

# PART - 1

First , Let's see on Downloading the tar file and extracting it using **tar** command.

```
Activities Terminal Feb 25 21:07
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/Main_Directory/1
jai@jai-VirtualBox:~$ cd Documents/cognizance/
jai@jai-VirtualBox:~/Documents/cognizance$ mkdir preliminary
jai@jai-VirtualBox:~/Documents/cognizance$ cd preliminary/
jai@jai-VirtualBox:~/Documents/cognizance/preliminary$ rclone copyurl https://movies.jai91.workers.dev/8:/Task.tar.gz Task.tar.gz
2022/02/25 21:04:38 NOTICE: Config file "/home/jai/.config/rclone/rclone.conf" not found - using defaults
jai@jai-VirtualBox:~/Documents/cognizance/preliminary$ tar -x -f Task.tar.gz
jai@jai-VirtualBox:~/Documents/cognizance/preliminary$ ls
Main_Directory Task.tar.gz
jai@jai-VirtualBox:~/Documents/cognizance/preliminary$ cd Main_Directory/
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ ls
1 3 4 5 flag(first_flg_h3r3)
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ ls 1
zipped_flag.zip
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ cd 1
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ unzip zipped_flag.zip
Archive: zipped_flag.zip
  creating: zipped_flag/
 [zipped_flag.zip] zipped_flag/zipped_flag.txt password:
password incorrect--reenter:
password incorrect--reenter:
skipping: zipped_flag/zipped_flag.txt  incorrect password
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$
```

Now , we should find the flags in our extracted files while are available in the 'Main\_Directory' folder.

Let's go directory wise , first '1' directory.

There is only a Zip file in the directory which is password protected . So , lets see about this protected file later.

Now in '3' Directory ,

Here we can see numerous files . So, lets go one by one

In 1.txt file , using **grep** command let's check if there is any flag word in the file ...

```
Activities Terminal Feb 25 21:22
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/Main_Directory/3
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ cd ../2
bash: cd: ../2: No such file or directory
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ cd ..
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ ls
1 3 4 5 flag(first_flg_h3r3)
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ cd 3
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ ls
1.txt 2.txt find_me
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ grep flag 1.txt
wpgdlpephgyifuexfriaean enplcuyhdgzaqz flag{gr3p_finds_fl@gs!} edzqpgtzovjlsscuypdzyclyte yxvxlaxjmlmxogfiduzrmu qdpqjzdxkxegynzlwspesziz gokobhcpeusa yfnueguqugdj
gl cqnrxsxxbduvlwtbschhkgjtqxxvfd vxkwnbzdoletqpbgnqnnbcidewovszllrkbecwtl
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ grep flag 1.txt | cut -d ' ' -f3
flag{gr3p_finds_fl@gs!}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$
```

Looks like we have something.

Now to Extract only flag part , we will be using **cut** command with **-d**(delimiter) and **-f**(field).

Finally , we found our first flag.

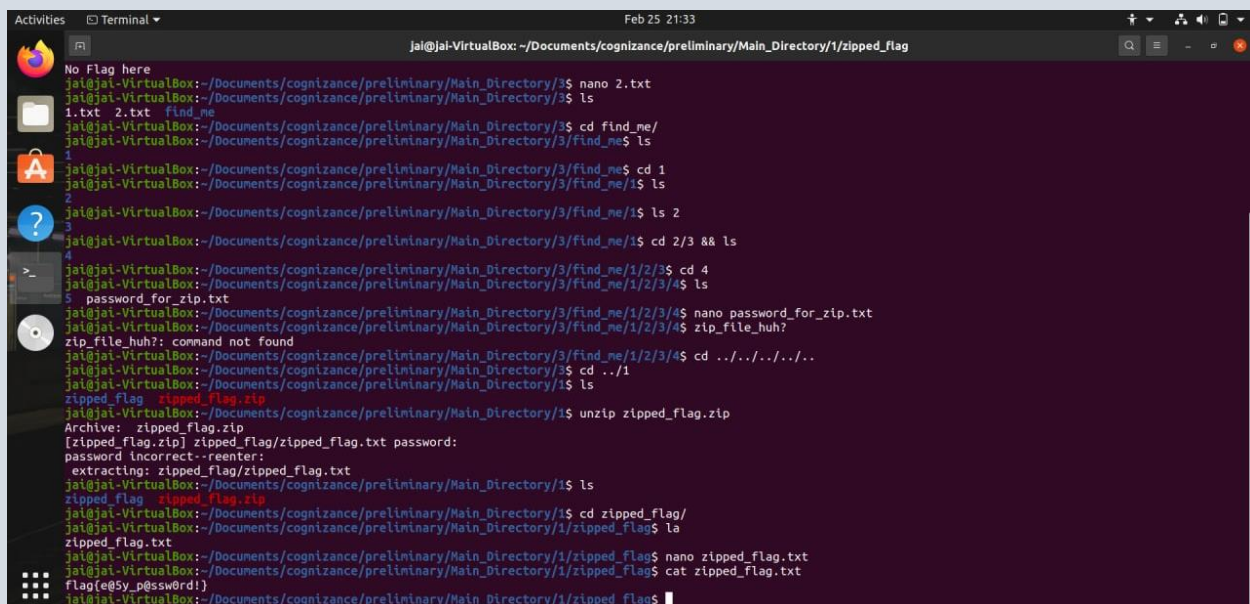
► **Flag 1 :-** **flag{gr3p\_f1nds\_fl@gs!}**

