

**ASHUTOSH P**  
**CH.EN.U4CSE20007**

## COGNIZANCE TASK - 4. (PART - 2)

- Write a bash script to echo your name 25 times

**Code:** for i in {1..25}; do echo Ashutosh; done

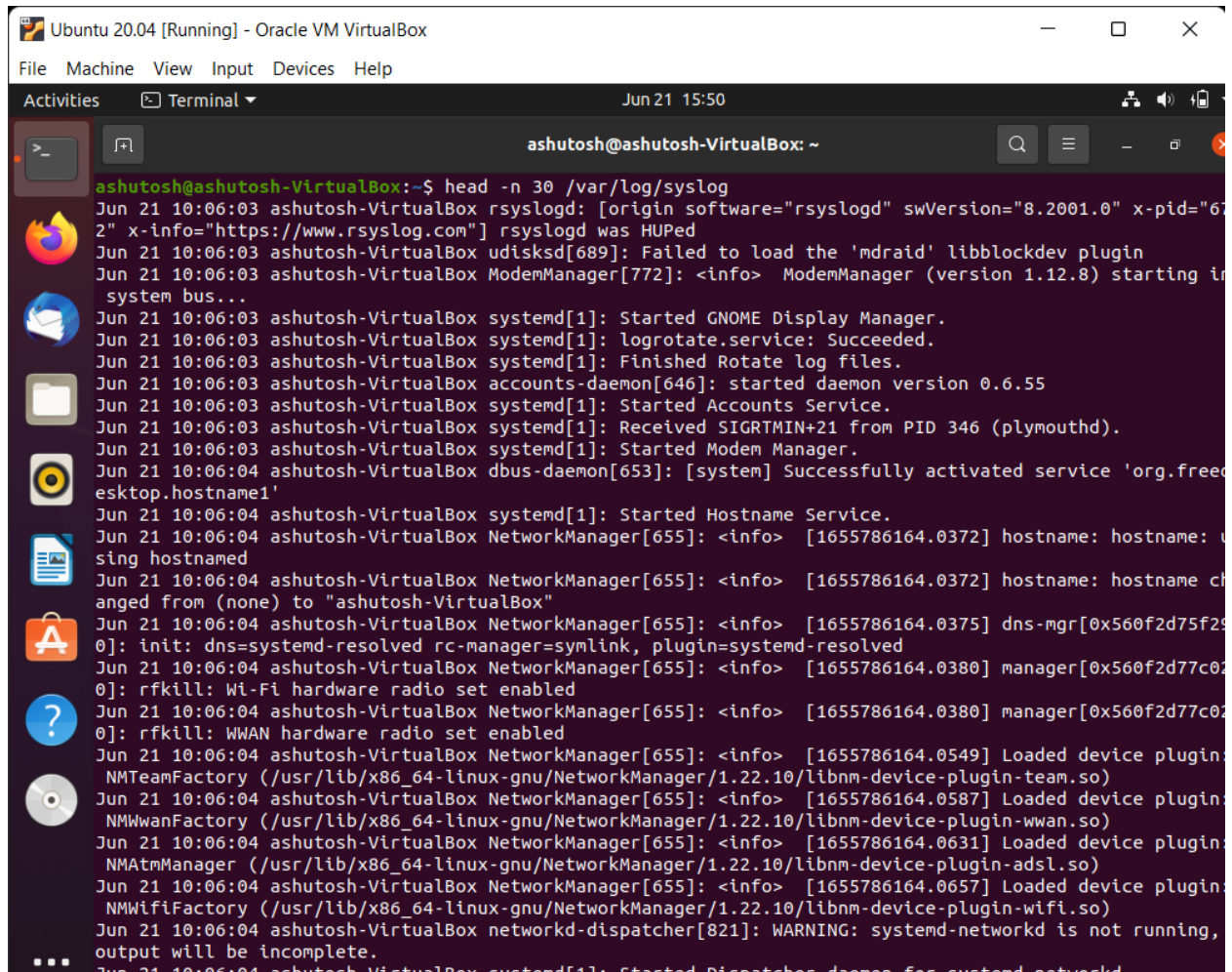
## Output:

[illegible]

- What command should I use to display the **first** 30 entries of syslog file?

