

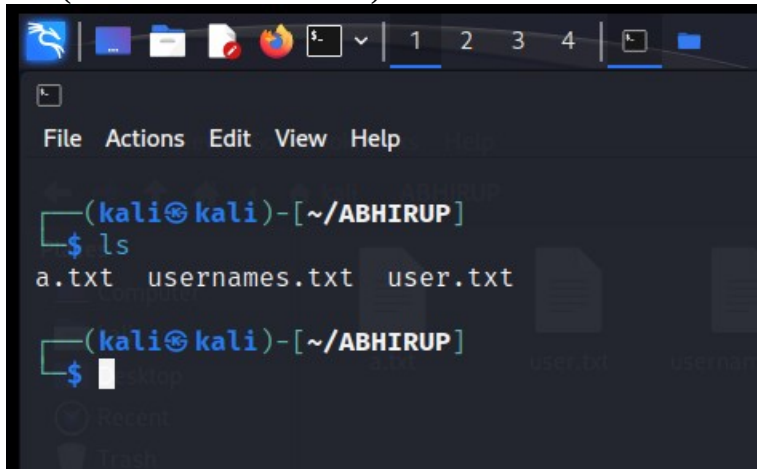
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COURSE: CYBERSECURITY & ETHICAL HACKING
SMARTBRIDGE EXTERNSHIP PROGRAM

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ASSESSMENT – 1 (20,21 MAY 2023)

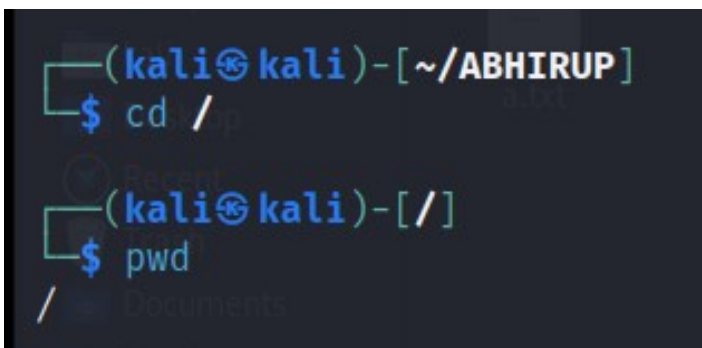
FILE AND DIRECTORY OPERATIONS

1. ls (list files and directories)



```
(kali㉿kali)-[~/ABHIRUP]
$ ls
a.txt  usernames.txt  user.txt
```

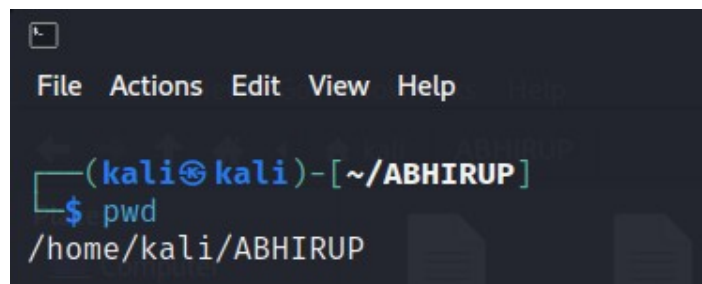
2.cd (change directory)



```
(kali㉿kali)-[~/ABHIRUP]
$ cd /

(kali㉿kali)-[/]
$ pwd
/
```

3.pwd (print working directory)



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

4.mkdir(make directory)

```
(kali㉿kali)-[~/ABHIRUP]
$ mkdir cyber

(kali㉿kali)-[~/ABHIRUP]
$ ls
a.txt  cyber  usernames.txt  user.txt
```

5.touch (create an empty file)

```
(kali㉿kali)-[~/ABHIRUP]
$ touch learn_linux.txt

(kali㉿kali)-[~/ABHIRUP]
$ ls
a.txt  cyber  learn_linux.txt  usernames.txt  user.txt
```

6.cp (copy files and directories)

```
File Actions Edit View Help

(kali㉿kali)-[~/ABHIRUP]
$ cp /etc/passwd .

(kali㉿kali)-[~/ABHIRUP]
$ ls
passwd
```

7.mv (move or rename files and directories)

