

OLD DOMINION UNIVERSITY

CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS

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Assignment #1 – Explore CCIA and Basic Linux Commands

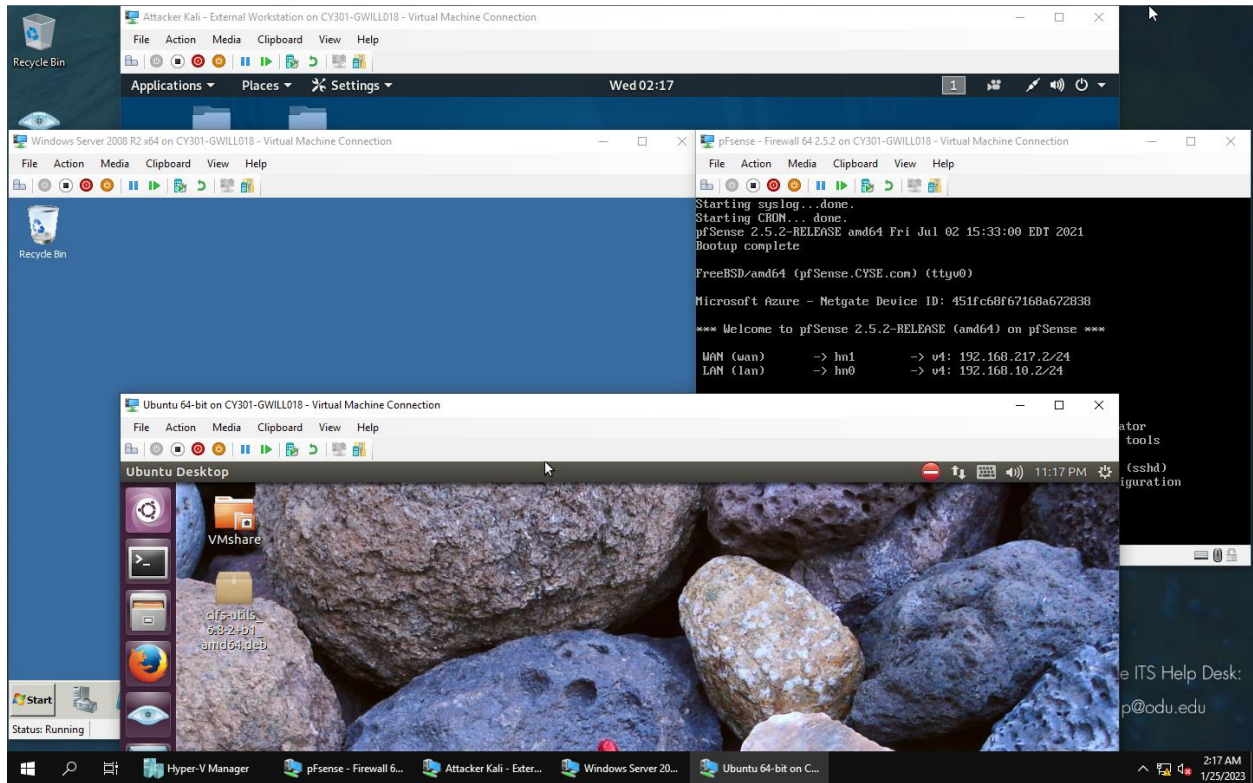
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Gavin Williams