**Code:** `head -n 30 /var/log/syslog`

**Output:**



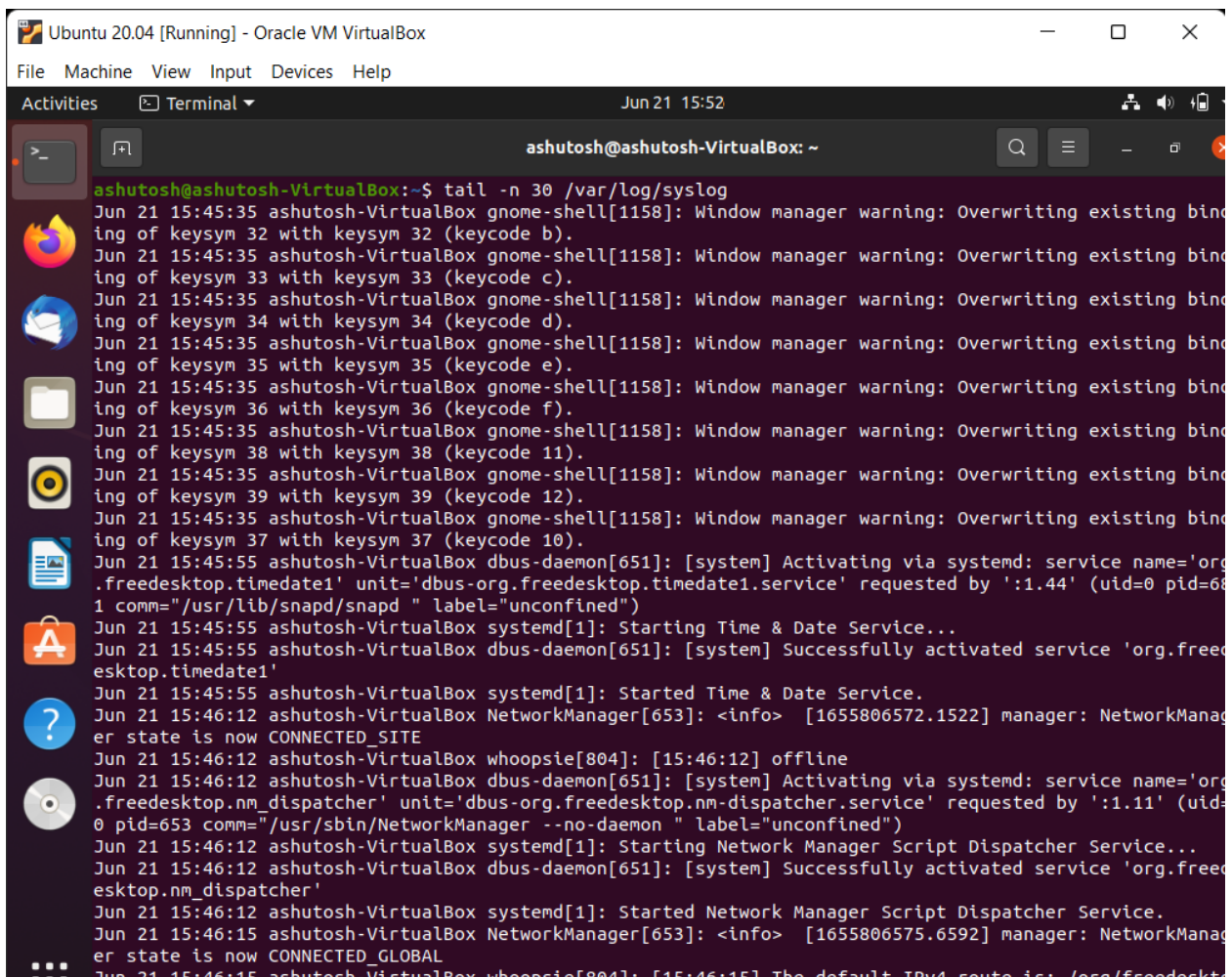
The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal displays the command `head -n 30 /var/log/syslog` and its output, which consists of 30 lines of system logs. The logs show the startup sequence of the system, including the rsyslogd service, udisksd, ModemManager, systemd, GNOME Display Manager, Accounts Service, Plymouth, dbus-daemon, Hostname Service, NetworkManager, and the loading of various network device plugins. The output is truncated at the bottom with "output will be incomplete."

```
ashutosh@ashutosh-VirtualBox: ~$ head -n 30 /var/log/syslog
Jun 21 10:06:03 ashutosh-VirtualBox rsyslogd: [origin software="rsyslogd" swVersion="8.2001.0" x-pid="672" x-info="https://www.rsyslog.com"] rsyslogd was HUPed
Jun 21 10:06:03 ashutosh-VirtualBox udisksd[689]: Failed to load the 'mdraid' libblockdev plugin
Jun 21 10:06:03 ashutosh-VirtualBox ModemManager[772]: <info> ModemManager (version 1.12.8) starting in system bus...
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: Started GNOME Display Manager.
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: logrotate.service: Succeeded.
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: Finished Rotate log files.
Jun 21 10:06:03 ashutosh-VirtualBox accounts-daemon[646]: started daemon version 0.6.55
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: Started Accounts Service.
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: Received SIGRTMIN+21 from PID 346 (plymouthd).
Jun 21 10:06:03 ashutosh-VirtualBox systemd[1]: Started Modem Manager.