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

(kali㉿kali)-[~/ABHIRUP]
$ mv learn_linux.txt fast.txt

(kali㉿kali)-[~/ABHIRUP]
$ ls
fast.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)-[~/ABHIRUP]
$ find / -name *.txt -type f 2>/dev/null
/home/kali/Desktop/bruteforce/list.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/Werkzeug-2.3.2.dist-info/top_level.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/Flask-2.3.1.dist-info/entry_points.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/Flask-2.3.1.dist-info/top_level.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/MarkupSafe-2.1.2.dist-info/top_level.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/blinker-1.6.2.dist-info/top_level.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/pip-22.3.dist-info/LICENSE.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/pip-22.3.dist-info/entry_points.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/pip-22.3.dist-info/top_level.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/wheel-0.37.1.dist-info/LICENSE.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/wheel-0.37.1.dist-info/entry_points.txt
/home/kali/Desktop/Empire/flask/lib/python3.10/site-packages/wheel-0.37.1.dist-info/top_level.txt

```

FILE VIEWING AND EDITING

1.cat (concatenate and display content)

```

(kali㉿kali)-[~/ABHIRUP]
$ 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:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin

```

2.less (view file content with pagination)

less /etc/passwd

```
kali@kali: ~/ABHIRUP
File Actions Edit View Help
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:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:100:65534::/nonexistent:/usr/sbin/nologin
systemd-network:x:101:102:systemd Network Management,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:102:103:systemd Resolver,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:103:110:systemd Time Synchronization,,:/run/systemd:/usr/sbin/nologin
messagebus:x:104:111::/nonexistent:/usr/sbin/nologin
tss:x:105:113:TPM software stack,,:/var/lib/tpm:/bin/false
strongswan:x:106:65534::/var/lib/strongswan:/usr/sbin/nologin
tcpdump:x:107:114::/nonexistent:/usr/sbin/nologin
usbmux:x:108:46:usbmux daemon,,:/var/lib/usbmux:/usr/sbin/nologin
sshd:x:109:65534::/run/sshd:/usr/sbin/nologin
dnsmasq:x:110:65534:dnsmasq,,:/var/lib/misc:/usr/sbin/nologin
/etc/passwd
```

3.head (display the beginning of a file)

```
(kali@kali)-[~/ABHIRUP]
$ 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)-[~/ABHIRUP]
$ tail /etc/passwd
rwhod:x:127:65534::/var/spool/rwho:/usr/sbin/nologin
iodine:x:128:65534::/run/iodine:/usr/sbin/nologin
miredo:x:129:65534::/var/run/miredo:/usr/sbin/nologin
statd:x:130:65534::/var/lib/nfs:/usr/sbin/nologin
postgres:x:131:138:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
inetsim:x:132:140::/var/lib/inetsim:/usr/sbin/nologin
king-phisher:x:133:142::/var/lib/king-phisher:/usr/sbin/nologin
kali:x:1000:1000:,,,:/home/kali:/usr/bin/zsh
mosquitto:x:134:146::/var/lib/mosquitto:/usr/sbin/nologin
polkitd:x:998:998:polkit:/nonexistent:/usr/sbin/nologin
```

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

```
(kali㉿kali)-[~/ABHIRUP]
$ nano file1.txt
```

```
kali@kali: ~/ABHIRUP
File Actions Edit View Help
GNU nano 7.2 file1.txt *
file contents of file1 random.
```

6.vi/vim (powerful text editor for experienced users)

```
(kali㉿kali)-[~/ABHIRUP]
$ vi file2.txt
```



```
kali@kali: ~/ABHIRUP
File Actions Edit View Help
contents of file using vim editor
~ stop
~ event
~ ash
~ arguments
~ basic
~ pictures
~ os
~ uploads
~
~ System
-- INSERT --
```

FILE PERMISSIONS

1. chmod (change file permissions)

```
(kali@kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rw-r--r--  1 kali kali   0 May 21 08:25 game.exe

(kali@kali)-[~/ABHIRUP]
$ chmod +x game.exe

(kali@kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rwxr-xr-x  1 kali kali   0 May 21 08:25 game.exe
```

2.chown(change file owner)

```
(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rwxr-xr-x  1 root root   0 May 21 08:25 game.exe

(kali㉿kali)-[~/ABHIRUP]
$ sudo chown kali game.exe

(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rwxr-xr-x  1 kali root   0 May 21 08:25 game.exe
```

3.chgrp (change file group)