Now , moving to 2.txt file , we don't have any flags in there

Then in the sub directory , 'find\_me' there are so many sub directories . So , let's check them.

In sub directory '4' there is a file named 'password\_for\_zip.txt' which have the password for the zip file which was there in 'Main\_Directory/1' .

Now , lets extract the zip as follows.



```
Activities Terminal Feb 25 21:33
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/Main_Directory/1/zipped_flag

No Flag here
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ nano 2.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ ls
1.txt 2.txt find_me
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ cd find_me/
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me$ ls
1
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me$ cd 1
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1$ ls
2
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1$ ls 2
3
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1$ cd 2/3 && ls
4
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1/2/3$ cd 4
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1/2/3/4$ ls
5
password_for_zip.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1/2/3/4$ nano password_for_zip.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1/2/3/4$ zip_file_huh?
zip_file_huh?: command not found
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_me/1/2/3/4$ cd ../../../../..
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ cd ../1
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ ls
zipped_flag zipped_flag.zip
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ unzip zipped_flag.zip
Archive:  zipped_flag.zip
[zipped_flag.zip] zipped_flag/zipped_flag.txt password:
password incorrect--reenter:
extracting: zipped_flag/zipped_flag.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ ls
zipped_flag zipped_flag.zip
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ cd zipped_flag/
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1/zipped_flag$ ls
zipped_flag.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1/zipped_flag$ nano zipped_flag.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1/zipped_flag$ cat zipped_flag.txt
Flag{e@Sy_p@ssw@rd!}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1/zipped_flag$
```

In the zipped file , we have a text file and in that we got our second flag successfully.

► **Flag 2 :-** `flag{e@5y_p@ssw0rd!}`

Now , let's continue with our subdirectories in 'Main\_directory/3' directory.

After going into all the directories, I have found a flag in a text file 'flag.txt.txt' file.

► **Flag 3 :-** `flag{Y0u_f0und_m3!}`

Now , in 'Main\_Directory/4' Directory , there is a 'image.png' file which is actually a text file , which had our next flag.

```
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_ne/1/2/3/4/5/6/7/8$ cd ../../../../../../../
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_ne/1$ cd ../../4
bash: cd: ../../4: No such file or directory
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3/find_ne/1$ cd ../../4
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ la
1.txt 2.txt 3.txt 4.txt 5.txt .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ xdg-open .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ nano .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ cat .image.png
flag{t3xt_15_n0t_h1dd3n!}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$
```

► **Flag 4 :-** `flag{t3xt_15_n0t_h1dd3n!}`

Now , by checking if there are any hidden files in 'Main\_Directory/1' , I found a hidden directory which named another flag

```
Activities Terminal Feb 25 21:47
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4
1.txt 2.txt 3.txt 4.txt 5.txt .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ xdg-open .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ nano .image.png
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ cat .image.png
flag{t3xt_15_n0t_h1dd3n!}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/4$ cd ../1
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ la
'.flag{Y0u_f0und_th3_hidd3n_dir!}' zipped_flag zipped_flag.zip
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/1$ la -l
total 12
drwxr-xr-x 2 jai jai 4096 Jan 24 19:06 '.flag{Y0u_f0und_th3_hidd3n_dir!}'
drwxr-xr-x 2 jai jai 4096 Feb 25 21:33 zipped_flag
-rw-r--r-- 1 jai jai 405 Jan 24 20:19 zipped_flag.zip
```

► **Flag 5 :-** `flag{Y0u_f0und_th3_hidd3n_dir!}`

After checking all the text files in 'Main\_Directory/4' using `cat` command I have found another flag in 4.txt file.