Jun 21 10:06:04 ashutosh-VirtualBox dbus-daemon[653]: [system] Successfully activated service 'org.freedesktop.hostname1'
Jun 21 10:06:04 ashutosh-VirtualBox systemd[1]: Started Hostname Service.
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0372] hostname: hostname: changing hostname
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0372] hostname: hostname changed from (none) to "ashutosh-VirtualBox"
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0375] dns-mgr[0x560f2d75f290]: init: dns=systemd-resolved rc-manager=symlink, plugin=systemd-resolved
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0380] manager[0x560f2d77c020]: rfkill: Wi-Fi hardware radio set enabled
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0380] manager[0x560f2d77c020]: rfkill: WWAN hardware radio set enabled
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0549] Loaded device plugin: NMTeamFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-team.so)
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0587] Loaded device plugin: NMWwanFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-wwan.so)
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0631] Loaded device plugin: NMAtmManager (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-adsl.so)
Jun 21 10:06:04 ashutosh-VirtualBox NetworkManager[655]: <info> [1655786164.0657] Loaded device plugin: NMWifiFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-wifi.so)
Jun 21 10:06:04 ashutosh-VirtualBox networkd-dispatcher[821]: WARNING: systemd-networkd is not running, output will be incomplete.
Jun 21 10:06:04 ashutosh-VirtualBox systemd[1]: Started Dispatcher daemon for systemd-networkd
```

