



**COGNIZANCE CLUB**

**PRELIMINARY**

**Name:** Dharan Kumar

**Roll No:** CH.EN.U4CSE20019

**Topic:** Task-4 (CYS Basics)

## Part 2:

- Write a bash script to echo your name 25 times

**Code :**

```
valid=True
count=1
while [ $valid ]
do
echo "Dharan Kumar"
if [ $count -eq 25 ];
then break
fi
((count++))
done
```

Output:

[illegible]

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

```
dharan@dharan:~$ head -n 30 /var/log/syslog
Jun 21 15:05:54 dharan rsyslogd: [origin software="rsyslogd" swVersion="8.2001.0" x-pid="633" x-info="https://www.rsyslog.com"] rsyslogd was HUPed
Jun 21 15:05:55 dharan networkd-dispatcher[767]: WARNING: systemd-networkd is not running, output will be incomplete.
Jun 21 15:05:55 dharan systemd[1]: Started GNOME Display Manager.
Jun 21 15:05:55 dharan systemd[1]: Started Dispatcher daemon for systemd-networkd.
Jun 21 15:05:55 dharan ModemManager[751]: <info> ModemManager (version 1.12.8) starting in system bus...
Jun 21 15:05:55 dharan systemd[1]: Received SIGRTMIN+21 from PID 313 (plymouthd).
Jun 21 15:05:55 dharan systemd[1]: logrotate.service: Succeeded.
Jun 21 15:05:55 dharan systemd[1]: Finished Rotate log files.
Jun 21 15:05:55 dharan systemd[1]: Started Modem Manager.
Jun 21 15:05:55 dharan systemd[1]: Started Disk Manager.
Jun 21 15:05:55 dharan udisksd[644]: Acquired the name org.freedesktop.UDisks2 on the system message bus
Jun 21 15:05:56 dharan systemd[1]: Created slice User Slice of UID 1000.
Jun 21 15:05:56 dharan systemd[1]: Starting User Runtime Directory /run/user/1000...
Jun 21 15:05:56 dharan systemd[1]: Finished User Runtime Directory /run/user/1000.
Jun 21 15:05:56 dharan systemd[1]: Starting User Manager for UID 1000...
Jun 21 15:05:56 dharan dbus-daemon[611]: [system] Successfully activated service 'org.freedesktop.hostname1'
Jun 21 15:05:56 dharan systemd[1]: Started Hostname Service.
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.6283] hostname:
```

```
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.6283] hostname: hostname changed from (none) to "dharan"
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.6286] dns-mgr[0x563ca108c290]: init: dns=systemd-resolved rc-manager=symlink, plugin=systemd-resolved
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.6425] manager[0x563ca10a5030]: rfkill: Wi-Fi hardware radio set enabled
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.6565] manager[0x563ca10a5030]: rfkill: WWAN hardware radio set enabled
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.7242] Loaded device plugin: NMWwanFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-wwan.so)
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.7641] Loaded device plugin: NMBluetoothManager (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-bluetooth.so)
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.7706] Loaded device plugin: NMWifiFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-wifi.so)
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.7878] Loaded device plugin: NMAtmManager (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-adsl.so)
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.8364] Loaded device plugin: NMTeamFactory (/usr/lib/x86_64-linux-gnu/NetworkManager/1.22.10/libnm-device-plugin-team.so)
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.8379] manager: rfkill: Wi-Fi enabled by radio killswitch; enabled by state file
```

```
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.8431] manager:
rfkill: WWAN enabled by radio killswitch; enabled by state file
Jun 21 15:05:56 dharan NetworkManager[612]: <info> [1655804156.8458] manager:
Networking is enabled by state file
```