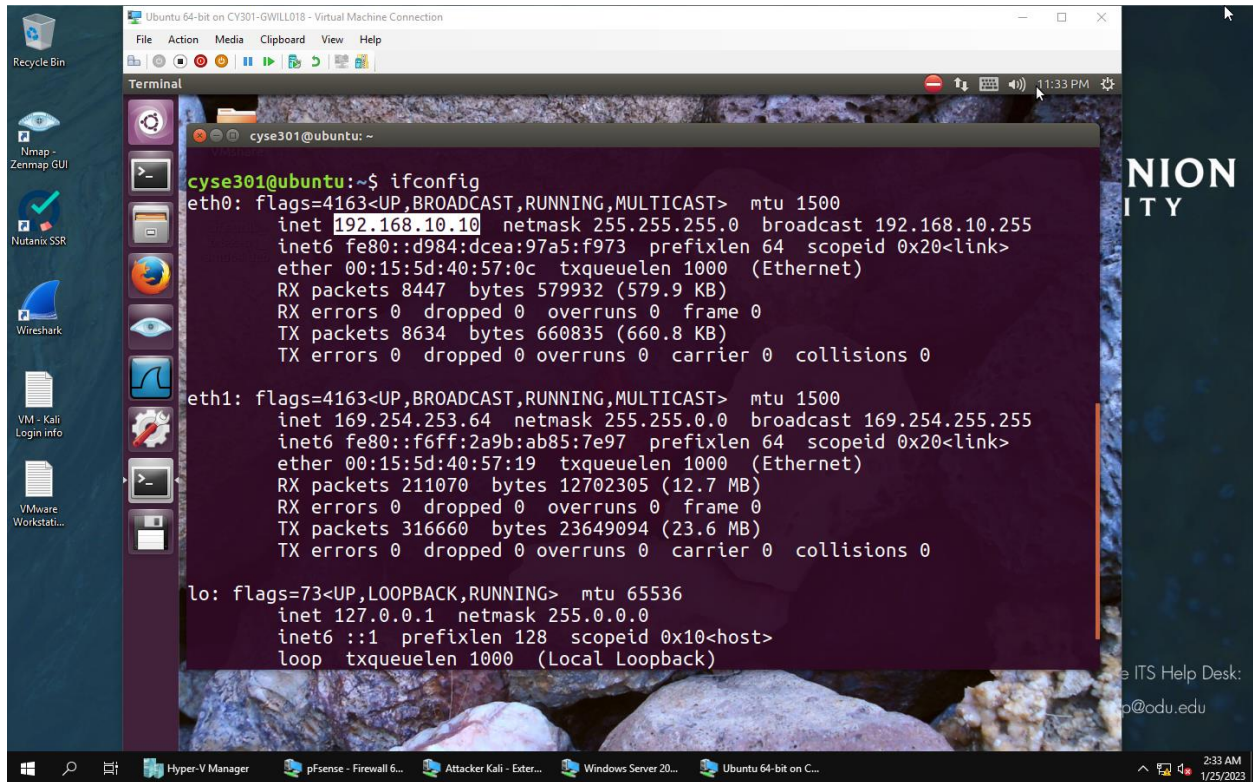
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# TASK A

## 1. Power on the following VMs:



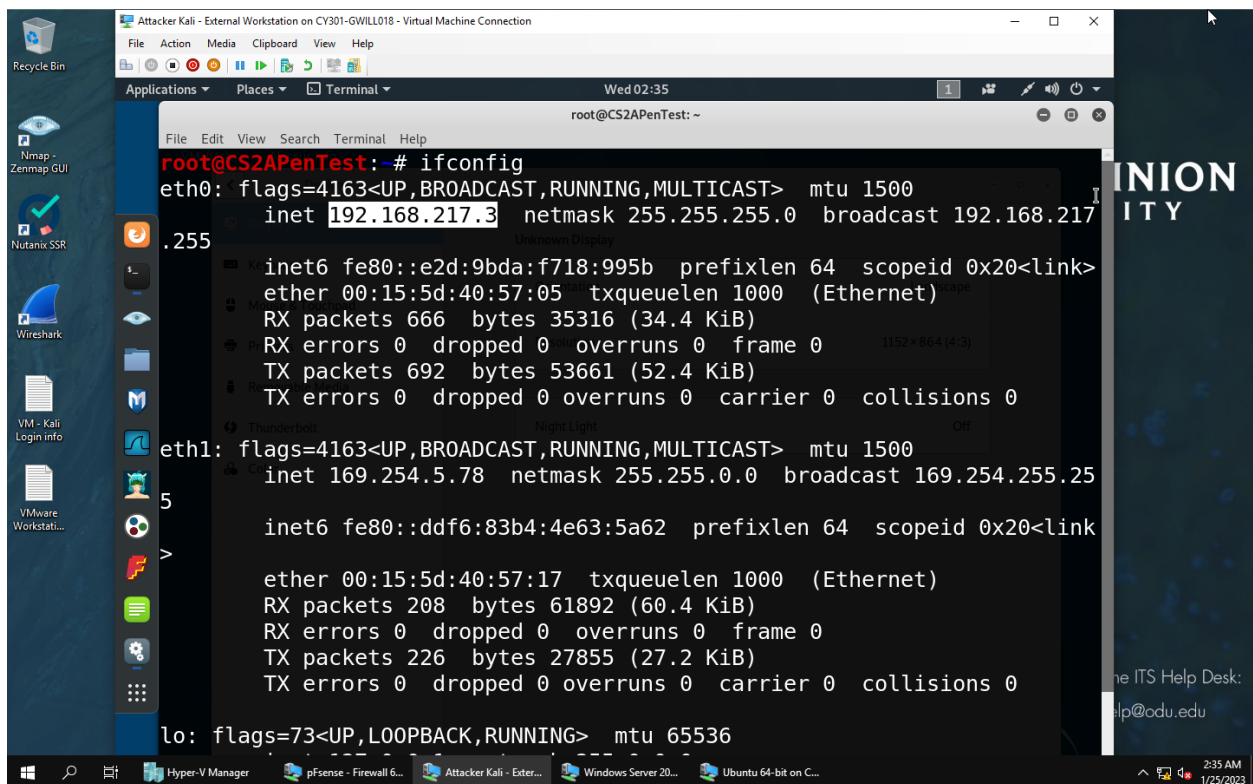
2. Find the IP address of the following VMs by using command:



```
cyse301@ubuntu:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.10.10 netmask 255.255.255.0 broadcast 192.168.10.255
    inet6 fe80::d984:dcea:97a5:f973 prefixlen 64 scopeid 0x20<link>
    ether 00:15:5d:40:57:0c txqueuelen 1000 (Ethernet)
    RX packets 8447 bytes 579932 (579.9 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8634 bytes 660835 (660.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 169.254.253.64 netmask 255.255.0.0 broadcast 169.254.255.255
    inet6 fe80::f6ff:2a9b:ab85:7e97 prefixlen 64 scopeid 0x20<link>
    ether 00:15:5d:40:57:19 txqueuelen 1000 (Ethernet)
    RX packets 211070 bytes 12702305 (12.7 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 316660 bytes 23649094 (23.6 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

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)
```

