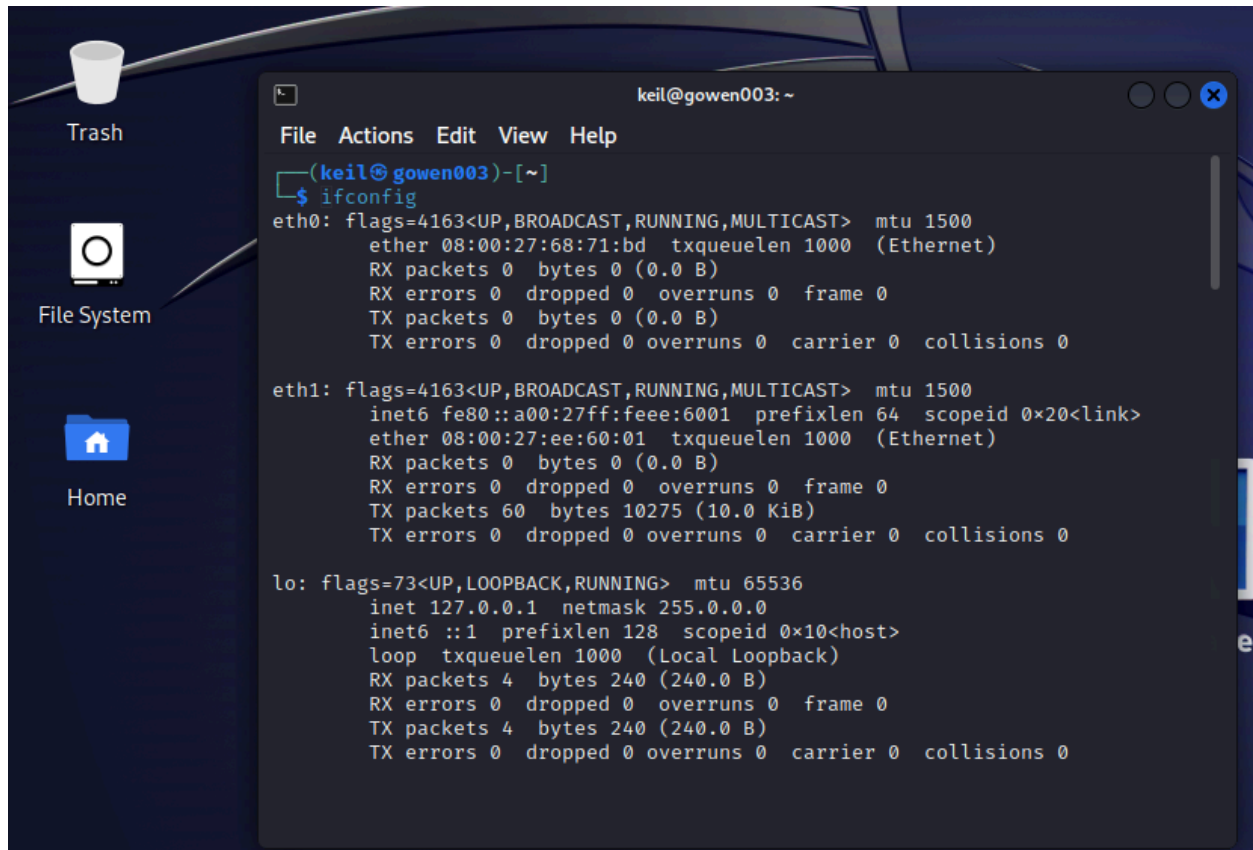


# CYSE 301: Cybersecurity Technique and Operations

## Assignment: Lab 1– Basic Linux commands

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



The screenshot shows a Linux desktop environment with a dark theme. On the left sidebar, there are icons for 'Trash', 'File System', and 'Home'. The main window is a terminal titled 'keil@gowen003: ~'. The terminal output shows the results of the 'ifconfig' command, displaying details for three network interfaces: eth0, eth1, and lo. The lo interface is the loopback interface, and its IP address is 127.0.0.1.

```
keil@gowen003: ~  
File Actions Edit View Help  
(keil@gowen003)-[~]  
$ ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
ether 08:00:27:68:71:bd txqueuelen 1000 (Ethernet)  
RX packets 0 bytes 0 (0.0 B)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 0 bytes 0 (0.0 B)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
inet6 fe80::a00:27ff:feee:6001 prefixlen 64 scopeid 0<20<link>  
ether 08:00:27:ee:60:01 txqueuelen 1000 (Ethernet)  
RX packets 0 bytes 0 (0.0 B)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 60 bytes 10275 (10.0 KiB)  
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 0<10<host>  
loop txqueuelen 1000 (Local Loopback)  
RX packets 4 bytes 240 (240.0 B)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 4 bytes 240 (240.0 B)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

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

```
keil@gowen003: ~
File Actions Edit View Help

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)
  RX packets 4 bytes 240 (240.0 B)
  RX errors 0 dropped 0 overruns 0 frame 0
  TX packets 4 bytes 240 (240.0 B)
  TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