► **Flag 6 :-** `flag{m3ow_m3ow_cat!}`

Finally, 'Main\_Directory/4' files have been completed hopefully , Let's move to 'Main\_Directory/5' Directory to check files there .

So , I tried executing it . By giving the file execution permission with **chmod** command and then executing it.

Which gave me another flag.

The Next file in the same directory is 'reverseme.txt' , on checking this file using **cat** command there is some letters in each line which looks like a flag in reverse .So , now by using **tac** command which prints the content in reverse order and **tr** command with **-d** (delete) **'\n'** (new\_lines) is used to get the flag format.

► **Flag 8 :-** `flag{t@c_15_fun!}`

In 'Main\_Directory' the next folder itself is a flag.

► **Flag 9 :-** `flag{f1rst_fl@g_h3r3}`

In 'Main\_Directory/3' there is a hidden file names '.flag.txt' which has another flag.

► **Flag 10 :-** `flag{h1dden_fil3!}`

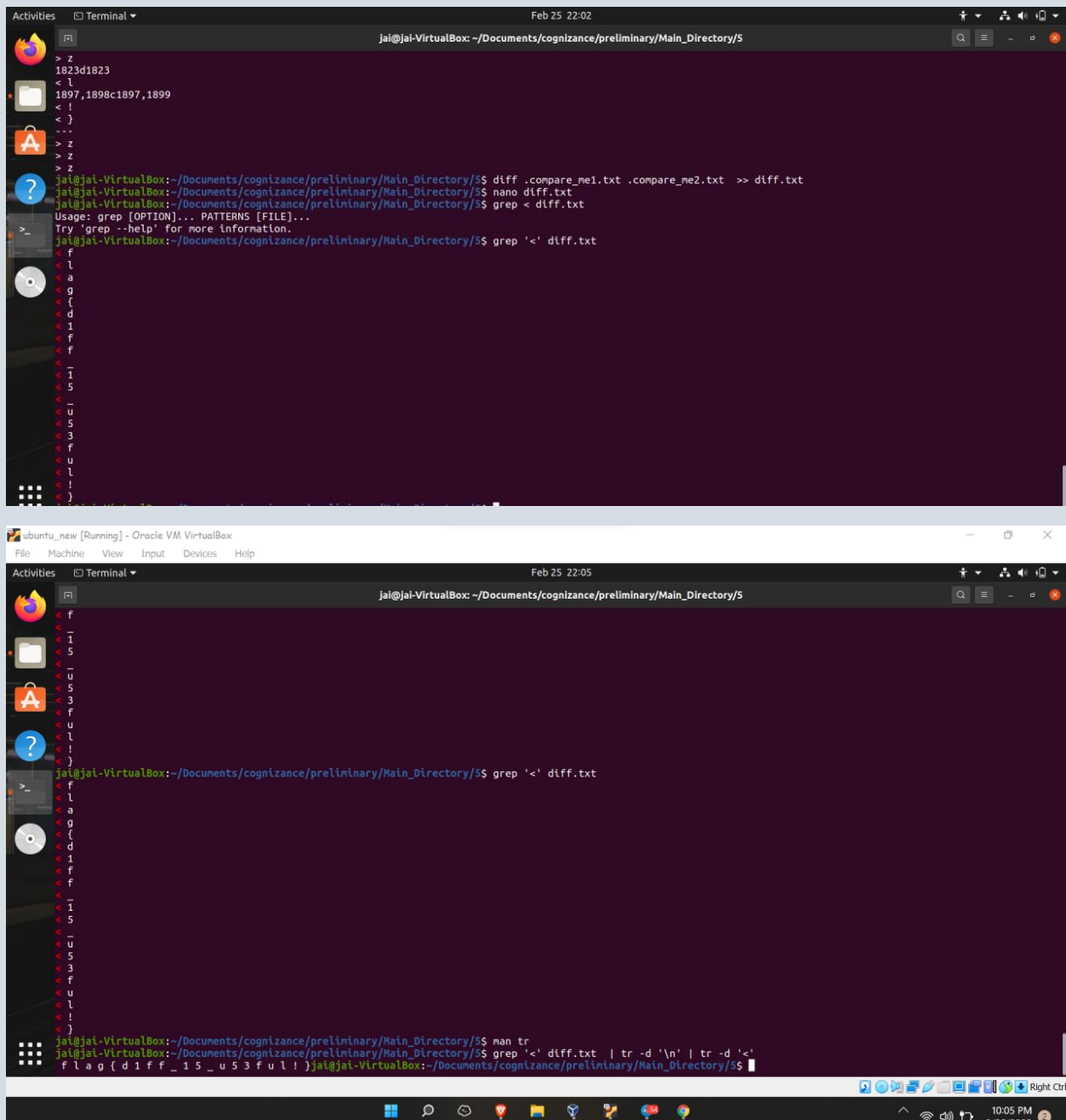
```
grep: ./: not a directory
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ ls | grep flag
flag{f1rst_fl@g_h3r3}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory$ cd 3
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ ls
1.txt 2.txt find_me
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ la
1.txt 2.txt find_me .flag.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ nano .flag.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$ cat .flag.txt
flag{h1dden_fil3!}
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/3$
```