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

```
dharan@dharan:~$ tail -n 30 /var/log/syslog
Jun 21 19:38:39 dharan systemd[1]: Started Time & Date Service.
Jun 21 19:38:40 dharan snapd[602]: storehelpers.go:722: cannot refresh: snap ha
s no updates available: "bare", "core18", "core20", "gnome-3-34-1804", "gnome-3
-38-2004", "gtk-common-themes", "snap-store", "snapd"
Jun 21 19:38:40 dharan snapd[602]: autorefresh.go:539: auto-refresh: all snaps
are up-to-date
Jun 21 19:38:47 dharan NetworkManager[578]: <info> [1655820527.0238] manager:
NetworkManager state is now CONNECTED_SITE
Jun 21 19:38:47 dharan whoopsie[730]: [19:38:47] offline
Jun 21 19:38:47 dharan dbus-daemon[577]: [system] Activating via systemd: servi
ce name='org.freedesktop.nm_dispatcher' unit='dbus-org.freedesktop.nm-dispatche
r.service' requested by ':1.10' (uid=0 pid=578 comm="/usr/sbin/NetworkManager -
-no-daemon " label="unconfined")
Jun 21 19:38:47 dharan systemd[1]: Starting Network Manager Script Dispatcher S
ervice...
Jun 21 19:38:47 dharan dbus-daemon[577]: [system] Successfully activated servic
e 'org.freedesktop.nm_dispatcher'
Jun 21 19:38:47 dharan systemd[1]: Started Network Manager Script Dispatcher Se
rvice.
Jun 21 19:38:54 dharan NetworkManager[578]: <info> [1655820534.8685] manager:
NetworkManager state is now CONNECTED_GLOBAL
Jun 21 19:38:54 dharan whoopsie[730]: [19:38:54] The default IPv4 route is: /or
g/freedesktop/NetworkManager/ActiveConnection/1
Jun 21 19:38:54 dharan whoopsie[730]: [19:38:54] Not a paid data plan: /org/fre
edesktop/NetworkManager/ActiveConnection/1
Jun 21 19:38:54 dharan whoopsie[730]: [19:38:54] Found usable connection: /org/
freedesktop/NetworkManager/ActiveConnection/1
Jun 21 19:38:56 dharan whoopsie[730]: [19:38:56] online
```

```
Jun 21 19:39:05 dharan systemd[1]: NetworkManager-dispatcher.service: Succeeded
.
Jun 21 19:39:09 dharan systemd[1]: systemd-timedated.service: Succeeded.
Jun 21 19:39:23 dharan systemd[714]: vite-spawn-afe1860b-d416-4424-acd7-1067b1d5
fb05.scope: Succeeded.
Jun 21 19:39:23 dharan systemd[714]: gnome-terminal-server.service: Succeeded.
Jun 21 19:40:27 dharan systemd[714]: Started Application launched by gnome-shel
l.
Jun 21 19:40:28 dharan dbus-daemon[790]: [session uid=1000 pid=790] Activating
via systemd: service name='org.gnome.Terminal' unit='gnome-terminal-server.serv
ice' requested by ':1.116' (uid=1000 pid=2308 comm="/usr/bin/gnome-terminal.rea
l --window " label="unconfined")
Jun 21 19:40:28 dharan systemd[714]: Starting GNOME Terminal Server...
Jun 21 19:40:30 dharan dbus-daemon[790]: [session uid=1000 pid=790] Successfull
y activated service 'org.gnome.Terminal'
Jun 21 19:40:30 dharan systemd[714]: Started GNOME Terminal Server.
Jun 21 19:40:30 dharan systemd[714]: Started VTE child process 2319 launched by
gnome-terminal-server process 2311.
Jun 21 19:40:30 dharan systemd[714]: gnome-launched-org.gnome.Terminal.desktop-
2304.scope: Succeeded.
Jun 21 19:40:55 dharan PackageKit: daemon quit
Jun 21 19:40:55 dharan systemd[1]: packagekit.service: Succeeded.
Jun 21 19:48:34 dharan systemd[1]: Starting Cleanup of Temporary Directories...
Jun 21 19:48:34 dharan systemd[1]: systemd-tmpfiles-clean.service: Succeeded.
Jun 21 19:48:34 dharan systemd[1]: Finished Cleanup of Temporary Directories.
```

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

```
dhara@dhara:~/Desktop$ cat >alpha.txt
```

```
d  
e  
s  
f  
c  
d  
w  
y  
t  
q  
a  
d  
f
```

```
dhara@dhara:~/Desktop$ cat alpha.txt | sort -k 2
```

```
a  
c  
d  
d  
d  
e  
f  
f  
q  
s  
t  
w  
y
```

- Reverse order

```
dhara@dhara:~/Desktop$ cat alpha.txt
```

```
d  
e  
s  
f  
c  
d  
w  
y  
t  
q  
a  
d  
f
```

```
dhara@dhara:~/Desktop$ tac alpha.txt
```

```
f  
d  
a  
q  
t  
y  
w  
d  
c  
f  
s  
e  
d
```

- Numerical order

```
dharan@dharan:~/Desktop$ cat >numeric.txt
672
35764
23
1
23
443
2342
43
234
233
215
543
dharan@dharan:~/Desktop$ sort -n numeric.txt
1
23
23
43
215
233
234
443
543
672
2342
35764
```

- 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?

```
dharan@dharan:~/Desktop$ cat alpha.txt
d
e
s
f
c
d
w
y
t
q
a
d
f
```

```
dhara@dhara:~/Desktop$ sort alpha.txt | uniq -u
a
c
e
q
s
t
w
y
```

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

Access to a file has three levels:

- **Read permission** - If authorized, the user can read the contents of the file.
- **Write permission** - If authorized, the user can modify the file.
- **Execute permission** - If authorized, the user can execute the file as a program.

Finally, there are three sets of access permissions associated with each file:

- **User permission** - Specifies the level of access given to the user matching the file's UID.
- **Group permission** - Specifies the level of access given to users in groups matching the file's GID.
- **Others permission** - Specifies the level of access given to users without a matching UID or GID.