

OLD DOMINION UNIVERSITY  
CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS

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# ASSIGNMENT #1

# LINUX COMMANDS

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**Course #:** CYSE301\_14735

1. (10 pt) How do you find the IP address of your Linux machine using the command line?

```
(anna@atabo003)-[~/Desktop]
└─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.204 netmask 255.255.255.0 broadcast 192.168.1.255
    inet6 fe80::a00:27ff:fe2:7d4d prefixlen 64 scopeid 0<20<link>
    inet6 2600:4040:14af:1900:17a7:2a64:2bdd:2607 prefixlen 64 scopeid 0<0<global>
    inet6 2600:4040:14af:1900:a00:27ff:fe2:7d4d prefixlen 64 scopeid 0<0<global>
    ether 08:00:27:f2:7d:4d txqueuelen 1000 (Ethernet)
    RX packets 33595 bytes 2086108 (1.9 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 370 bytes 33353 (32.5 KiB)
    TX errors 0 dropped 19 overruns 0 carrier 0 collisions 0
```

The IP address on a linux terminal is found by using the ifconfig command. From there you can see not just the IP address of the machine, but the MAC Address and subnet mask as well.

2. (10 pt) Display your current directory in a terminal.

```
(anna@atabo003)-[~/Desktop]
└─$ pwd
/home/anna/Desktop
```

Pwd will always show the directory that I am working in

3. (10 pt) Use the echo command to print your name to the console.

```
(anna@atabo003)-[~/Desktop]
└─$ echo Anna Mae Boubacar
Anna Mae Boubacar
```

Echo command will always display text on screen

4. (10 pt) Display your first and last names in two separate lines using a single echo command (tip: how to enable the interpretation of escape characters?)

```
(anna@atabo003)-[~/Desktop]
└─$ echo -e "Anna Mae\nBoubacar"
Anna Mae
Boubacar
```

The -e in the echo command and \n will trigger the command to display text on screen on two separate lines

5. (10 pt) How to change to home directory using cd command and, absolute pathname.

```
(anna@atabo003)-[~/Desktop]
$ cd /home/anna

(anna@atabo003)-[~]
$
```

The cd command along with the desired directory destination and absolute pathname will automatically send you to that working directory

6. (10 pt) Create a new file named “forXXXX.txt” in your home directory (replace “XXXX” with your own MIDAS). Then, use the long listing format to display the contents in your home directory. What is the size of the file you just created?

```
(anna@atabo003)-[~]
$ touch ~/foratabo003.txt

(anna@atabo003)-[~]
$ ls -l ~
total 136720
-rw-rw-r-- 1 anna anna      594 Mar  5 21:56 atabo003.hash
-rwxrwxr-x 1 anna anna     135 Apr  7 20:08 backup_aliceee.sh
-rwxrwxr-x 1 anna anna     284 Apr  7 20:01 backup_alice.sh
-rw-r--r-- 1 anna anna    5332 Feb 12  2025 copyright_cyse
drwxr-xr-x 2 anna anna    4096 Mar 31 20:06 Desktop
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Documents
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Downloads
-rw-rw-r-- 1 anna anna         0 Sep  2 23:12 foratabo003.txt
-rwxrwxr-x 1 anna anna      46 Apr 21 21:36 for_loop.sh
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Music
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Pictures
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Public
-rw-r--r-- 1 anna anna 139921507 Mar  5 22:12 rockyou.txt
-rw-r----- 1 root root    2140 Mar  5 22:18 shadow
-rw----- 1 anna anna      38 Mar 31 18:40 taskA.sh.save
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Templates
-rw-rw-r-- 1 anna anna    2140 Mar  5 22:18 test.txt
drwxr-xr-x 2 anna anna    4096 Jan 17  2025 Videos
-rwxrwxr-x 1 anna anna      65 Apr 21 21:41 while_loop.sh
drwxr-xr-x 2 anna anna    4096 Feb 12  2025 zstd
```

The size of the file created is 0, which means that the file has no contents within it

7. (20 pt) Create a new directory named “XXXX” in your home directory (replace “XXXX” with your own MIDAS). Then, use the long listing format to display the contents in your home directory. What is the size of the file you just created?

```
(anna@atabo003)-[~]
└─$ mkdir ~/atabo003

(anna@atabo003)-[~]
└─$ ls -l ~
total 136724
drwxrwxr-x 2 anna anna      4096 Sep  2 23:15 atabo003
-rw-rw-r-- 1 anna anna      594 Mar  5 21:56 atabo003.hash
-rwxrwxr-x 1 anna anna      135 Apr  7 20:08 backup_aliceee.sh
-rwxrwxr-x 1 anna anna      284 Apr  7 20:01 backup_alice.sh
-rw-r--r-- 1 anna anna     5332 Feb 12 2025 copyright_cyse
drwxr-xr-x 2 anna anna     4096 Mar 31 20:06 Desktop
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Documents
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Downloads
-rw-rw-r-- 1 anna anna         0 Sep  2 23:12 foratabo003.txt
-rwxrwxr-x 1 anna anna       46 Apr 21 21:36 for_loop.sh
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Music
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Pictures
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Public
-rw-r--r-- 1 anna anna 139921507 Mar  5 22:12 rockyou.txt
-rw-r----- 1 root root      2140 Mar  5 22:18 shadow
-rw----- 1 anna anna         38 Mar 31 18:40 taskA.sh.save
drwxr-xr-x 2 anna anna     4096 Jan 17 2025 Templates
-rw-rw-r-- 1 anna anna     2140 Mar  5 22:18 test.txt
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-rwxrwxr-x 1 anna anna        65 Apr 21 21:41 while_loop.sh
drwxr-xr-x 2 anna anna     4096 Feb 12 2025 zstd
```

The size of the file is 4096

8. (20 pt) Copy /etc/passwd file to your home directory. The copy should be named as “passwd\_XXXX” (replace “XXXX” with your own MIDAS) in your home directory. Then, complete the following two subtasks: • Use the proper command to display the first six lines in this file. • Search keyword “www” in this file.

```
(anna@atabo003)-[~]
└─$ cp /etc/passwd ~/passwd_atabo003

(anna@atabo003)-[~]
└─$ head -n 6 ~/passwd_atabo003
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

(anna@atabo003)-[~]
└─$ grep "www" ~/passwd_atabo003
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin

(anna@atabo003)-[~]
└─$
```

The CP command copies files over to the desired directory. The Head command tells the terminal to only display the requested number of lines. The grep command singles out specific terms or desired words. The grep command is also great for quick research within a file