<u>Platform: Kali Linux</u>

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Topic: Kali Linux Basic commands



Description: On Day 1 of my cybersecurity learning journey, I practiced core Kali Linux commands in a virtual environment. I navigated directories using *cd* and *Is*, created and removed files with *touch* and *rm*, and explored system details using *whoami*, *hostname*, and *uname*. I also experimented with *sudo* to understand user levels. Additionally, I enabled the firewall with *ufw* and to secure the host and guest connection I enable the secure shell with *ssh*. This hands-on session helped me get comfortable with the Linux terminal — a critical skill for future penetration testing and security analysis

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File and Directory Management:

Command 1:

```
___(ayeshanadeem⊕ ayeshanadeem)-[~]
$ cd Documents
```

Command 2:

```
ayeshanadeem⊕ ayeshanadeem)-[~/Documents]
$\text{ls}
$\text{link}$
```

Command 3:

```
(ayeshanadeem® ayeshanadeem)-[~/Documents]

$ pwd

/home/ayeshanadeem/Documents
```

Command 4:

mkdir [new_folder_name]

```
(ayeshanadeem® ayeshanadeem)-[~/Documents]
$ mkdir MyDocs

(ayeshanadeem® ayeshanadeem)-[~/Documents]
$ cd MyDocs

(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
```

Command 5:

touch [new_file_name]

```
(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ touch my_document1.txt

(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ touch my_document2.txt

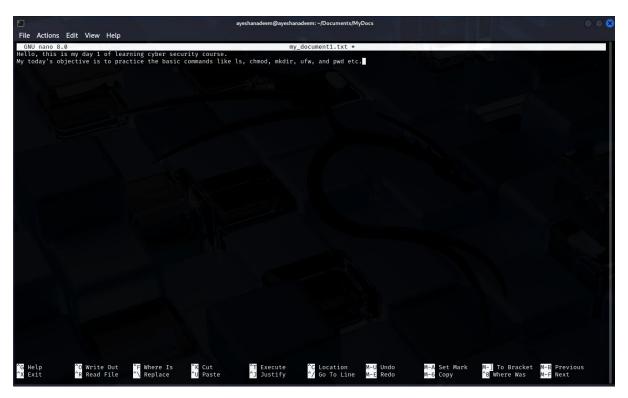
(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ ls
my_document1.txt my_document2.txt
```

Command 6:

nano [file_name]

Edit the document and save it

- Press Ctrl + O and then press "Enter button"
- Press Ctrl + X to exit the file



Command 7:

```
(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ cat my_document1.txt
Hello, this is my day 1 of learning cyber security course.
My today's objective is to pratice the basic command like ls, chmod, mkdir, ufw, and pwd etc.

(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ cat my_document2.txt
In comming days I will learn about Nmap, Metasploit, Ettercap, and Wireshark.
```

To read content entered in files

Command 8:

rm [file_name]

```
(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ rm my_document1.txt my_document2.txt

(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
$ ls

(ayeshanadeem® ayeshanadeem)-[~/Documents/MyDocs]
```

Command 9:

rm -r [folder_name]

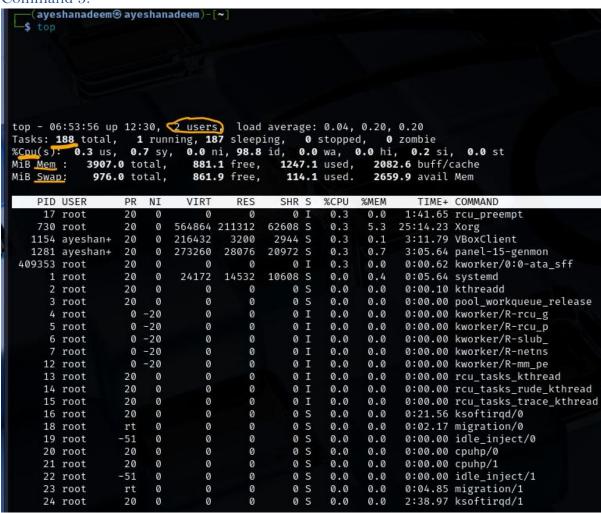
System Information:

Command 1:

```
(ayeshanadeem® ayeshanadeem)-[~]
$ hostname
ayeshanadeem
```

```
____(ayeshanadeem⊕ ayeshanadeem)-[~]
$ uname -a
Linux ayeshanadeem 6.6.15-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.6.15-2kali1 (2024-05-17) x86_64 GNU/Linux
```

Command 3:



Shows the running process

Command 4:

```
(ayeshanadeem® ayeshanadeem)-[~]
 $ df
Filesystem
                Size
                       Used Avail Use% Mounted on
                                    0% /dev
udev
                1.9G
                         0 1.9G
tmpfs
                391M
                       1.2M
                             390M
                                    1% /run
                            6.6G
/dev/sda2
                 24G
                        16G
                                   71% /
tmpfs
                2.0G
                          0
                            2.0G
                                    0% /dev/shm
efivarfs
                256K
                        61K
                             191K
                                   25% /sys/firmware/efi/efivars
                                    0% /run/lock
tmpfs
                5.0M
                          0
                             5.0M
tmpfs
                1.0M
                          0
                             1.0M
                                    0% /run/credentials/systemd-journald.service
                2.0G
                             2.0G
tmpfs
                       100K
                                    1% /tmp
/dev/sda1)
                511M
                       152K
                             511M
                                    <u>1%</u> /boot/efi
                 1.0M
                        0
                             1.0M
                                    0% /run/credentials/getty@tty1.service
tmpfs
tmpfs
                391M
                       2.5M
                             389M
                                     1% /run/user/1000
```

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- /dev/sda1 is a small EFI partition used during system boot (especially on UEFI systems).
- /dev/sda2 is the main disk space of Kali Machine.

Command 5:

```
      (ayeshanadeem⊕ ayeshanadeem)-[~]

      $ free -m
      total used free shared buff/cache available

      Mem: 3906 1279 848 19 2082 2627

      Swap: 975 114 861
```

Shows memory usage.

Package Management (APT):

Command 1:

```
(ayeshanadeem® ayeshanadeem)-[~]
$ sudo apt update & apt upgrade -y
[sudo] password for ayeshanadeem:
Get:1 http://kali.download/kali kali-rolling InRelease [41.5 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 Packages [21.0 MB]
Get:3 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [51.4 MB]
Get:4 http://kali.download/kali kali-rolling/contrib amd64 Packages [118 kB]
Get:5 http://kali.download/kali kali-rolling/contrib amd64 Contents (deb) [327 kB]
Get:6 http://kali.download/kali kali-rolling/non-free-firmware amd64 Packages [10.8 kB]
Get:7 http://kali.download/kali kali-rolling/non-free-firmware amd64 Contents (deb) [26.7 kB]
Fetched 72.9 MB in 1min 20s (911 kB/s)
1896 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

This command usually takes time.....

To get list of installed packages.

Command 3:

To install any app.

Command 4:

```
(ayeshanadeem@ ayeshanadeem)-[~]

Saudo apt remove wireshark

The following packages were automatically installed and are no longer required:
dnsmap libgdal34t64 libqt6core5compat6 python3-cpuinfo
figlet libgfapi0 libqt6multimedia6 python3-git python3-pysmid python3-in-minimal sparta-scripts
finger libgfrpc0 librados2 python3-gitdb python3-pysmp4 rsh-redone-client toilet-fonts
ibverbs-providers libgfxdr0 librados2 python3-py python3-pysmp4 rsh-redone-client toilet-fonts
imagemagick libglusterfs0 libsuperlu6 python3-py python3-py python3-serial-asyncio ruby3.1-dev unicornscan
imagemagick-6.q16 libhdf5-l03-1164 medusa python3-numexpr python3-smmap ruby3.1-dev unicornscan
libramadillo12 libhdf5-hl-100164 python-odf-doc python3-numexpr python3-tables rwho
libboost-iostreams1.83.0 liblbfgsbb python-odf-tools python3-pandas-lib python3-tables-data
libboost-thread1.83.0 liblbfgsbb python-tables-data python3-pandas-lib python3-tables-lib python3-liberdf19t64 python3-ajpy python3-pyexploitdb python3-tables-modules
libcphfs2 libpython3.11-dev python3-bottleneck python3-pyfiglet
Use 'sudo apt autoremove' to remove them.

REMOVING:
wireshark

Summary:
Upgrading: 0, Installing: 0, Removing: 1, Not Upgrading: 1894
Freed space: 10.7 MB

Continue? [Y/n] y
(Reading database ... 431090 files and directories currently installed.)
Removing wireshark (4.2.5-1) ...
Processing triggers for desktop-file-utils (0.27-2) ...
Processing triggers for desktop-file-utils (0.27-2) ...
Processing triggers for kali-menu (2023.4.7) ...
```

To uninstall any app.

Security & Networking:

Command 1:

```
ayeshanadeem⊕ ayeshanadeem)-[~]
$ sudo ufw enable
[sudo] password for ayeshanadeem:
Firewall is active and enabled on system startup

(ayeshanadeem⊕ ayeshanadeem)-[~]
$ sudo ufw status
Status: active
```

```
(ayeshanadeem⊕ ayeshanadeem)-[~]
$ sudo ufw default allow outgoing
Default outgoing policy changed to 'allow'
(be sure to update your rules accordingly)

(ayeshanadeem⊕ ayeshanadeem)-[~]
$ sudo ufw default deny incoming
Default incoming policy changed to 'deny'
(be sure to update your rules accordingly)
```

For secure network traffic.

