

OLD DOMINION UNIVERSITY
CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS
Assignment #1 Basic Linux Commands

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Task A: Practice with the Basic Linux Commands

1. How do you find the IP address of your Linux machine using the command line?

```
(osboxes@cmera)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.26.6.111 netmask 255.255.240.0 broadcast 172.26.15.255
    inet6 fe80::20c:29ff:fe35:2ed1 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:35:2e:d1 txqueuelen 1000 (Ethernet)
    RX packets 176 bytes 36582 (35.7 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 204 bytes 19267 (18.8 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

I used the “ifconfig” command and the IP address returned is “172.26.6.111”.

2. Display your current directory in a terminal.

```
(osboxes@cmera)-[~]
$ pwd
/home/osboxes
```

I used the “pwd” command to show the current working directory which is “/home/osboxes”

3. Use the echo command to print your name to the console.

```
(osboxes@cmera)-[~]
$ echo celeste
celeste
```

The “echo” command allowed me to print my name Celeste.

4. Display your first and last names in two separate lines using a single echo command.

```
(osboxes@cmera)-[~]
$ echo -e "celeste\nmeraz"
celeste
meraz
```

I used the echo to print my name, the “-e” enables interpretation of escape characters. The “\n” in between my name creates the newline, creating the separate line.

5. How to change to home directory using cd command and, absolute pathname.

```
(osboxes@cmera)-[~]
$ cd /

(osboxes@cmera)-[/]
$ cd /home/osboxes

(osboxes@cmera)-[~]
$
```

I used the “cd” command to change directories and add the absolute pathname “/home/osboxes”

6. Create a new file named “forXXXX.txt” in your home directory. Then, use the long listing format to display the contents in your home directory.

```
(osboxes@cmera)-[~]
└─$ touch forcmera.txt | ls -l
total 64
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Desktop
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Documents
drwxr-xr-x  2 osboxes osboxes 4096 Apr 21  2024 Downloads
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Music
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Pictures
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Public
drwxr-xr-x  2 osboxes osboxes 4096 Nov 22  2023 Stock
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Templates
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Videos
drwxr-xr-x  2 osboxes osboxes 4096 Nov 22  2023 backups
drwxr-xr-x 13 osboxes osboxes 4096 Sep 12  2024 dmarc-report-converter
-rw-r--r--  1 osboxes osboxes   43 Nov 22  2023 firstfilecm
-rw-r--r--  1 osboxes osboxes    0 Sep  1 14:23 forcmera.txt
-rwxrwxrwx  1 osboxes osboxes 7332 Apr 21  2024 linux
-rw-r--r--  1 osboxes osboxes    0 Nov 22  2023 magnetic
-rwxrwxr-x  1 osboxes root   1797 Mar 24  2024 pass.txt
-rw-r--r--  1 root    root    498 Sep 22  2023 shadow
```

I used the “touch” command to create the txt file. The “ls” command lists the contents of the directory and “-l” lists the contents in long listing format.

What is the size of the file you just created?

The size of the “forcmera.txt” file is 0 since the file was just created and has no content.

7. Create a new directory named “XXXX” in your home directory. Then, use the long listing format to display the contents in your home directory.

```
(osboxes@cmera)-[~]
└─$ mkdir cmera | ls -l
total 64
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Desktop
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Documents
drwxr-xr-x  2 osboxes osboxes 4096 Apr 21  2024 Downloads
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Music
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Pictures
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Public
drwxr-xr-x  2 osboxes osboxes 4096 Nov 22  2023 Stock
```

I used the “mkdir” command to create the directory. The “ls” command lists the contents of the directory and “-l” lists the contents in long listing format.

What is the size of the file you just created?

```
(osboxes@cmera)-[~]
└─$ ls -l
total 68
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Desktop
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Documents
drwxr-xr-x  2 osboxes osboxes 4096 Apr 21  2024 Downloads
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Music
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Pictures
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Public
drwxr-xr-x  2 osboxes osboxes 4096 Nov 22  2023 Stock
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Templates
drwxr-xr-x  2 osboxes osboxes 4096 Oct  2  2023 Videos
drwxr-xr-x  2 osboxes osboxes 4096 Nov 22  2023 backups
drwxr-xr-x  2 osboxes osboxes 4096 Sep  1 14:25 cmera
drwxr-xr-x 13 osboxes osboxes 4096 Sep 12  2024 dmarc-report-converter
```

The size of the “cmera” directory is 4096 by default.

8. Copy /etc/passwd file to your home directory. The copy should be named as “passwd_XXXX” in your home directory.

```
(osboxes@cmera)-[~]
└─$ cp /etc/passwd ~/passwd_cmera

(osboxes@cmera)-[~]
└─$ head -n 6 ~/passwd_cmera
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

(osboxes@cmera)-[~]
└─$ grep "www" ~/passwd_cmera
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
```

I used the “cp /etc/passwd” command to copy the “passwd_cmera” file to my home directory.

Then, complete the following two subtasks:

- Use the proper command to display the first six lines in this file.

I used the “head -n 6” command to display the first six line of the “passwd_cmera” file.

- **Search keyword “www” in this file.**

I used the “grep “www”” command to show the line containing “www” in the “passwd_cmera” file.