```
(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rwxr-xr-x  1 kali root   0 May 21 08:25 game.exe

(kali㉿kali)-[~/ABHIRUP]
$ sudo chgrp kali game.exe

(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 8
drwxr-xr-x  2 kali kali 4096 May 21 08:25 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rwxr-xr-x  1 kali kali   0 May 21 08:25 game.exe
```

FILE COMPRESSION AND ARCHIVING

1. tar (archive files)

```
(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 12
drwxr-xr-x  2 kali kali 4096 May 21 08:31 .
drwxr-xr-x 43 kali kali 4096 May 21 08:23 ..
-rw-r--r--  1 kali kali   26 May 21 08:31 file1.txt
-rwxr-xr-x  1 kali kali    0 May 21 08:25 game.exe

(kali㉿kali)-[~/ABHIRUP]
$ tar -cvf archive1.tar file1.txt game.exe
file1.txt
game.exe

(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 24
drwxr-xr-x  2 kali kali  4096 May 21 08:31 .
drwxr-xr-x 43 kali kali  4096 May 21 08:23 ..
-rw-r--r--  1 kali kali 10240 May 21 08:31 archive1.tar
-rw-r--r--  1 kali kali   26 May 21 08:31 file1.txt
-rwxr-xr-x  1 kali kali    0 May 21 08:25 game.exe
```

2. gzip (compress files)

```
(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 24
drwxr-xr-x  2 kali kali  4096 May 21 08:31 .
drwxr-xr-x 43 kali kali  4096 May 21 08:23 ..
-rw-r--r--  1 kali kali 10240 May 21 08:31 archive1.tar
-rw-r--r--  1 kali kali   26 May 21 08:31 file1.txt
-rwxr-xr-x  1 kali kali    0 May 21 08:25 game.exe

(kali㉿kali)-[~/ABHIRUP]
$ gzip game.exe

(kali㉿kali)-[~/ABHIRUP]
$ ls -la
total 28
drwxr-xr-x  2 kali kali  4096 May 21 08:32 .
drwxr-xr-x 43 kali kali  4096 May 21 08:23 ..
-rw-r--r--  1 kali kali 10240 May 21 08:31 archive1.tar
-rw-r--r--  1 kali kali   26 May 21 08:31 file1.txt
-rwxr-xr-x  1 kali kali   29 May 21 08:25 game.exe.gz
```


3.unzip (extract files from zip archive)

```
(kali㉿kali)-[~/ABHIRUP/1]
└─$ ls -la
total 100960
drwxr-xr-x 2 kali kali      4096 May 21 08:34 .
drwxr-xr-x 3 kali kali      4096 May 21 08:34 ..
-rw-r--r-- 1 kali kali 103371385 Oct 26  2022 Programming.zip

(kali㉿kali)-[~/ABHIRUP/1]
└─$ unzip Programming.zip
Archive:  Programming.zip
  extracting: 1. Introduction to Android Development/1. [AD] 1.1 Setup and Run Fi
  extracting: 1. Introduction to Android Development/Join @getstudyfever.pdf
  extracting: 1. Introduction to Android Development/5. [AD] 1.4 Activity Lifecyc
  extracting: 1. Introduction to Android Development/4. [AD] 1.3 Android Component
rs-studyfever.mp4
  extracting: 1. Introduction to Android Development/3. 1.2 [Doc] Project Structu
  extracting: 1. Introduction to Android Development/2. [AD] 1.2 Android Project S
  extracting: 1. Introduction to Android Development/6. Quiz/Q7.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Q12.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Q4.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Q10.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Answers.txt
  extracting: 1. Introduction to Android Development/6. Quiz/Q11.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Q1.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/0.png
  extracting: 1. Introduction to Android Development/6. Quiz/Q2.PNG
  extracting: 1. Introduction to Android Development/6. Quiz/Q9.PNG
```

```
(kali㉿kali)-[~/ABHIRUP/1]
└─$ ls -la
total 100964
drwxr-xr-x 3 kali kali      4096 May 21 08:34 .
drwxr-xr-x 3 kali kali      4096 May 21 08:34 ..
drwxr-xr-x 3 kali kali      4096 May 21 08:34 '1. Introduction to Android Development'
-rw-r--r-- 1 kali kali 103371385 Oct 26  2022 Programming.zip