- What command should I use to display the **last** 30 entries of syslog file?

**Code:** `tail -n 30 /var/log/syslog`

**Output:**



```
ashutosh@ashutosh-VirtualBox: ~$ tail -n 30 /var/log/syslog
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 32 with keysym 32 (keycode b).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 33 with keysym 33 (keycode c).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 34 with keysym 34 (keycode d).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 35 with keysym 35 (keycode e).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 36 with keysym 36 (keycode f).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 38 with keysym 38 (keycode 11).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 39 with keysym 39 (keycode 12).
Jun 21 15:45:35 ashutosh-VirtualBox gnome-shell[1158]: Window manager warning: Overwriting existing binding of keysym 37 with keysym 37 (keycode 10).
Jun 21 15:45:55 ashutosh-VirtualBox dbus-daemon[651]: [system] Activating via systemd: service name='org.freedesktop.timedate1' unit='dbus-org.freedesktop.timedate1.service' requested by ':1.44' (uid=0 pid=681 comm="/usr/lib/snapd/snapd" label="unconfined")
Jun 21 15:45:55 ashutosh-VirtualBox systemd[1]: Starting Time & Date Service...
Jun 21 15:45:55 ashutosh-VirtualBox dbus-daemon[651]: [system] Successfully activated service 'org.freedesktop.timedate1'
