-x  2 root root  4096 May 28 06:48 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 10240 May 28 06:47 archive1.tar
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root    31 May 28 06:46 learn2.txt.gz
-rwxr-xr-x  1 kali kali    0 May 28 06:38 learn.txt
```

3.unzip (extract files from zip archive)

```
(kali㉿kali)-[/assign1] rporation.
$ ls -la
total 40
drwxr-xr-x  2 root root  4096 May 28 06:52 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 10240 May 28 06:47 archive1.tar
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root   348 May 28 06:52 files.zip
-rw-r--r--  1 root root    31 May 28 06:46 learn2.txt.gz
-rwxr-xr-x  1 kali kali     0 May 28 06:38 learn.txt

(kali㉿kali)-[/assign1]
$ sudo unzip files.zip
Archive:  files.zip
replace learn.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: learn.txt
replace learn2.txt.gz? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
inflating: learn2.txt.gz

(kali㉿kali)-[/assign1]
$ ls -la
total 40
drwxr-xr-x  2 root root  4096 May 28 06:53 .
drwxr-xr-x 20 root root  4096 May 28 04:51 ..
-rw-r--r--  1 root root 10240 May 28 06:47 archive1.tar
-rw-----  1 root root 12288 May 28 06:30 .file1.txt.swp
-rw-r--r--  1 root root   348 May 28 06:52 files.zip
-rw-r--r--  1 root root    31 May 28 06:46 learn2.txt.gz
-rwxr-xr-x  1 root root     0 May 28 06:38 learn.txt
```

PROCESS MANAGEMENT

1.ps (list running processes)

```
(kali㉿kali)-[/assign1] rporation.
$ ps
  PID TTY          ps/power  TIME CMD
 11636 pts/4    00:00:06 zsh
 23344 pts/4    00:00:00 ps
```


2.top: Display real-time system information and processes

```
top - 07:00:03 up 1:25, 4 users, load average: 0.09, 0.06, 0.07
Tasks: 200 total, 1 running, 195 sleeping, 4 stopped, 0 zombie
%Cpu(s): 1.7 us, 1.7 sy, 0.0 ni, 96.1 id, 0.0 wa, 0.0 hi, 0.5 si, 0.0 st
MiB Mem : 5993.1 total, 4623.9 free, 765.4 used, 603.8 buff/cache
MiB Swap: 1024.0 total, 1024.0 free, 0.0 used, 4959.0 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
809	root	20	0	451316	134180	69112	S	7.0	2.2	0:36.88	Xorg
11633	kali	20	0	466272	107516	86396	S	4.0	1.8	0:03.57	qterminal
1143	kali	20	0	1226044	103880	77012	S	0.7	1.7	0:15.11	xfwm4
1195	kali	20	0	210116	36620	19048	S	0.7	0.6	0:36.74	panel-13-cpugra
23394	kali	20	0	10332	3924	3112	R	0.7	0.1	0:00.11	top
551	root	20	0	167380	12632	7204	S	0.3	0.2	0:10.86	vmtoolsd
1046	kali	20	0	9588	5388	4264	S	0.3	0.1	0:01.40	dbus-daemon
1197	kali	20	0	342048	32488	20640	S	0.3	0.5	0:15.86	panel-15-genmon
1198	kali	20	0	657656	45612	34484	S	0.3	0.7	0:04.34	panel-16-pulsea
1205	kali	20	0	390648	42516	31824	S	0.3	0.7	0:00.28	panel-22-action
14978	root	20	0	0	0	0	I	0.3	0.0	0:00.58	kworker/0:0-events
1	root	20	0	167636	12156	8924	S	0.0	0.2	0:01.59	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.02	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	slub_flushwq
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
12	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
13	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
14	root	20	0	0	0	0	S	0.0	0.0	0:00.06	ksoftirqd/0
15	root	20	0	0	0	0	I	0.0	0.0	0:03.37	rcu_preempt
16	root	rt	0	0	0	0	S	0.0	0.0	0:00.03	migration/0
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
20	root	rt	0	0	0	0	S	0.0	0.0	0:00.47	migration/1
21	root	20	0	0	0	0	S	0.0	0.0	0:00.09	ksoftirqd/1
23	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/1:0H-events_highpri
24	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/2
25	root	rt	0	0	0	0	S	0.0	0.0	0:00.47	migration/2
26	root	20	0	0	0	0	S	0.0	0.0	0:00.05	ksoftirqd/2
28	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/2:0H-events_highpri

3. kill (terminate processes)

```
(kali㉿kali)-[~]
$ sudo kill 1147
[sudo] password for kali:
```

4. bg (run processes in background)

```
(kali㉿kali)-[~]
$ sleep 12
^Z
zsh: suspended sleep 12

(kali㉿kali)-[~]
$ bg
[1] + continued sleep 12

(kali㉿kali)-[~]
$
[1] + done sleep 12
```

5. fg: Bring background processes to the foreground

```
(kali㉿kali)-[~]  
$ sleep 23 &  
[1] 24214  
  
(kali㉿kali)-[~]  
$ fg  
[1] + running    sleep 23
```