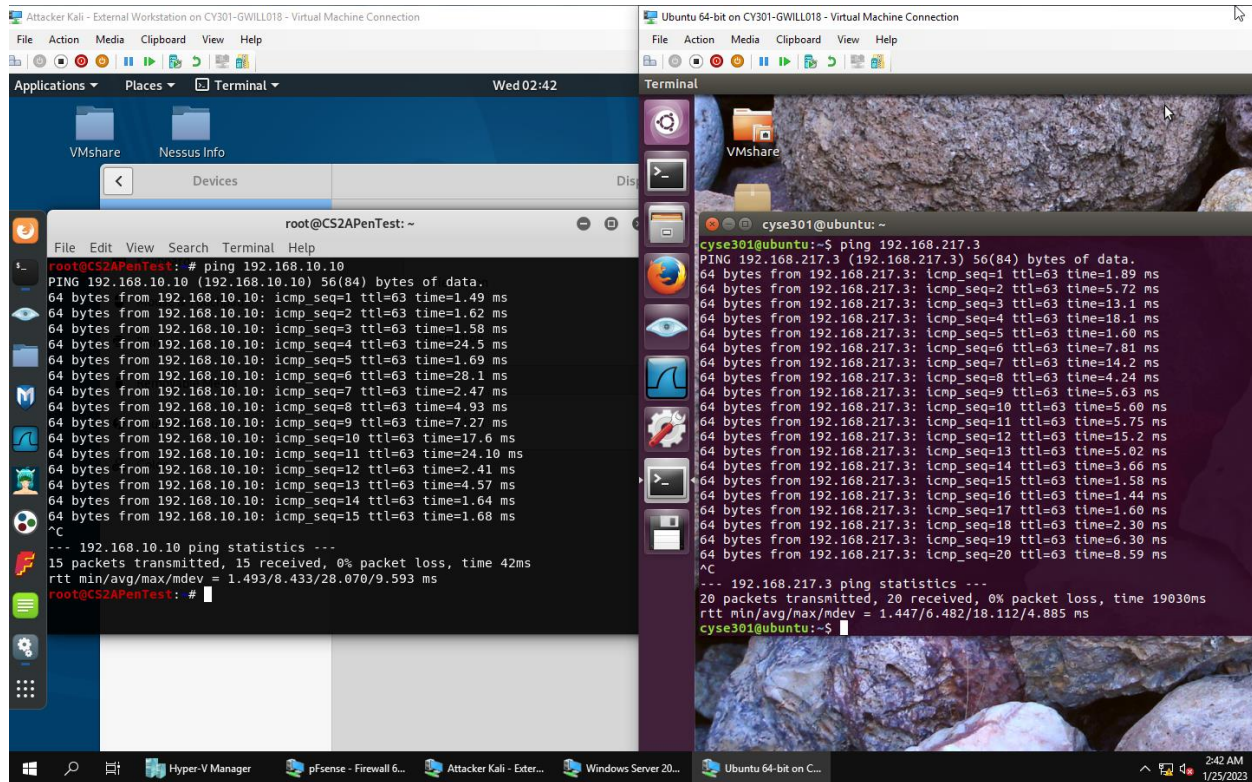


```
root@CS2APenTest:~# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.217.3 netmask 255.255.255.0 broadcast 192.168.217.255
    inet6 fe80::e2d:9bda:f718:995b prefixlen 64 scopeid 0x20<link>
    ether 00:15:5d:40:57:05 txqueuelen 1000 (Ethernet)
    RX packets 666 bytes 35316 (34.4 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 692 bytes 53661 (52.4 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 169.254.5.78 netmask 255.255.0.0 broadcast 169.254.255.255
    inet6 fe80::ddf6:83b4:4e63:5a62 prefixlen 64 scopeid 0x20<link>
    ether 00:15:5d:40:57:17 txqueuelen 1000 (Ethernet)
    RX packets 208 bytes 61892 (60.4 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 226 bytes 27855 (27.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
```