Jun 21 15:45:55 ashutosh-VirtualBox systemd[1]: Started Time & Date Service.
Jun 21 15:46:12 ashutosh-VirtualBox NetworkManager[653]: <info> [1655806572.1522] manager: NetworkManager state is now CONNECTED_SITE
Jun 21 15:46:12 ashutosh-VirtualBox whoopsie[804]: [15:46:12] offline
Jun 21 15:46:12 ashutosh-VirtualBox dbus-daemon[651]: [system] Activating via systemd: service name='org.freedesktop.nm_dispatcher' unit='dbus-org.freedesktop.nm-dispatcher.service' requested by ':1.11' (uid=0 pid=653 comm="/usr/sbin/NetworkManager --no-daemon" label="unconfined")
Jun 21 15:46:12 ashutosh-VirtualBox systemd[1]: Starting Network Manager Script Dispatcher Service...
Jun 21 15:46:12 ashutosh-VirtualBox dbus-daemon[651]: [system] Successfully activated service 'org.freedesktop.nm_dispatcher'
Jun 21 15:46:12 ashutosh-VirtualBox systemd[1]: Started Network Manager Script Dispatcher Service.
Jun 21 15:46:15 ashutosh-VirtualBox NetworkManager[653]: <info> [1655806575.6592] manager: NetworkManager state is now CONNECTED_GLOBAL
Jun 21 15:46:15 ashutosh-VirtualBox whoopsie[804]: [15:46:15] The default IPv4 route is: /org/freedesktop/NetworkManager/SettingsManager1
```

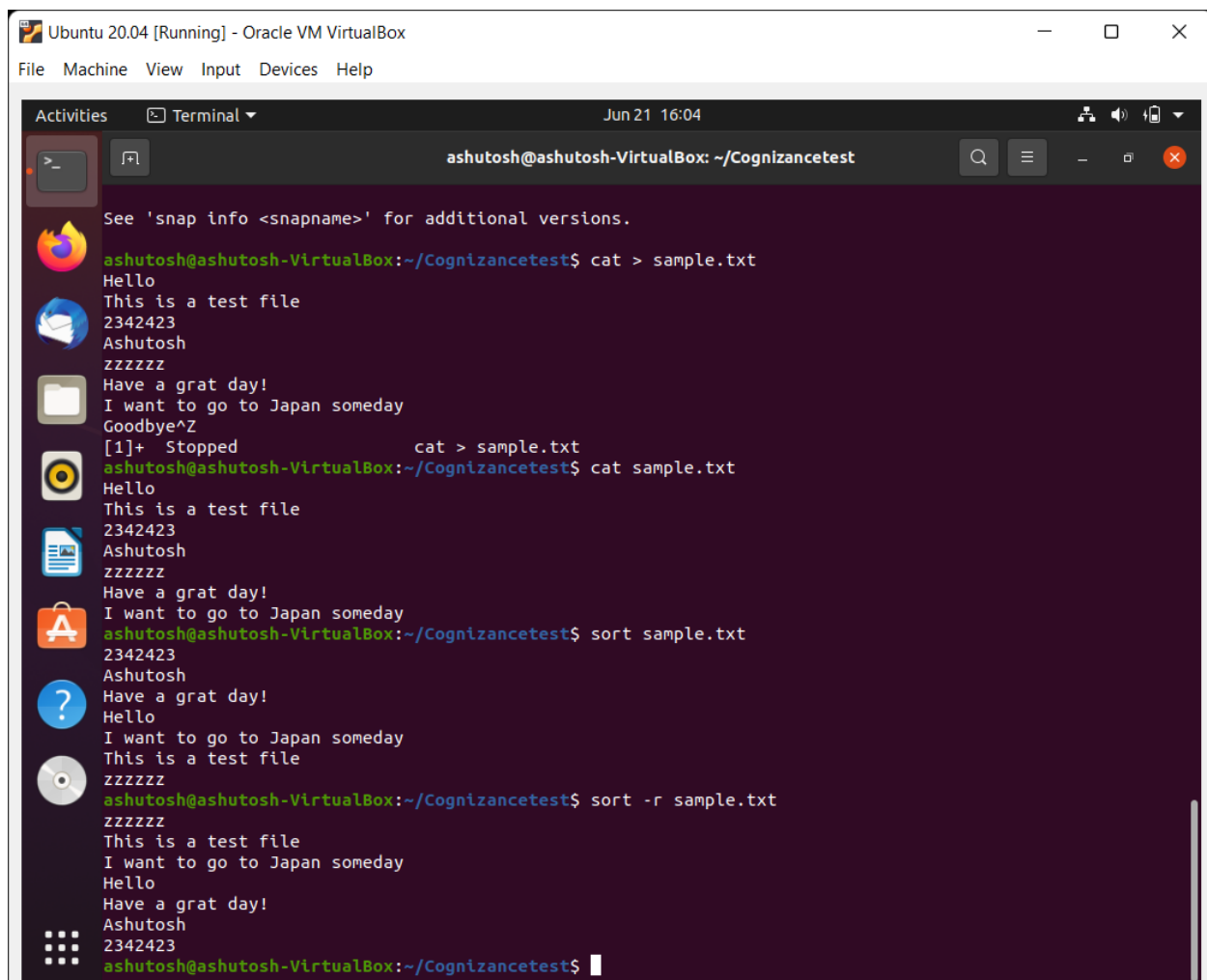
- What command should I use to arrange the entries of a file
  - Alphabetically
  - Reverse order