SYSTEM INFORMATION

1. uname: Print system information

```
(kali㉿kali)-[~]  
$ uname  
Linux
```

2. df: Display disk space usage

```
(kali㉿kali)-[~]  
$ df  
Filesystem      1K-blocks    Used Available Use% Mounted on  
udev            3030240         0   3030240  0% /dev  
tmpfs            613696      1156    612540  1% /run  
/dev/sda1       82083148 20218160  57649440 26% /  
tmpfs            3068464         0   3068464  0% /dev/shm  
tmpfs             5120         0        5120  0% /run/lock  
tmpfs            613692        84    613608  1% /run/user/1000
```

3. free: Display memory usage

```
(kali㉿kali)-[~]  
$ free  
              total        used        free      shared  buff/cache   available  
Mem:           6136932       719280       4803588        15888        614064       5146340  
Swap:          1048572           0       1048572
```

4. uptime: Show system uptime

```
(kali㉿kali)-[~]  
$ uptime  
07:06:01 up 1:31, 4 users, load average: 0.10, 0.08, 0.08
```

5. who: Display logged-in users

```
(kali㉿kali)-[~]  
$ who  
kali      tty7          2023-05-28 04:35 (:0)  
kali      pts/1        2023-05-28 05:05  
kali      pts/2        2023-05-28 05:06  
kali      pts/5        2023-05-28 06:30
```

6. w: Display logged-in users and their activities

```
(kali㉿kali)-[~]  
$ w  
07:06:15 up 1:31, 4 users, load average: 0.07, 0.08, 0.07  
USER      TTY      FROM          LOGIN@      IDLE   JCPU   PCPU WHAT  
kali      tty7      :0             04:35       2:31m 39.37s 0.43s xfce4-session  
kali      pts/1    -             05:05       0.00s 0.00s 0.00s sudo less /etc/passwd  
kali      pts/2    -             05:06       0.00s 0.00s 0.00s sudo less /etc/passwd  
kali      pts/5    -             06:30       0.00s 0.00s 0.03s sudo vi file1.txt
```

NETWORKING

1. ifconfig: Configure network interfaces

```
(kali㉿kali)-[~]  
$ ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.56.129 netmask 255.255.255.0 broadcast 192.168.56.255  
    inet6 fe80::1edf:61ca:741b:8198 prefixlen 64 scopeid 0x20<link>  
    ether 00:0c:29:4b:dc:b0 txqueuelen 1000 (Ethernet)  
    RX packets 23 bytes 11326 (11.0 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 31 bytes 7871 (7.6 KiB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 4 bytes 240 (240.0 B)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 4 bytes 240 (240.0 B)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

2. ping: Send ICMP echo requests to a network host

```
(kali㉿kali)-[~]
$ ping google.com
PING google.com (142.250.67.142) 56(84) bytes of data.
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=1 ttl=128 time=48.5 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=2 ttl=128 time=1067 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=3 ttl=128 time=45.7 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=4 ttl=128 time=46.9 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=5 ttl=128 time=44.8 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=6 ttl=128 time=45.6 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=7 ttl=128 time=45.7 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=8 ttl=128 time=45.8 ms
64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=9 ttl=128 time=46.5 ms
```

3. ssh: Securely connect to a remote system

```
(kali㉿kali)-[~]
$ ssh stacy@10.10.11.222
█
```

4. scp: Securely copy files between systems