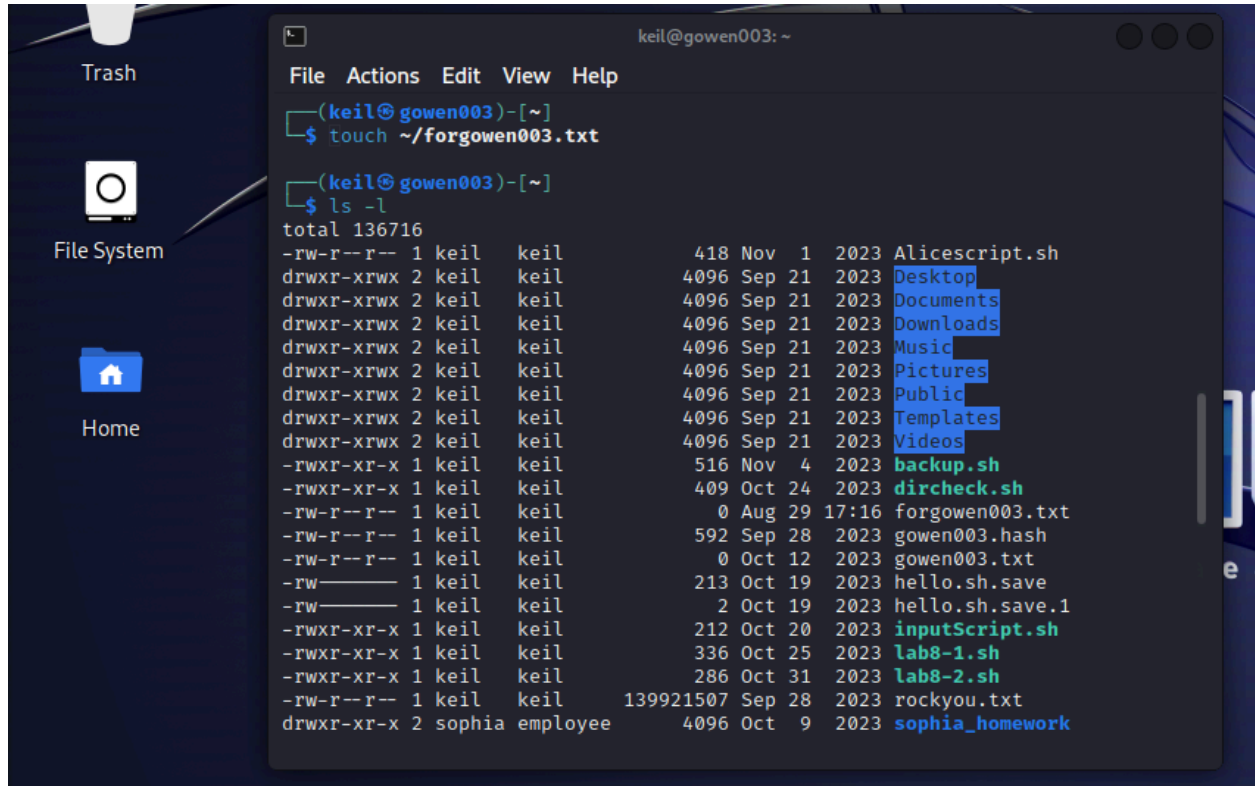
(keil@gowen003)-[~]
└─$ pwd
/home/keil

(keil@gowen003)-[~]
└─$ echo keil
keil

(keil@gowen003)-[~]
└─$ echo -e "keil\n owens"
keil
owens

(keil@gowen003)-[~]
└─$ cd /home/keil
```

2. Display your current directory in a terminal.
3. Use the echo command to print your name to the console.
4. Display your first and last names in two separate lines using a single echo command (tip: how to enable the interpretation of escape characters?)
5. How to change to home directory using cd command and, absolute pathname.



6. 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?

The image shows a terminal window titled "keil@gowen003: ~" with a menu bar containing "File", "Actions", "Edit", "View", and "Help". The terminal displays the following commands and output:

```
(keil@gowen003)-[~]
$ mkdir gowen003

(keil@gowen003)-[~]
$ ls -l
total 136720
-rw-r--r-- 1 keil keil 418 Nov 1 2023 Alicescript.sh
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Desktop
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Documents
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Downloads
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Music
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Pictures
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Public
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Templates
drwxr-xrwx 2 keil keil 4096 Sep 21 2023 Videos
-rwxr-xr-x 1 keil keil 516 Nov 4 2023 backup.sh