## Code:

Alphabetically: `sort sample.txt`

Reverse: `sort -r sample.txt`

## Output:

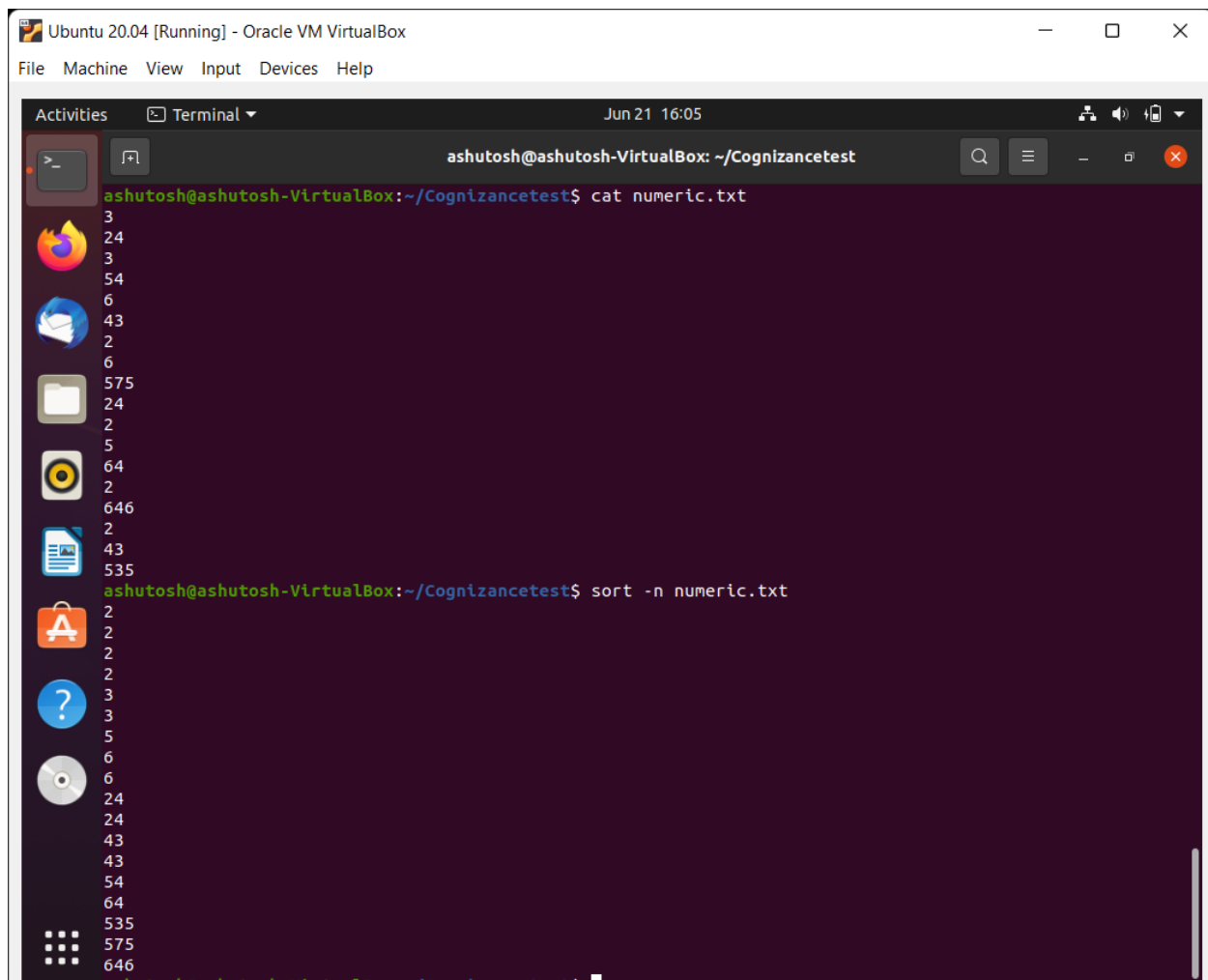


```
ashutosh@ashutosh-VirtualBox: ~/Cognizancetest
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ cat > sample.txt
Hello
This is a test file
2342423
Ashutosh
zzzzzz
Have a grat day!
I want to go to Japan someday
Goodbye^Z
[1]+  Stopped                  cat > sample.txt
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ cat sample.txt
Hello
This is a test file
2342423
Ashutosh
zzzzzz
Have a grat day!
I want to go to Japan someday
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ sort sample.txt
2342423
Ashutosh
Have a grat day!
Hello
I want to go to Japan someday
This is a test file
zzzzzz
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ sort -r sample.txt
zzzzzz
This is a test file
I want to go to Japan someday
Hello
Have a grat day!
Ashutosh
2342423
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$
```