### 3. Verify the connection between Kali Linux VM and Ubuntu VM using the ping command.



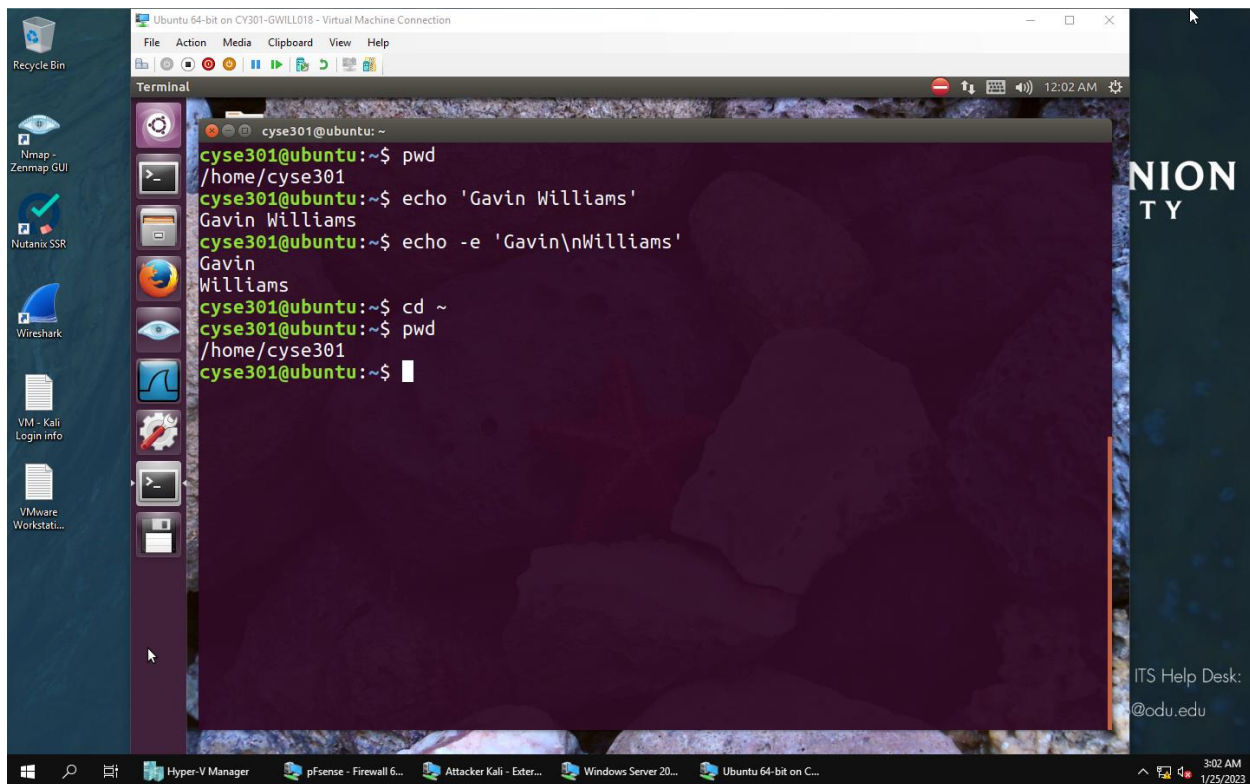
#### Explanation:

(Step 1) I turned on all the VM's listed in the instructions (pfSense, Kali – External, Windows Server 2008, Ubuntu 64-bit) and oriented them on screen so all are visible. (Step 2) Then I found the IP addresses of both Ubuntu and Kali using the **ifconfig** command. (Step 3) Using the IP address giving by the ifconfig command I was able to verify the connection between the two VMs by using the **ping** command ("ping 192.168.10.10" "ping 192.168.217.3").

## TASK B

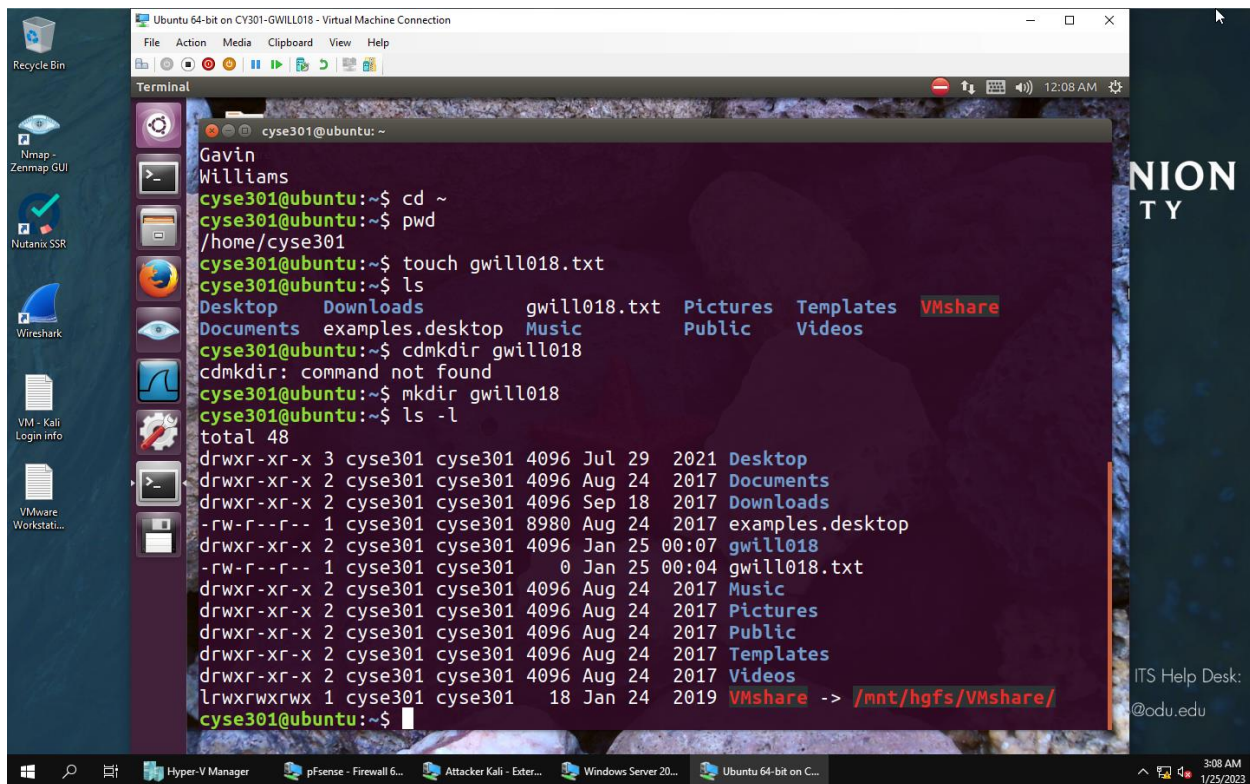
1. Display your current directory in a terminal.
2. Use the echo command to print your name to the console.
3. Display your first and last names in two separate lines using a single echo command.
4. Execute the command to return to your home directory.





