2. **Find OS version, kernel version, uptime, memory, cores, and swap details of Linux machine.**
   a. Be ready to explain what is free & available memory.
   b. Release all cache memory & how do you manage the same in a prod env.
   c. Increase the ulimit for the current user to 1028.
   d. Change the timezone to IST

Answer:

For finding the

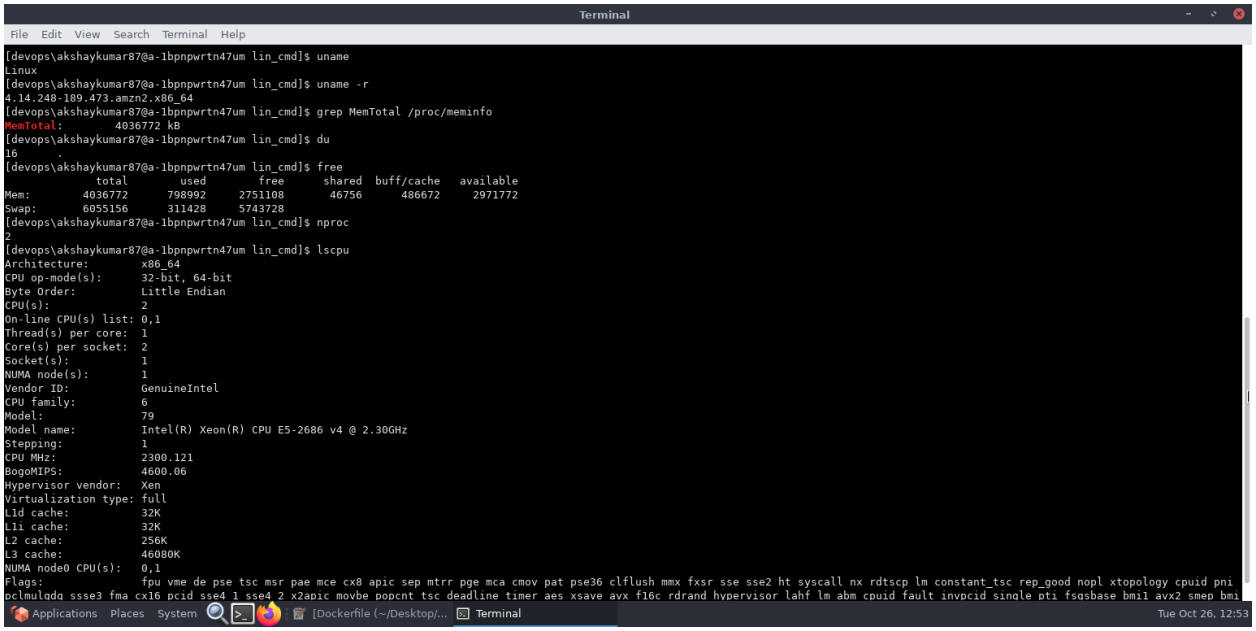
OS version: - uname

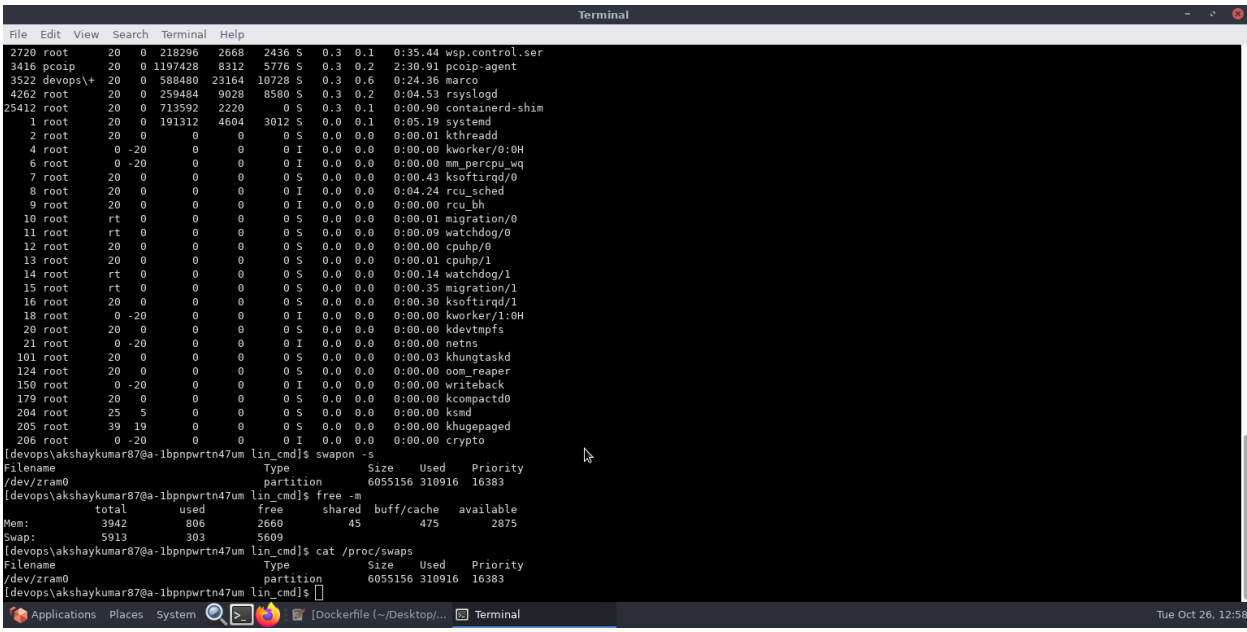
Kernel version:- uname –r

Memory: - grep MemTotal /proc/meminfo

Cores:- nproc

Also in support of the answer giving the executed commands screenshots.