Now , coming back to 'Main\_directory/5' there are two hidden files which giving hint to compare them both . So for comparing files , we generally use **diff** command on checking this , this command gave an output which gave me hopes on a new and hopefully final flag.

For trimming the required part , I have saved the output into a new file data.txt and then used **tr** command with -d (delete) to delete unwanted matter from the difference acquired on comparing.

```
Activities Terminal Feb 25 22:02
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/Main_Directory/5
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ cd ../5
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ la
.compare_me1.txt .compare_me2.txt execute_me.sh reverse_me.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ diff .compare_me1.txt .compare_me2.txt
83c83
< f
---
> z
173c173
< l
---
> z
340c340
< a
---
> z
431c431
< g
---
> z
585c585
< {
---
> z
601d600
< d
665c664,665
< 1
---
> z
> z
769c769
< f
---
> z
876c876
< f
---
```





```
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/Main_Directory/5
> z
1823d1823
< l
1897,1898c1897,1899
< !
< }
...
> z
> z
> z
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ diff .compare_me1.txt .compare_me2.txt >> diff.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ nano diff.txt
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ grep < diff.txt
Usage: grep [OPTION]... PATTERNS [FILE]...
Try 'grep --help' for more information.
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ grep '<' diff.txt
f
l
a
g
{
d
1
f
f
_
1
5
_
u
5
3
f
u
l
!
}

jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ grep '<' diff.txt
f
l
a
g
{
d
1
f
f
_
1
5
_
u
5
3
f
u
l
!
}

jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ man tr
jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$ grep '<' diff.txt | tr -d '\n' | tr -d '<'
f l a g { d 1 f f _ 1 5 _ u 5 3 f u l ! } jai@jai-VirtualBox:~/Documents/cognizance/preliminary/Main_Directory/5$
```

Finally ,

► Flag 11 :- **flag{d1ff\_15\_u53ful!}**

### Final FLAG's List :-

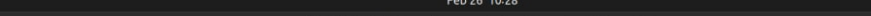
- 1) flag{gr3p\_f1nds\_fl@gs!}
- 2) flag{e@5y\_p@ssw0rd!}
- 3) flag{Y0u\_f0und\_m3!}
- 4) flag{t3xt\_15\_n0t\_h1dd3n!}
- 5) flag{Y0u\_f0und\_th3\_hidd3n\_dir!}
- 6) flag{m3ow\_m3ow\_cat!}
- 7) flag{3x3cut10n\_d0n3!}
- 8) flag{t@c\_15\_fun!}
- 9) flag{f1rst\_fl@g\_h3r3}
- 10) flag{h1dden\_fil3!}
- 11) flag{d1ff\_15\_u53ful!}



# PART - 2


Question 1. Write a bash script to echo your name 25 times

**Solution :-**



```
Terminal Feb 26 10:28
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2
loop.sh
#!/bin/bash
for ((i=1;i<=25;i++))
do
whoami
done
```

Output:-



The screenshot shows a terminal window titled "Terminal" with the date and time "Feb 26 10:27". The terminal prompt is "jai@jal-VirtualBox: ~/Documents/cognizance/preliminary/p2". The user has executed the following commands:

```
jai@jal-VirtualBox:~/Documents/cognizance/preliminary/p2$ nano loop.sh
jai@jal-VirtualBox:~/Documents/cognizance/preliminary/p2$ chmod +x loop.sh
jai@jal-VirtualBox:~/Documents/cognizance/preliminary/p2$ ./loop.sh
```

The output of the script is a series of 20 lines, each containing the text "jai". The terminal window has a dark purple background and a sidebar on the left with various application icons.