-rwxr-xr-x 1 keil keil 409 Oct 24 2023 dircheck.sh
-rw-r--r-- 1 keil keil 0 Aug 29 17:16 forgowen003.txt
drwxr-xr-x 2 keil keil 4096 Aug 29 17:17 gowen003
-rw-r--r-- 1 keil keil 592 Sep 28 2023 gowen003.hash
-rw-r--r-- 1 keil keil 0 Oct 12 2023 gowen003.txt
-rw----- 1 keil keil 213 Oct 19 2023 hello.sh.save
-rw----- 1 keil keil 2 Oct 19 2023 hello.sh.save.1
-rwxr-xr-x 1 keil keil 212 Oct 20 2023 inputScript.sh
-rwxr-xr-x 1 keil keil 336 Oct 25 2023 lab8-1.sh
-rwxr-xr-x 1 keil keil 286 Oct 31 2023 lab8-2.sh
```

7. 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?

```
keil@gowen003: ~  
File Actions Edit View Help  
-rw-r--r-- 1 keil keil 0 Oct 12 2023 gowen003.txt  
-rw----- 1 keil keil 213 Oct 19 2023 hello.sh.save  
-rw----- 1 keil keil 2 Oct 19 2023 hello.sh.save.1  
-rwxr-xr-x 1 keil keil 212 Oct 20 2023 inputScript.sh  
-rwxr-xr-x 1 keil keil 336 Oct 25 2023 lab8-1.sh  
-rwxr-xr-x 1 keil keil 286 Oct 31 2023 lab8-2.sh  
-rw-r--r-- 1 keil keil 139921507 Sep 28 2023 rockyou.txt  
drwxr-xr-x 2 sophia employee 4096 Oct 9 2023 sophia_homework  
  
(keil@gowen003)-[~]  
$ cp /etc/passwd ~/passwd_gowen003  
  
(keil@gowen003)-[~]  
$ head -n 6 passwd_gowen003  
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  
  
(keil@gowen003)-[~]  
$ grep "www" passwd_gowen003  
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin  
  
(keil@gowen003)-[~]  
$
```

8. 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.