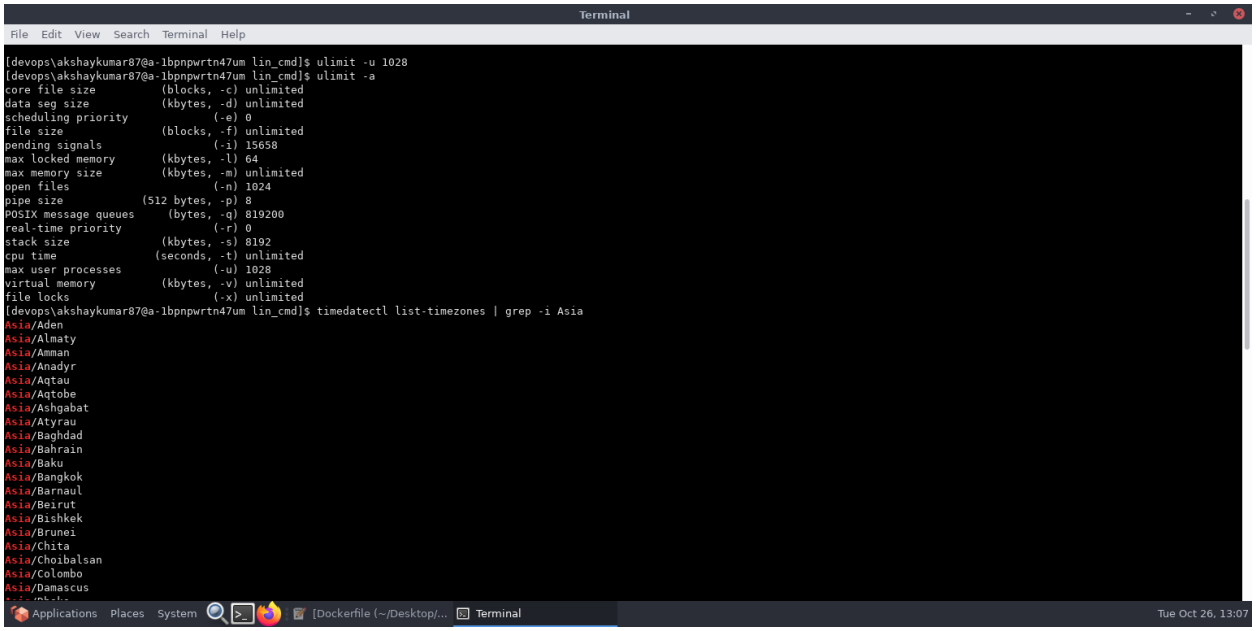


Figure showing the up limiting the user process

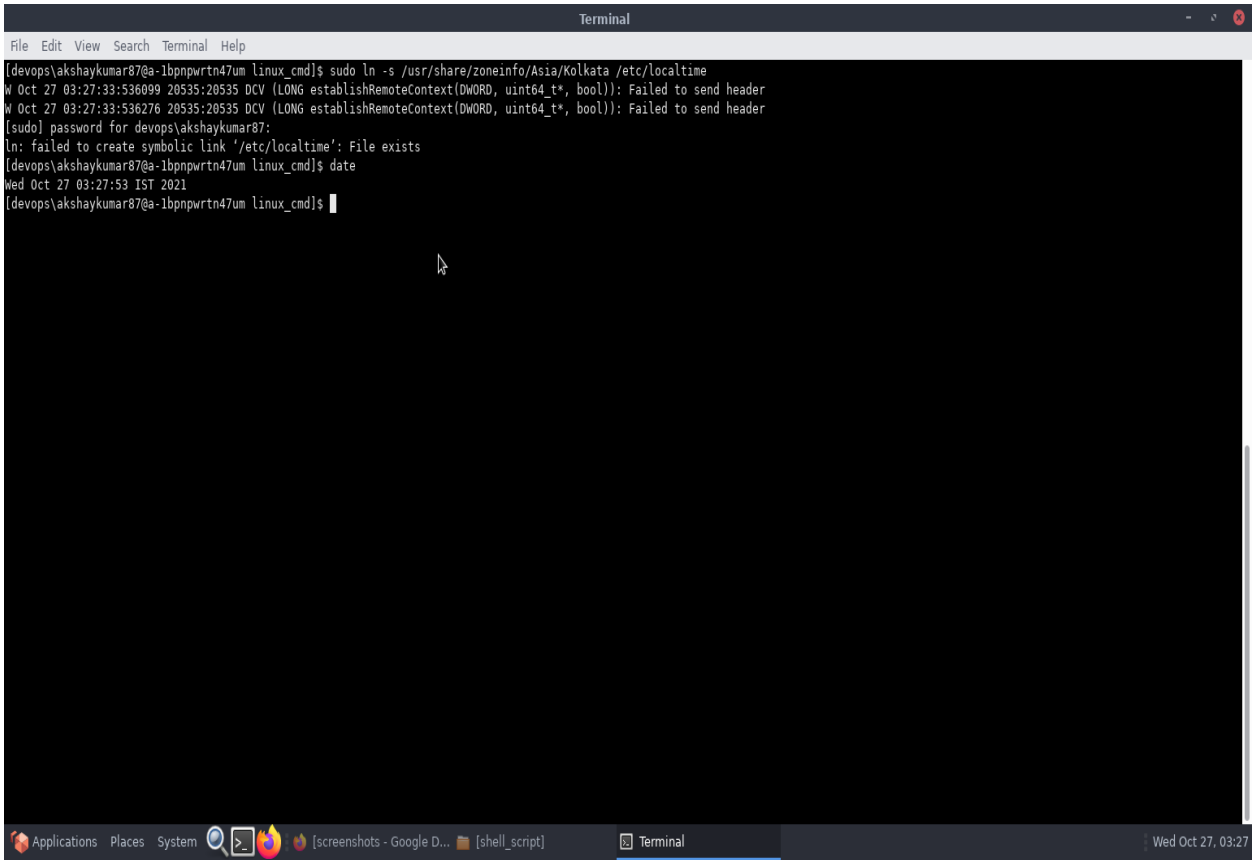


Figure showing the changing of timezone.

3. **Install nginx**

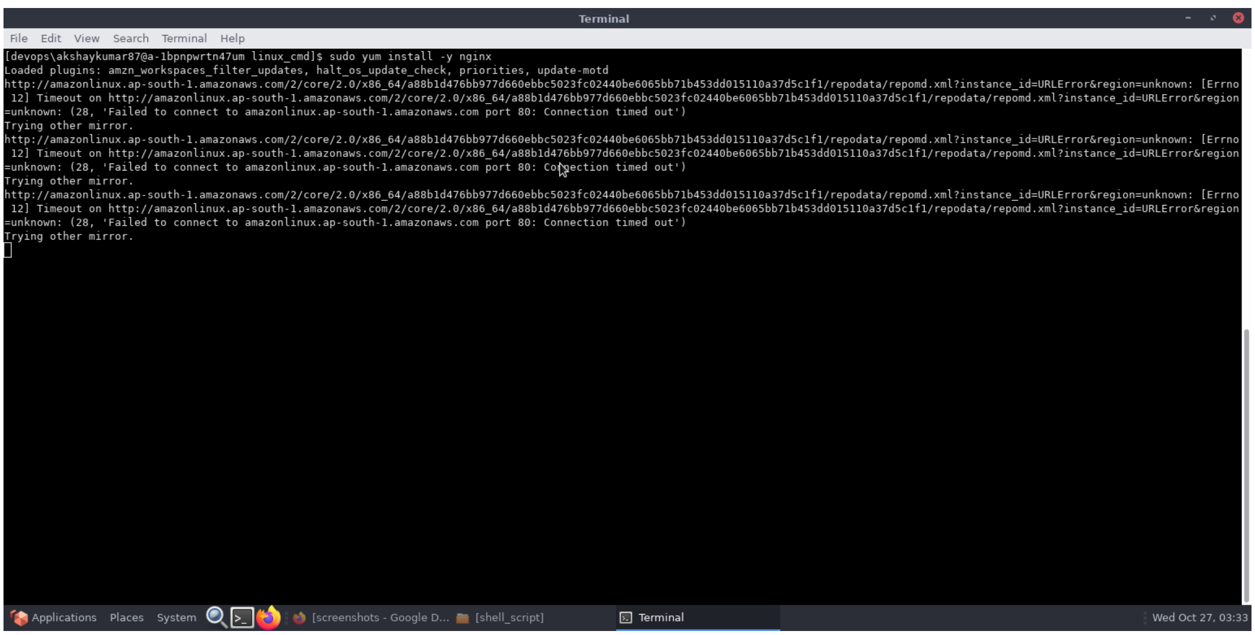
   a. Configure the web server. Change the default location

   b.Route all the requests to port 8080.

   c. Configure the web server which shows files/directories and make them downloadable from the web page.