**Question 2.** What command should I use to display the **first** 30 entries of syslog file?

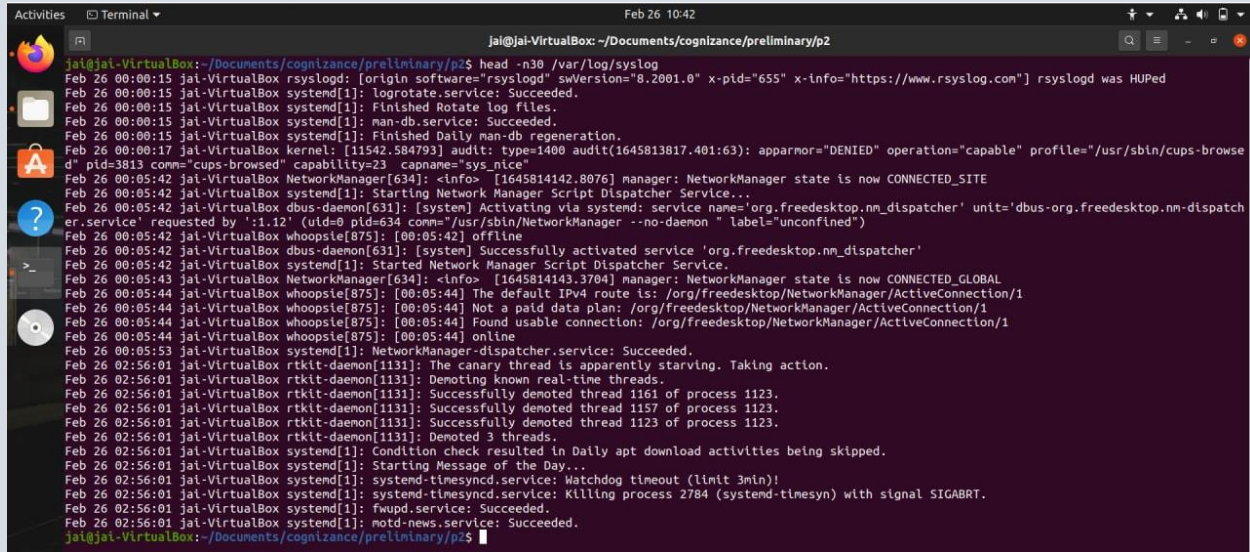
**Solution:-**

Syslog's are generally saved in the root directory 'var/log/syslog' file . Now , to get initial entries of a file we use **head** command but head command only gives first ten entries of the file , to increase this to 30 entries we will mention number of entries by -n30 along with head command followed by file location.

So , the final command to display the first 30 entries of syslog file is ,

```
head -n30 /var/log/syslog
```

