

OLD DOMINION UNIVERSITY

CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS

Assignment: Lab 1– Basic Linux Commands

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**Get Ready:** Select a Linux VM  
Each student can choose to use any Linux environment for e.g., Kali or Ubuntu to complete the following task., if it is installed in your computer/laptop from your previous courses.

If you don't have Linux installed on your computer, you can use kali Linux provided in Cyber Range. You can access that from your canvas.

**NOTE:** please refer to the slides under Module 0.

### Task A: Practice with the Basic Linux Commands

You can take one screenshot to cover the answer for multiple tasks.

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

“bash”

‘ip a’

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

```
(student@kali.example.com)-[~]
└─$ pwd
home/student
```

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

```
(student@kali.example.com)-[~]
└─$ echo "Cora Wilson"
Cora Wilson
```

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?)

```
(student@kali.example.com)-[~]
└─$ echo -e "Cora\nWilson"
Cora
Wilson
```

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

```
(student@kali.example.com)-[~]
└─$ cd ~

(student@kali.example.com)-[~]
└─$ cd /home/student
```

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.

```
(student@kali.example.com)-[~]
└─$ touch forCwils083.txt

(student@kali.example.com)-[~]
└─$ ls -l
total 32
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Desktop
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Documents
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Downloads
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Music
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Pictures
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Public
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Templates
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Videos
-rw-rw-r-- 1 student student    0 Sep  1 20:09 forCwils083.txt
```

What is the size of the file you just created?

0 bytes, touch creates an empty file.

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.

```
(student@kali.example.com)-[~]
└─$ mkdir Cwils083

(student@kali.example.com)-[~]
└─$ ls -l
total 36
drwxrwxr-x 2 student student 4096 Sep  1 20:11 Cwils083
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Desktop
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Documents
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Downloads
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Music
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Pictures
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Public
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Templates
drwxr-xr-x 2 student student 4096 Aug 28 19:59 Videos
-rw-rw-r-- 1 student student   0 Sep  1 20:09 forCwils083.txt
```

What is the size of the file you just created?

4096 bytes

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.

```
(student@kali.example.com)-[~]
└─$ cp /etc/passwd ~/passwd_Cwils083
```

Then, complete the following two subtasks:

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

```
(student@kali.example.com)-[~]
└─$ head -n 6 ~/passwd_Cwils083
root:x:0:0:root:/root:/bin/bash
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
```

- Search keyword “www” in this file.

```
(student@kali.example.com)-[~]
└─$ grep "www" ~/passwd_Cwils083
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
```