(kali㉿kali)-[~/ABHIRUP/1]
```

```
(kali㉿kali)-[~/ABHIRUP/1/1. Introduction to Android Development]
└─$ ls
'1. [AD] 1.1 Setup and Run First App on Android Studio-studyfever.mp4'
'2. [AD] 1.2 Android Project Strutcure-studyfever.mp4'
'3. 1.2 [Doc] Project Structure.pdf'
'4. [AD] 1.3 Android Components - Activities, Services, Receivers, Providers-studyfever.mp4'
'5. [AD] 1.4 Activity Lifecycle and Debugging-studyfever.mp4'
'6. Quiz'
```

PROCESS MANAGEMENT

1.ps (list running processes)

```
(kali㉿kali)-[~/ABHIRUP]
$ ps
  PID TTY          TIME CMD
 2351 pts/0        00:00:15 zsh
 16385 pts/0        00:00:00 ps
```

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

```
kali@kali: ~/ABHIRUP
File Actions Edit View Help
top - 08:36:36 up 28 min,  1 user,  load average: 0.40, 0.42, 0.34
Tasks: 200 total,   1 running, 199 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.3 us,  0.6 sy,  0.0 ni, 98.9 id,  0.0 wa,  0.0 hi,  0.2 si,  0.0 st
MiB Mem : 1959.0 total,  72.5 free,  887.8 used, 1189.1 buff/cache
MiB Swap: 1024.0 total, 1023.0 free,   1.0 used. 1071.2 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM     TIME+ COMMAND
 883  root       20   0 386048 116384 59880 S   0.7   5.8   0:23.40 Xorg
2348  kali       20   0 441712 104932 85536 S   0.7   5.2   0:05.90 qterminal
1668  kali       20   0 415084 27676 20476 S   0.3   1.4   0:06.07 panel-15-genmon
1805  kali       20   0 364504 44208 30868 S   0.3   2.2   0:03.61 vmtoolsd
16656 kali       20   0  11608   4972  3080 R   0.3   0.2   0:00.04 top
   1  root       20   0 167892 12428  9092 S   0.0   0.6   0:01.59 systemd
   2  root       20   0      0      0      0 S   0.0   0.0   0:00.01 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
   9  root       20   0      0      0      0 I   0.0   0.0   0:00.41 kworker/u64:0-flush-8:0
  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
```

3.kill (terminate processes)

```
(kali㉿kali)-[~/ABHIRUP]
$ ps
  PID TTY          TIME CMD
 2351 pts/0        00:00:18 zsh
 19260 pts/0        00:00:00 ps

(kali㉿kali)-[~/ABHIRUP]
$ kill 2351
```

4.bg (run processes in background)

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

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

5.fg: Bring background processes to the foreground

```
(kali㉿kali)-[~/ABHIRUP]
$ sleep 23 &
[1] 20560

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

SYSTEM INFORMATION

1. uname: Print system information

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

2. df: Display disk space usage

```
(kali㉿kali)-[~/ABHIRUP]
$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev              963488         0   963488    0% /dev
tmpfs             200604      1292   199312    1% /run
/dev/sda1       82083148 34768992 43098608   45% /
tmpfs            1003008         0   1003008    0% /dev/shm
tmpfs              5120         0     5120    0% /run/lock
tmpfs            200600         88   200512    1% /run/user/1000
```

3. free: Display memory usage

```
(kali㉿kali)-[~/ABHIRUP]
$ free
              total        used        free      shared  buff/cache   available
Mem:           2006020      893916      466560         11088       826732      1112104
Swap:          1048572       42748      1005824
```

4. uptime: Show system uptime

```
(kali㉿kali)-[~/ABHIRUP]
$ uptime
08:44:04 up 36 min,  1 user,  load average: 0.38, 0.46, 0.41
```

5. who: Display logged-in users

```
(kali㉿kali)-[~/ABHIRUP]
$ who
kali          tty7                2023-05-21 08:08 (:0)
```


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

```
(kali㉿kali)-[~/ABHIRUP]
$ w
08:45:59 up 38 min,  1 user,  load average: 0.49, 0.43, 0.40
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
kali      tty7      :0            08:08    38:01  30.99s  0.40s xfce4-session
```