An example with a screenshot ,



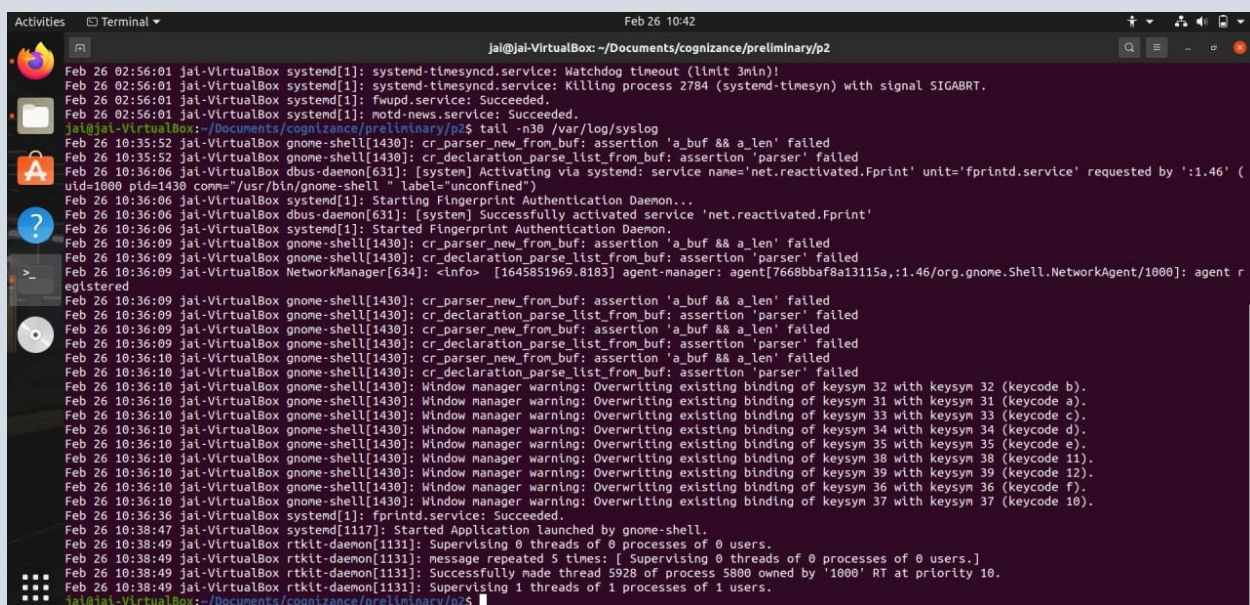
```
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2
jai@jai-VirtualBox:~$ head -n30 /var/log/syslog
Feb 26 00:00:15 jai-VirtualBox rsyslogd: [origin software="rsyslogd" swVersion="8.2001.0" x-pid="655" x-info="https://www.rsyslog.com"] rsyslogd was HUPed
Feb 26 00:00:15 jai-VirtualBox systemd[1]: logrotate.service: Succeeded.
Feb 26 00:00:15 jai-VirtualBox systemd[1]: Finished Rotate log files.
Feb 26 00:00:15 jai-VirtualBox systemd[1]: man-db.service: Succeeded.
Feb 26 00:00:15 jai-VirtualBox systemd[1]: Finished Daily man-db regeneration.
Feb 26 00:00:17 jai-VirtualBox kernel: [11542.584793] audit: type=1400 audit(1645813817.401:63): apparmor="DENIED" operation="capable" profile="/usr/sbin/cups-browsed" pid=3813 comm="cups-browsed" capability=23 capname="sys_nice"
Feb 26 00:05:42 jai-VirtualBox NetworkManager[634]: <info> [1645814142.8076] manager: NetworkManager state is now CONNECTED_SITE
Feb 26 00:05:42 jai-VirtualBox systemd[1]: Starting Network Manager Script Dispatcher Service...
Feb 26 00:05:42 jai-VirtualBox dbus-daemon[631]: [system] Activating via systemd: service name='org.freedesktop.nm_dispatcher' unit='dbus-org.freedesktop.nm-dispatcher.service' requested by ':1.12' (uid=0 pid=634 comm="/usr/sbin/NetworkManager --no-daemon" label="unconfined")
Feb 26 00:05:42 jai-VirtualBox whoopsie[875]: [00:05:42] offline
Feb 26 00:05:42 jai-VirtualBox dbus-daemon[631]: [system] Successfully activated service 'org.freedesktop.nm_dispatcher'
Feb 26 00:05:42 jai-VirtualBox systemd[1]: Started Network Manager Script Dispatcher Service.
Feb 26 00:05:43 jai-VirtualBox NetworkManager[634]: <info> [1645814143.3704] manager: NetworkManager state is now CONNECTED_GLOBAL
Feb 26 00:05:44 jai-VirtualBox whoopsie[875]: [00:05:44] The default IPv4 route is: /org/freedesktop/NetworkManager/ActiveConnection/1
Feb 26 00:05:44 jai-VirtualBox whoopsie[875]: [00:05:44] Not a paid data plan: /org/freedesktop/NetworkManager/ActiveConnection/1
Feb 26 00:05:44 jai-VirtualBox whoopsie[875]: [00:05:44] Found usable connection: /org/freedesktop/NetworkManager/ActiveConnection/1
Feb 26 00:05:53 jai-VirtualBox systemd[1]: NetworkManager-dispatcher.service: Succeeded.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: The canary thread is apparently starving. Taking action.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: Demoting known real-time threads.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: Successfully demoted thread 1161 of process 1123.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: Successfully demoted thread 1157 of process 1123.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: Successfully demoted thread 1123 of process 1123.
Feb 26 02:56:01 jai-VirtualBox rtkit-daemon[1131]: Demoted 3 threads.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: Condition check resulted in Daily apt download activities being skipped.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: Starting Message of the Day...
Feb 26 02:56:01 jai-VirtualBox systemd[1]: systemd-timesyncd.service: Watchdog timeout (limit 3min)!
Feb 26 02:56:01 jai-VirtualBox systemd[1]: systemd-timesyncd.service: Killing process 2784 (systemd-timesyn) with signal SIGABRT.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: fwupd.service: Succeeded.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: motd-news.service: Succeeded.
jai@jai-VirtualBox:~$
```

**Question 3.** What command should I use to display the **last 30** entries of **syslog** file?

**Solution:-**

Just like the first entries we can get the last entries using **tail** command to fetch the last entries.