Answer:

Showing the problem with the work space but the commands are clear and the way it is being started.



4. **Create a job in crontab to create zip of system logs every last day of the month and keep only the last 30 days' logs.**

Answer:

For this we can create four different separate jobs. They are:

55 23 30 4,6,9,11 *myjob.sh

55 23 31 1,3,5,7,8,10,12 *myjob.sh

55 23 28 2 *myjob.sh

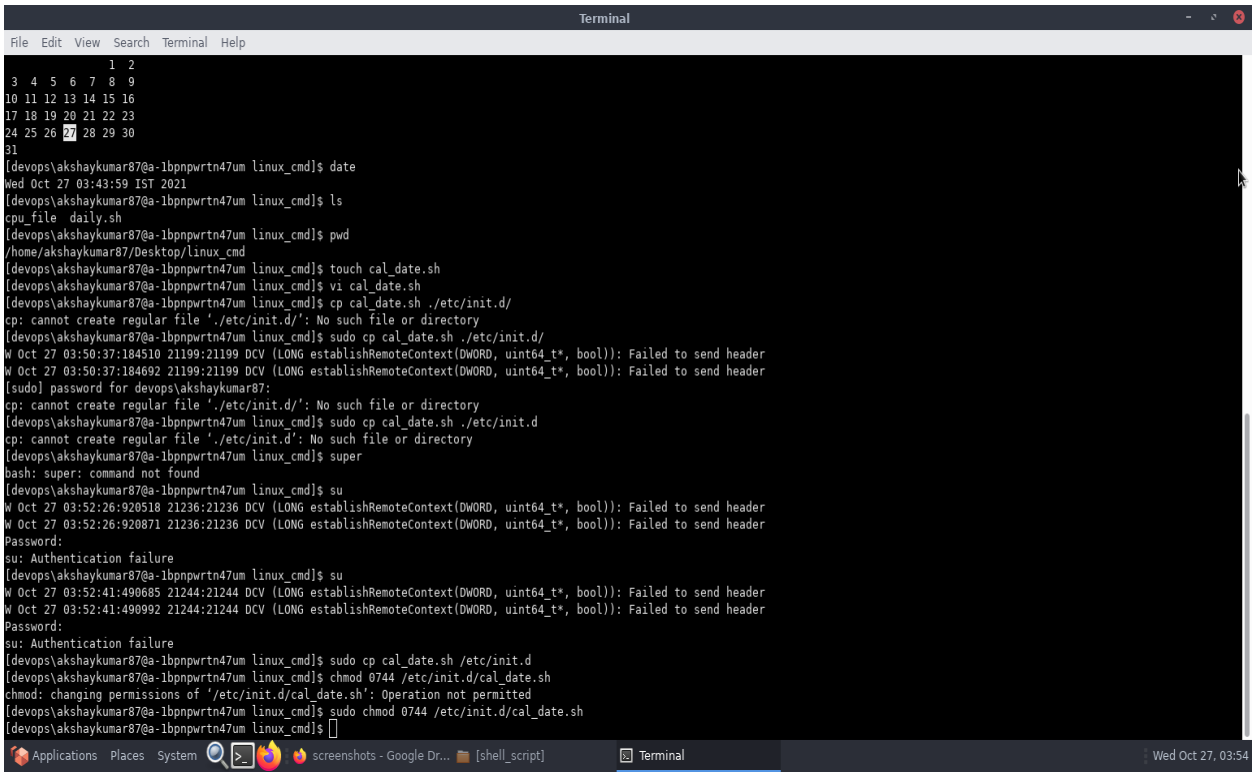
55 23 29 2 *myjob.sh

5. **Date and Calendar should print whenever I open the terminal**

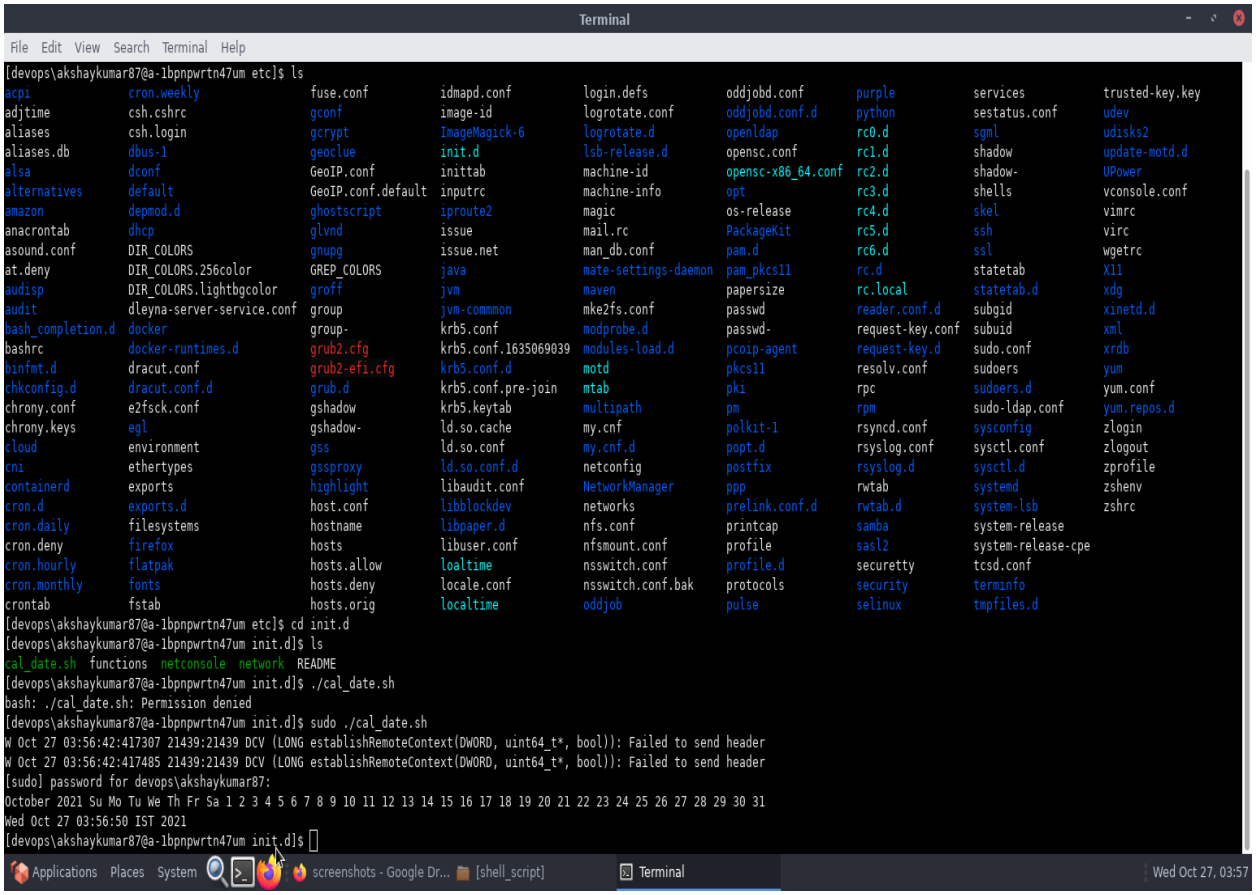
Answer:

For this I added .sh file in the /etc/init.d with the commands for cal and date

Screenshots showing the required output.



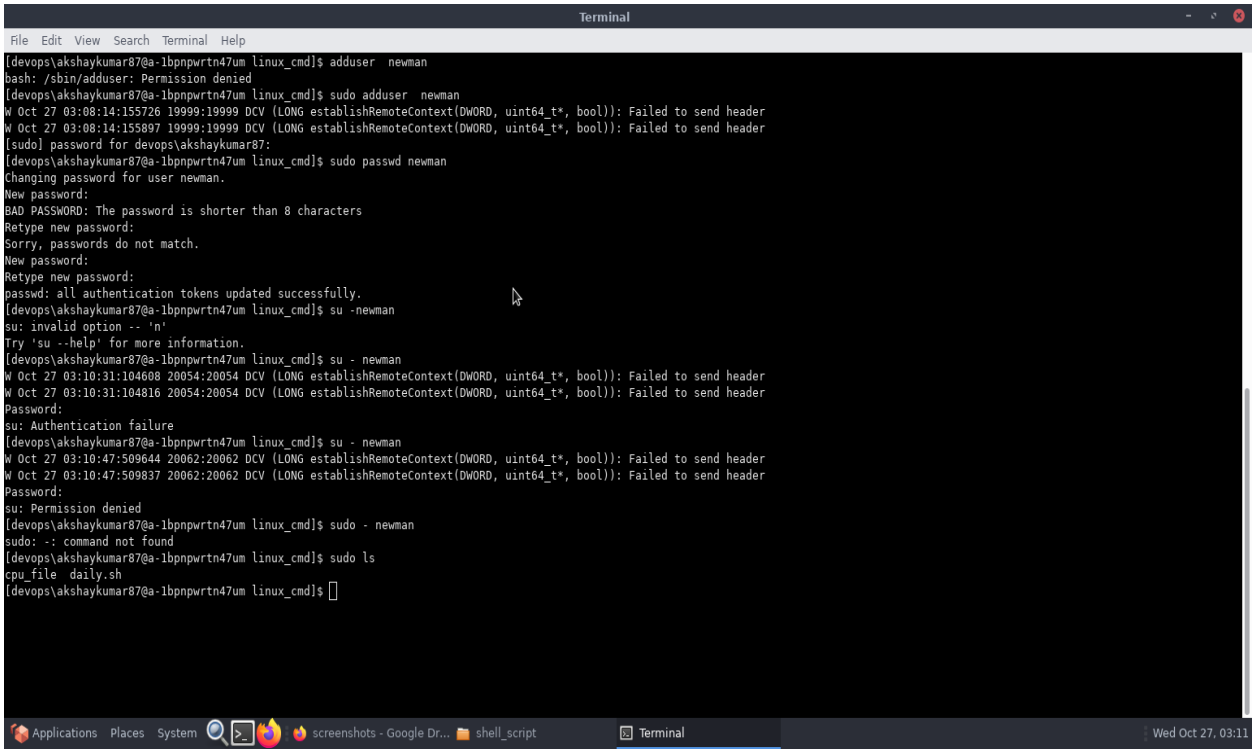
Showing the date and time when the terminal is opened.