- Numerical order

## Code:

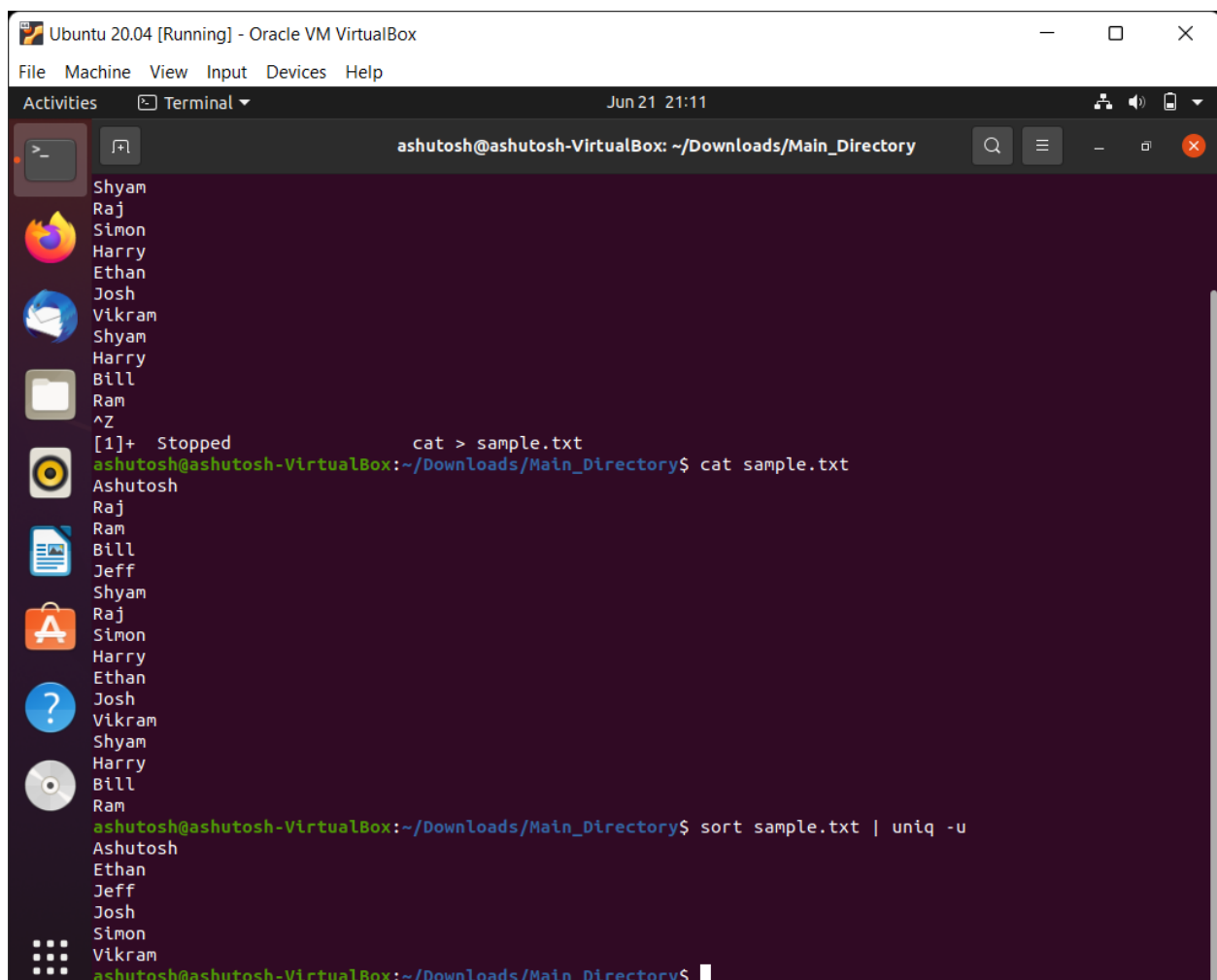
**Numerical:** `sort -n numeric.txt`



The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal is running the command `cat numeric.txt`, which displays a list of numbers: 3, 24, 3, 54, 6, 43, 2, 6, 575, 24, 2, 5, 64, 2, 646, 2, 43, 535. Below this, the command `sort -n numeric.txt` is executed, resulting in the numbers being sorted in ascending order: 2, 2, 2, 2, 3, 3, 3, 5, 6, 6, 24, 24, 24, 43, 43, 43, 54, 64, 535, 575, 646.

```
ashutosh@ashutosh-VirtualBox: ~/Cognizancetest
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ cat numeric.txt
3
24
3
54
6
43
2
6
575
24
2
5
64
2
646
2
43
535
ashutosh@ashutosh-VirtualBox:~/Cognizancetest$ sort -n numeric.txt
2
2
2
2
3
3
3
5
6
6
24
24
24
43
43
43
54
64
535
575
646
```

- Copee is a hard-working cop. He found a case and almost at the verge of cracking it. It could be his best breakthrough. He has the list of criminals but lots of duplicates are there. He needs to find the only one that is **different**. He sought your help. How will you sort this issue?



```
ashutosh@ashutosh-VirtualBox: ~/Downloads/Main_Directory
Shyam
Raj
Simon
Harry
Ethan
Josh
Vikram
Shyam
Harry
Bill
Ram
^Z
[1]+  Stopped                  cat > sample.txt
ashutosh@ashutosh-VirtualBox:~/Downloads/Main_Directory$ cat sample.txt
Ashutosh
Raj
Ram
Bill
Jeff
Shyam
Raj
Simon
Harry
Ethan
Josh
Vikram
Shyam
Harry
Bill
Ram
ashutosh@ashutosh-VirtualBox:~/Downloads/Main_Directory$ sort sample.txt | uniq -u
Ashutosh
Ethan
Jeff
Josh
Simon
Vikram
```

- What are the Three parts of file's permission?

**The three parts of file permission are read, write and execute.**

Someone with read permission may read the contents of a file, or list the contents of a directory.

Someone with write permission may modify the contents of a file, including adding, changing, or deleting file contents.

For directories, this means that someone with write permission may create or delete files within the directory. Someone with execute permission may run an executable file or access the contents of a directory.

File permissions are set on a file-by-file basis, and are set for each of three different access classes: user, group, and other:

- The owner of the file is called the user.
- People in the same group as the owner of the file comprise the group.
- Everyone else, including the web server, belongs to the other class.