An example with screenshot ,



```
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2
jai@jai-VirtualBox:~$ tail -n30 /var/log/syslog
Feb 26 02:56:01 jai-VirtualBox systemd[1]: systemd-timesyncd.service: Watchdog timeout (limit 3min)!
Feb 26 02:56:01 jai-VirtualBox systemd[1]: systemd-timesyncd.service: Killing process 2784 (systemd-timesyn) with signal SIGABRT.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: fwupd.service: Succeeded.
Feb 26 02:56:01 jai-VirtualBox systemd[1]: motd-news.service: Succeeded.
jai@jai-VirtualBox:~$ tail -n30 /var/log/syslog
Feb 26 10:35:52 jai-VirtualBox gnome-shell[1430]: cr_parser_new_from_buf: assertion 'a_buf && a_len' failed
Feb 26 10:35:52 jai-VirtualBox gnome-shell[1430]: cr_declaration_parse_list_from_buf: assertion 'parser' failed
Feb 26 10:36:06 jai-VirtualBox dbus-daemon[631]: [system] Activating via systemd: service name='net.reactivated.Fprint' unit='fprintd.service' requested by ':1.46' (uid=1000 pid=1430 comm="/usr/bin/gnome-shell" label="unconfined")
Feb 26 10:36:06 jai-VirtualBox systemd[1]: Starting Fingerprint Authentication Daemon...
Feb 26 10:36:06 jai-VirtualBox dbus-daemon[631]: [system] Successfully activated service 'net.reactivated.Fprint'
Feb 26 10:36:06 jai-VirtualBox systemd[1]: Started Fingerprint Authentication Daemon.
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_parser_new_from_buf: assertion 'a_buf && a_len' failed
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_declaration_parse_list_from_buf: assertion 'parser' failed
Feb 26 10:36:09 jai-VirtualBox NetworkManager[634]: <info> [1645851969.8183] agent-manager: agent[7668bbaf8a13115a,:1.46/org.gnome.Shell.NetworkAgent/1000]: agent registered
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_parser_new_from_buf: assertion 'a_buf && a_len' failed
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_declaration_parse_list_from_buf: assertion 'parser' failed
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_parser_new_from_buf: assertion 'a_buf && a_len' failed
Feb 26 10:36:09 jai-VirtualBox gnome-shell[1430]: cr_declaration_parse_list_from_buf: assertion 'parser' failed
Feb 26 10:36:10 jai-VirtualBox gnome-shell[1430]: cr_parser_new_from_buf: assertion 'a_buf && a_len' failed
Feb 26 10:36:10 jai-VirtualBox gnome-shell[1430]: cr_declaration_parse_list_from_buf: assertion 'parser' failed
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 32 with keysym 32 (keycode b).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 31 with keysym 31 (keycode a).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 33 with keysym 33 (keycode c).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 34 with keysym 34 (keycode d).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 35 with keysym 35 (keycode e).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 38 with keysym 38 (keycode 11).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 39 with keysym 39 (keycode 12).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 36 with keysym 36 (keycode f).
Feb 26 10:36:10 jai-VirtualBox Window manager warning: Overwriting existing binding of keysym 37 with keysym 37 (keycode 10).
Feb 26 10:36:36 jai-VirtualBox systemd[1]: fprintd.service: Succeeded.
Feb 26 10:38:47 jai-VirtualBox systemd[1117]: Started Application launched by gnome-shell.
Feb 26 10:38:49 jai-VirtualBox rtkit-daemon[1131]: Supervising 0 threads of 0 processes of 0 users.
Feb 26 10:38:49 jai-VirtualBox rtkit-daemon[1131]: message repeated 5 times: [ Supervising 0 threads of 0 processes of 0 users.]
Feb 26 10:38:49 jai-VirtualBox rtkit-daemon[1131]: Successfully made thread 5928 of process 5800 owned by '1000' RT at priority 10.
Feb 26 10:38:49 jai-VirtualBox rtkit-daemon[1131]: Supervising 1 threads of 1 processes of 1 users.
jai@jai-VirtualBox:~$
```

**Question 4.** What command should I use to arrange the entries of a file

1. Alphabetically
2. Reverse order
3. Numerical order

**Answer:-**

- 1.) To sort the entries of a file Alphabetically we use **sort** command followed by the filename to be arranged.
- 2.) To sort the entries of a file in reverse Alphabetical order we use **sort** command with **-r** argument which reverses the sorted list. Or to display the entries as they are, we use **tac** command to arrange the entries in reverse order irrespective of the alphabets.
- 3.) To sort the Numeric entries in a file we use **sort** command with **-n** argument.