```
-(ayeshanadeem⊛ ayeshanadeem)-[~]
  -$ <u>sudo</u> systematl start ssh
   -(ayeshanadeem® ayeshanadeem)-[~]
$ sudo systemctl status ssh

    ssh.service - OpenBSD Secure Shell server

     Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: disabled)
Active: active (running) since Mon 2025-07-14 03:47:40 EDT; 3 days ago
 Invocation: a6cc258ecacd48a6835711ff57a002e9
        Docs: man:sshd(8)
               man:sshd_config(5)
   Main PID: 276708 (sshd)
       Tasks: 1 (limit:
     Memory: 3.3M (peak: 3.6M)
         CPU: 82ms
     CGroup: /system.slice/ssh.service
Jul 14 03:47:40 ayeshanadeem systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Jul 14 03:47:40 ayeshanadeem sshd[276708]: Server listening on 0.0.0.0 port 22.
Jul 14 03:47:40 ayeshanadeem sshd[276708]: Server listening on :: port 22.
Jul 14 03:47:40 ayeshanadeem systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
```

This secure guest and host connection, file sharing, and copy pasting etc

Command 3:

Command 4:

```
-(ayeshanadeem® ayeshanadeem)-[~]
_$ netstat -tuln
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address
                                              Foreign Address
                                                                       State
tcp
           0
                  0 127.0.0.1:6789
                                              0.0.0.0:*
                                                                       LISTEN
                  0 0.0.0.0:22
tcp
           0
                                              0.0.0.0:*
                                                                       LISTEN
           0
                  0 127.0.0.1:43895
                                              0.0.0.0:*
tcp
                                                                       LISTEN
           0
                  0 0.0.0.0:3000
                                              0.0.0.0:*
                                                                       LISTEN
tcp
           0
                  0 :::22
                                                                       LISTEN
tcp6
                                              :::*
                  0 fe80::a00:27ff:feb8:546 :::*
           0
udp6
```

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To know which ports are open to listen

Command 5:

```
(ayeshanadeem® ayeshanadeem)-[~]

$ ping google.com
PING google.com (192.178.24.174) 56(84) bytes of data.
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=1 ttl=116 time=149 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=2 ttl=116 time=146 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=3 ttl=116 time=43.8 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=4 ttl=116 time=238 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=5 ttl=116 time=94.7 ms
^C

— google.com ping statistics —
6 packets transmitted 5 received, 16.6667% packet loss, time 5009ms
rtt min/avg/max/mdev = 43.828/134.240/237.749/64.515 ms
```

Test network connectivity.

Others:

Command 1:

```
(ayeshanadeem⊕ ayeshanadeem)-[~]

$ sudo ufw default allow outgoing
Default outgoing policy changed to 'allow'
(be sure to update your rules accordingly)

(ayeshanadeem⊕ ayeshanadeem)-[~]

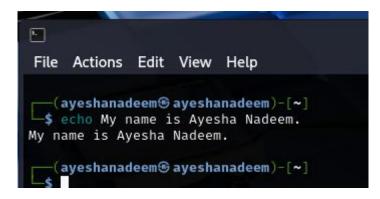
$ sudo ufw default deny incoming
Default incoming policy changed to 'deny'
(be sure to update your rules accordingly)

(ayeshanadeem⊕ ayeshanadeem)-[~]

$ ping google.com
PING google.com (192.178.24.174) 56(84) bytes of data.
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=1 ttl=116 time=149 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=2 ttl=116 time=146 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=3 ttl=116 time=43.8 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=3 ttl=116 time=238 ms
64 bytes from mct04s02-in-f14.1e100.net (192.178.24.174): icmp_seq=5 ttl=116 time=94.7 ms
^C

— google.com ping statistics —
6 packets transmitted, 5 received, 16.6667% packet loss, time 5009ms
rtt min/avg/max/mdev = 43.828/134.240/237.749/64.515 ms
```

To clear the content from cmd.



To write any content on cmd.

Command 3:

```
-(ayeshanadeem⊕ ayeshanadeem)-[~]
 1 git clone https://github.com/den4uk/andriller.git \n
    cd andriller
 2
 3 sudo chmod +x setup.py andriller-gui.py
    pip install build
    sudo apt install python3-venv
    clear
    sudo apt update
    sudo apt-key del
    wget -q -0 - https://archive.kali.org/archive-key.asc
10
    cd
    sudo apt-key del
    wget -q -0 - https://archive.kali.org/archive-key.asc
    sudo rm /etc/apt/trusted.gpg.d/kali-archive-keyring.g
13
    wget -q0- https://archive.kali.org/archive-key.asc |
15
    sudo nano /etc/apt/sources.list
    sudo apt update
16
    sudo apt upgrade
   sudo apt install bettercap
18
19
    sudo apt
             -- fix-broken install
20
    sudo apt install bettercap
    sudo su
22
    docker -- version
    sudo docker pull opensecurity/mobile-security-framewo
24
    ip a
25
26
    ipa
    ip a
27
    sudo su
28
    ping google.com
29
    ping
         localhost
30
    ping
    ping google.com
    sudo apt-get install beef-xss
33
    sudo su
34
    clear
    sudo apt-get install beef-xss
36
    sudo su
37
    exit
38
    ./beef
39
    beef-xss
    sudo su
40
    exit
41
    beef-xss
```