NETWORKING

1. ifconfig: Configure network interfaces

```
(kali㉿kali)-[~/ABHIRUP]
$ ifconfig lo
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 28  bytes 2736 (2.6 KiB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 28  bytes 2736 (2.6 KiB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

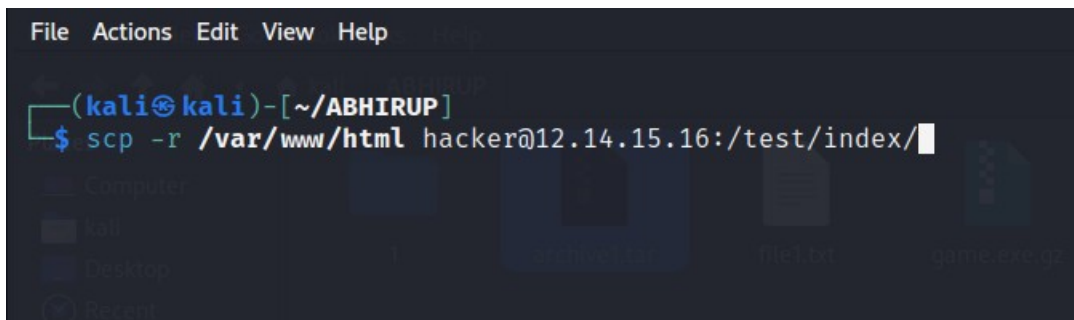
2. ping: Send ICMP echo requests to a network host

```
(kali㉿kali)-[~/ABHIRUP]
$ ping google.com
PING google.com (142.250.194.174) 56(84) bytes of data.
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=1 ttl=128 time=99.0 ms
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=2 ttl=128 time=96.6 ms
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=3 ttl=128 time=96.1 ms
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=4 ttl=128 time=116 ms
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=5 ttl=128 time=128 ms
64 bytes from del12s06-in-f14.1e100.net (142.250.194.174): icmp_seq=6 ttl=128 time=121 ms
```

3. ssh: Securely connect to a remote system

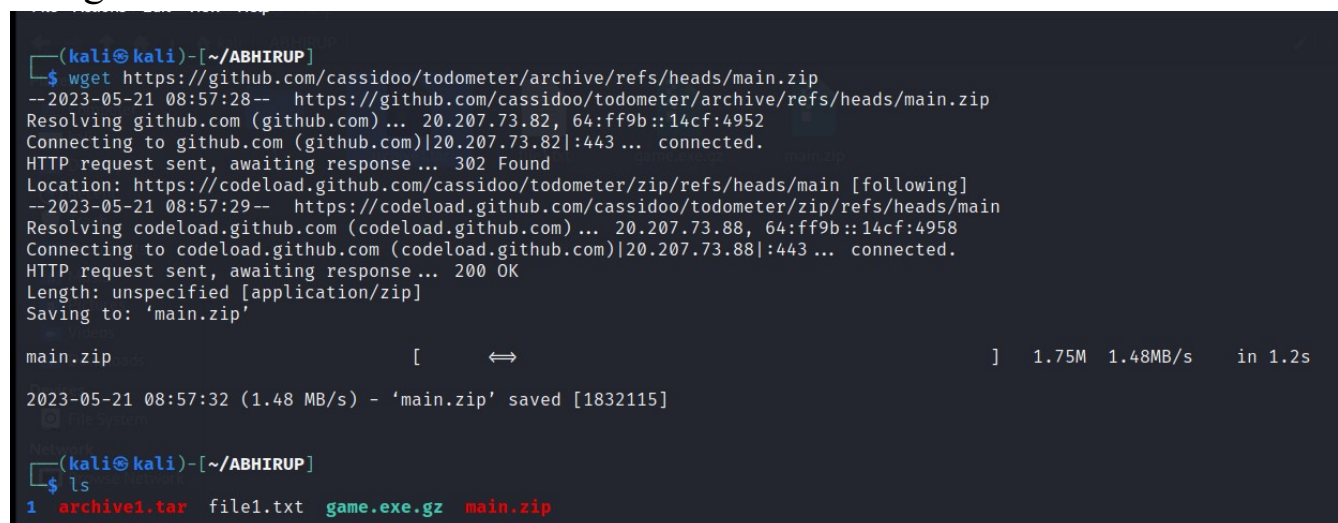
```
(kali㉿kali)-[~/ABHIRUP]
$ ssh marcus@10.10.11.211
```


4. scp: Securely copy files between systems

A terminal window on a Kali Linux system. The prompt is (kali@kali)-[~/ABHIRUP]. The command being entered is \$ scp -r /var/www/html hacker@12.14.15.16:/test/index/. The terminal has a dark background with light blue and green text. A file manager sidebar is visible on the left with icons for Computer, Home, Desktop, and Recent.

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

5. wget: Download files from the web

A terminal window on a Kali Linux system. The prompt is (kali@kali)-[~/ABHIRUP]. The command being entered is \$ wget https://github.com/cassidoo/todometer/archive/refs/heads/main.zip. The output shows the download progress and completion. Below the terminal output, there is a visual representation of the downloaded file 'main.zip' with its size (1.75M) and download speed (1.48MB/s). Finally, the command \$ ls is entered, and the output shows the files in the directory: 1 archive1.tar file1.txt game.exe.gz main.zip.