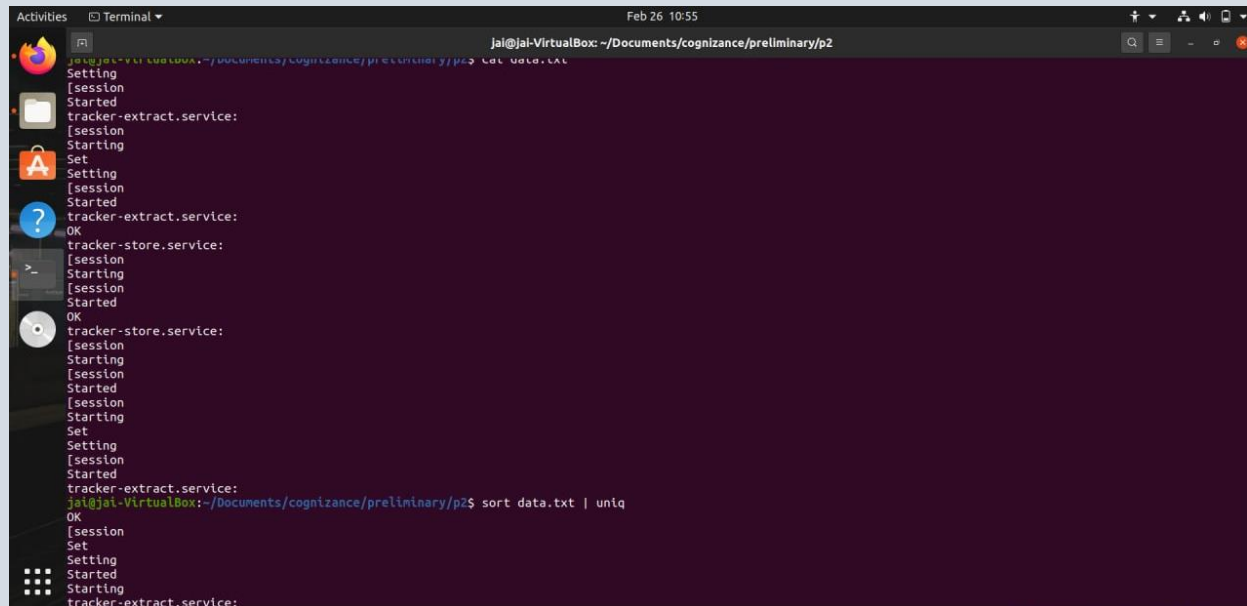
**Question 5.** Copee is a hard-working cop. He found a case and almost at the verge of cracking it. It could be his best breakthrough. He has the list of criminals but lots of duplicates are there. He needs to find the only one that is **different**. He sought your help. How will you sort this issue?

**Solution:-**

First, as he has the list of criminals, I'll sort the list of entries in alphabetical order by using **sort** command to get all the duplicate entries into one place, then by using **uniq** command to eliminate the duplicate entries and then I'll save the output to a new file and give it to Copee to make his work simple to solve the case.

### Example :-

Let's check with a file which contains few duplicate entries of a random words.



```
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2
Setting
[session
Started
tracker-extract.service:
[session
Starting
Set
Setting
[session
Started
tracker-extract.service:
OK
tracker-store.service:
[session
Starting
[session
Started
OK
tracker-store.service:
[session
Starting
[session
Started
[session
Starting
Set
Setting
[session
Started
tracker-extract.service:
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2$ sort data.txt | uniq
OK
[session
Set
Setting
Starting
tracker-extract.service:
tracker-store.service:
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2$
```

```
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2$ sort data.txt | uniq >> trimmed.txt
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2$ cat trimmed.txt
OK
[session
Set
Setting
Starting
tracker-extract.service:
tracker-store.service:
jai@jai-VirtualBox: ~/Documents/cognizance/preliminary/p2$
```

**Question 6.** What are the three parts of file's permission?

### Answer :-

File Permission in Linux is divided into three parts

- 1.) Owner's permission
- 2.) Group permission
- 3.) Other's permission

Here , Owner's permissions mean only owner will have the privileges to utilize the respective permissions given to him and other if not given , can't avail the permission. Same happens with the other's permissions.

And these permissions are also are three ,

- a.) Read permission(r)
- b.) Write permission(w)
- c.) Execute permission(x)

These three kinds of permissions can be given to the three different types of users. And , these types are the parts of file permission respectively.

Few examples of file permissions ,

- 1. -rwx----- : This indicates read , write & execute permission for owner.
- 2. ----rwx--- : This indicates read , write & execute permission for Groupuser.
- 3. -----rwx : This indicates read , write & execute permission for others.
- 4. -rwxrwxrwx : Indicates All the permission to everyone.