```
(kali㉿kali)-[~]
$ scp -r /var/www/html exploit@12.14.15.16:/test/index/█
```

5. wget: Download files from the web

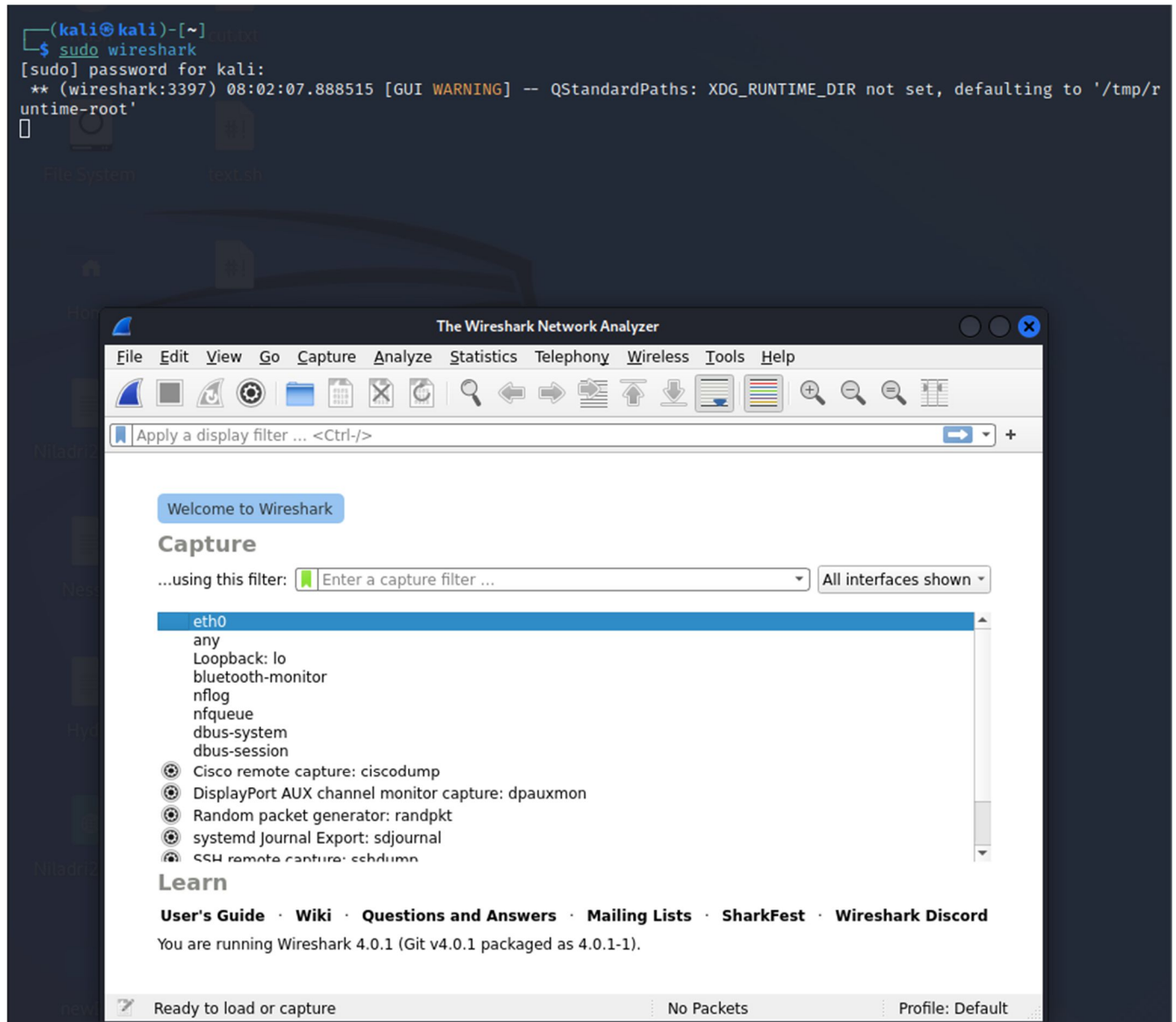
```
(kali㉿kali)-[~]
$ wget https://github.com/cassidoo/todometer/archive/refs/heads/main.zip
--2023-05-28 08:00:21-- https://github.com/cassidoo/todometer/archive/refs/heads/main.zip
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://codeload.github.com/cassidoo/todometer/zip/refs/heads/main [following]
--2023-05-28 08:00:23-- https://codeload.github.com/cassidoo/todometer/zip/refs/heads/main
Resolving codeload.github.com (codeload.github.com)... 20.207.73.88
Connecting to codeload.github.com (codeload.github.com)|20.207.73.88|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [application/zip]
Saving to: 'main.zip'

main.zip          [      ⇄      ]  1.75M  1.27MB/s   in 1.4s

2023-05-28 08:00:25 (1.27 MB/s) - 'main.zip' saved [1832115]
```


SYSTEM ADMINISTRATION

1. sudo: Execute commands with superuser privileges



2. apt-get: Package management for Debian-based distributions

```
(kali㉿kali)-[~]
$ sudo apt-get update
Get:1 http://kali.download/kali kali-rolling InRelease [41.2 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 Packages [19.3 MB]
Get:3 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [44.7 MB]
Get:4 http://kali.download/kali kali-rolling/contrib amd64 Packages [115 kB]
Get:5 http://kali.download/kali kali-rolling/contrib amd64 Contents (deb) [172 kB]
Get:6 http://kali.download/kali kali-rolling/non-free amd64 Packages [217 kB]
Get:7 http://kali.download/kali kali-rolling/non-free amd64 Contents (deb) [928 kB]
Fetched 65.4 MB in 16s (4,025 kB/s)
Reading package lists... Done
```

3. yum: Package management for Red Hat-based distributions (in kali yum not used, so this is skipped)

4. systemctl: Manage system services

```
(kali㉿kali)-[~]
$ systemctl status nessusd
o nessusd.service - The Nessus Vulnerability Scanner
   Loaded: loaded (/lib/systemd/system/nessusd.service; disabled; preset: disabled)
   Active: inactive (dead)
```

5. crontab: Schedule recurring tasks

```
(kali㉿kali)-[~]
$ crontab -e
no crontab for kali - using an empty one

Select an editor. To change later, run 'select-editor'.
 1. /bin/nano          ← easiest
 2. /usr/bin/vim.basic
 3. /usr/bin/vim.tiny

Choose 1-3 [1]: 1

GNU nano 6.4 /tmp/crontab.uJWQLi/crontab
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow  command
```

6. useradd: Add a new user

```
(kali㉿kali)-[~]  
$ sudo useradd hacker
```

7. passwd: Change user password

```
(kali㉿kali)-[~]  
$ sudo passwd hacker  
New password:  
Retype new password:  
passwd: password updated successfully
```