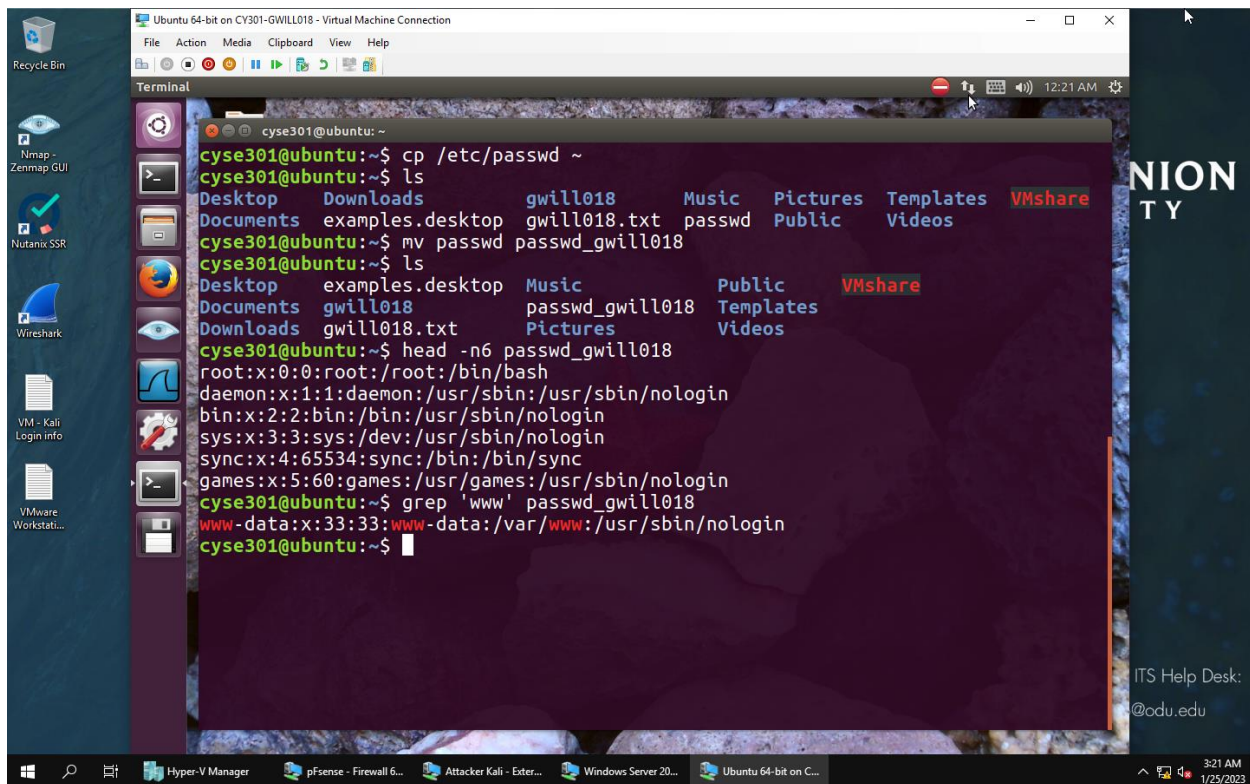
\*Steps 1, 2, 3, and 4 in one screenshot\*

5. 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?
6. 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?



\*Steps 5 and 6 in one screenshot, ignore the “cdmkdir” command that was a typo\*

7. Copy /etc/passwd file to your home directory and rename the file to “passwd\_XXXX” (replace “XXXX” with your own MIDAS). 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.



## Explanation:

(Step 1) I used the command **pwd** to show my current working directory. (Step 2) I used the **echo** 'Gavin Williams' so the console would print my name on screen. (Step 3) To display my first and last name on two separate lines I added the argument **-e** and a **\n** between my first and last name, this is the command I used **echo -e 'Gavin\nWilliams'**. (Step 4) I used **cd ~** to return my home directory. (Step 5) I used **touch** to create a new file, here is the command **touch gwill018.txt** and then used **ls** to view my directory (however I should have used **ls -l** as stated in the directions). With the command **ls -l** it shows that the file is **0 bytes**. (Step 6) I used the command **mkdir gwill018** to create a directory named "gwill018". Then with the **ls -l** command we can see that the directory is **4096 bytes**. (Step 7) Using the command **cp /etc/passwd ~** I was able to copy /etc/passwd to my home directory and with the command **mv passwd passwd\_gwill018** I was able to change the name. With the command **head -n6 passwd\_gwill018** I can see the first 6 lines of passwd\_gwill018. Lastly the command **grep 'www' passwd\_gwill018** allows to search for the key word 'www' from passwd\_gwill018.