6. **Create a User, and give it sudo privileges. But remove the power of rm.**

Answer:

In support of this providing the screenshot:



7. **Change the default port number for RDP to 8339 and document on the same.**

Answer:

Following are the steps for the above:

a) **Open Gnome Configuration Editor - gconf-editor (can use ALT-F2 for quick access.**

b) **Open Folder Desktop.**

c) **Open Folder Gnome.**

d) **Open Folder remote_access.**

e) **In right had pane.**

f) **Right Click on alternative_port and click on edit key.**

g) **Enter 8339 port number.**

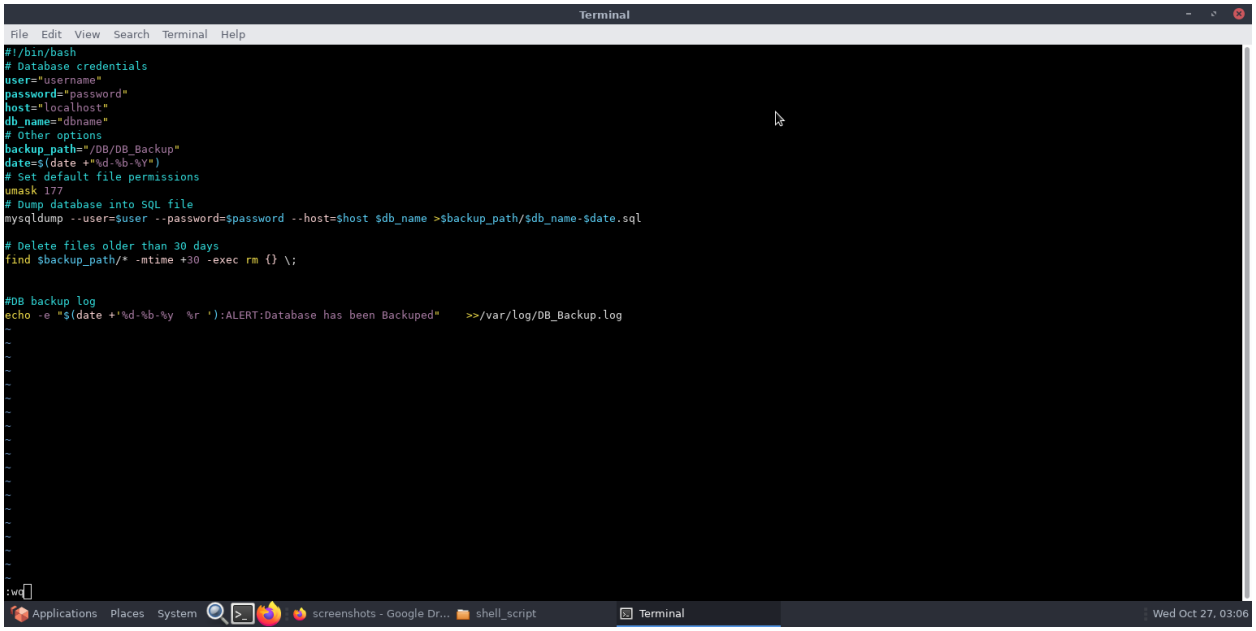
h) **Click OK.**

8. **Create a script to take regular backup of the database(MySql & Postgres), say every day at 11PM**

Anwer:

For its execution made a .sh file where the backup will be done.