```
(kali@kali)-[~/ABHIRUP]
$ wget https://github.com/cassidoo/todometer/archive/refs/heads/main.zip
--2023-05-21 08:57:28-- https://github.com/cassidoo/todometer/archive/refs/heads/main.zip
Resolving github.com (github.com)... 20.207.73.82, 64:ff9b::14cf:4952
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]
--2023-05-21 08:57:29-- https://codeload.github.com/cassidoo/todometer/zip/refs/heads/main
Resolving codeload.github.com (codeload.github.com)... 20.207.73.88, 64:ff9b::14cf:4958
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'

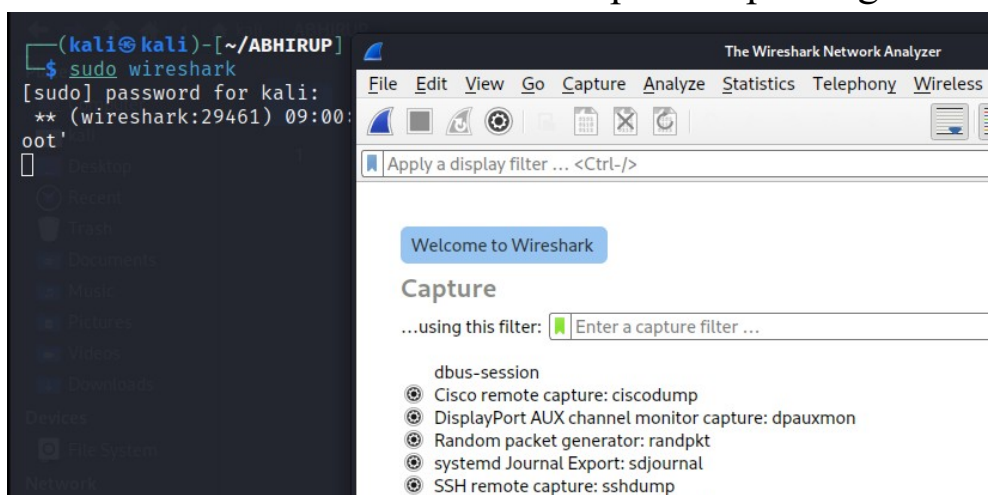
main.zip [ 1.75M 1.48MB/s in 1.2s]

2023-05-21 08:57:32 (1.48 MB/s) - 'main.zip' saved [1832115]

(kali@kali)-[~/ABHIRUP]
$ ls
1 archive1.tar file1.txt game.exe.gz main.zip
```

SYSTEM ADMINISTRATION

1. sudo: Execute commands with superuser privileges



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

```
(kali㉿kali)-[~/ABHIRUP]
$ sudo apt-get update
Hit:1 http://kali.download/kali kali-rolling InRelease
Reading package lists... Done

(kali㉿kali)-[~/ABHIRUP]
$
```

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)-[~/ABHIRUP]
$ 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)-[~/ABHIRUP]
$ 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
crontab: installing new crontab
```

cronjob to ping localhost everyday with 1 packet

```
kali@kali: ~/ABHIRUP
File Actions Edit View Help
GNU nano 7.2 /tmp/crontab.HXDjYJ/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
0 0 * * * ping -c 1 localhost > /dev/null
```

6. useradd: Add a new user

```
File Actions Edit View Help
(kali@kali)-[~]
$ sudo useradd hacker
[sudo] password for kali:
```

7. passwd: Change user password

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