Here providing the screenshot:

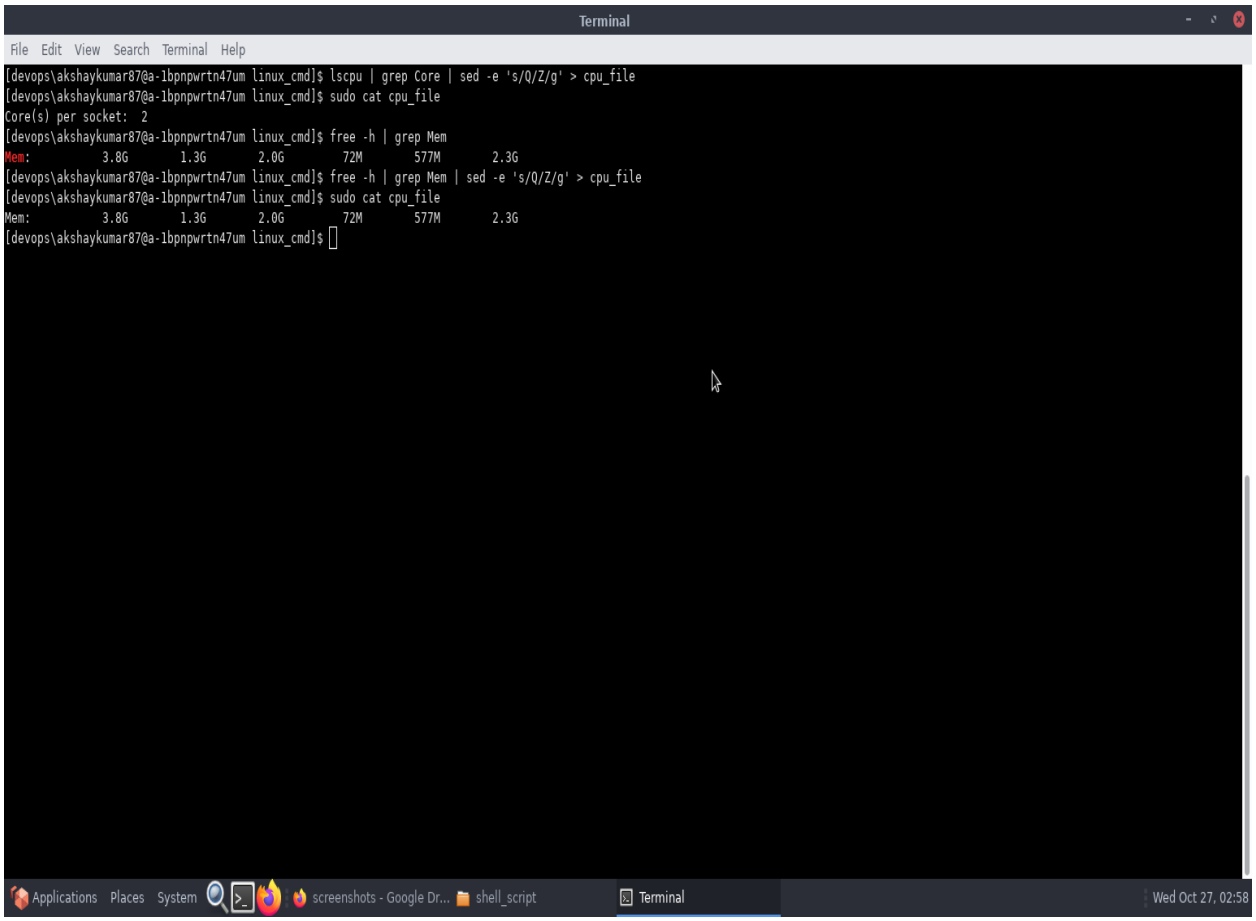


9. **Create a file that contains memory usage and the number of cpu in linux using the sed command.**

Anwer:

Created a file for storing the details of memory use and number of cpu.

Here the picture showing the above:

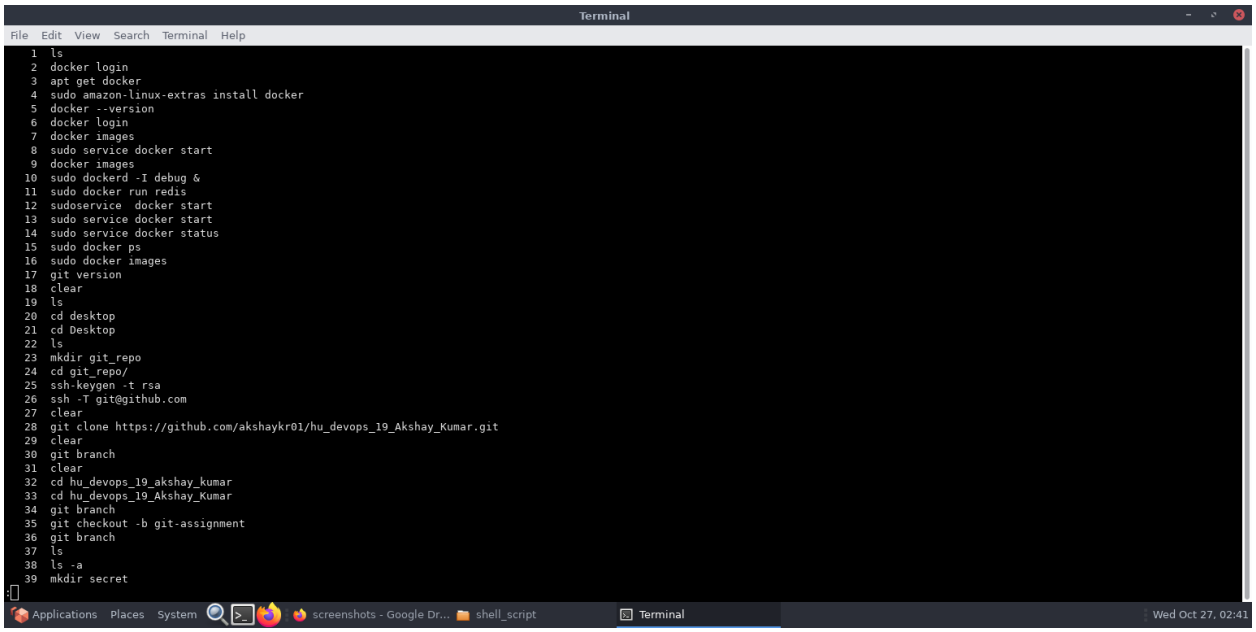


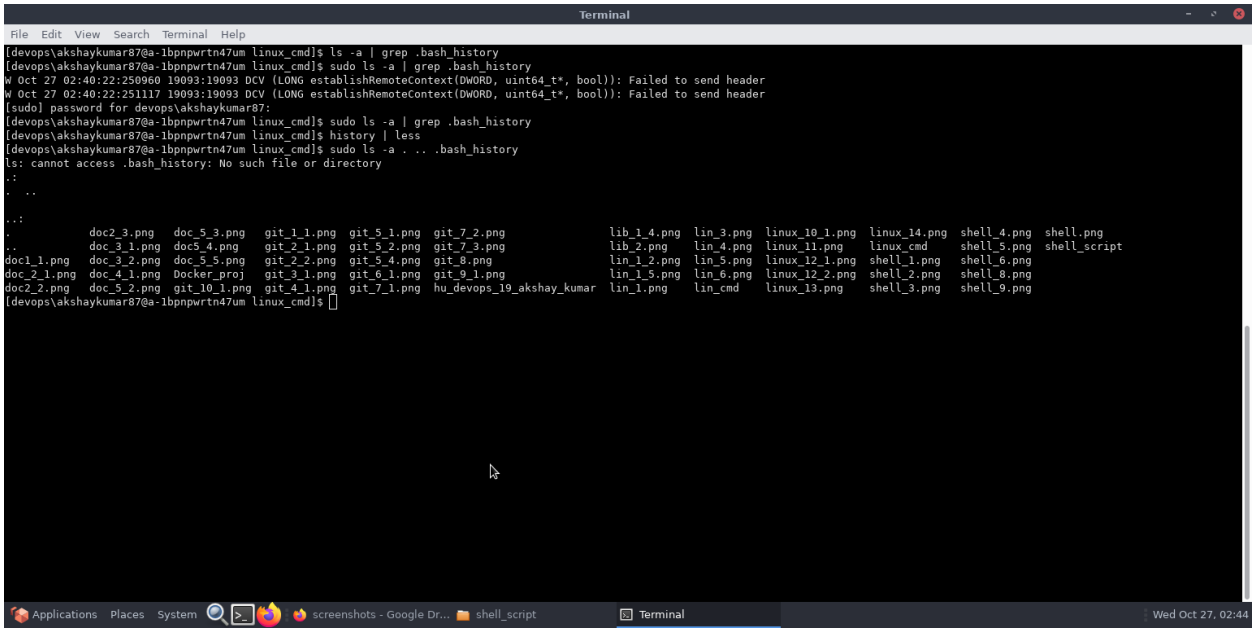
10. Find a file with all command line history and Delete the Complete Command line History.

Answer:

The required file is .bash_history.

Commands for finding and clearing it can be easily seen in the screenshot below:




Terminal
File Edit View Search Terminal Help
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ ls -a | grep .bash_history
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a | grep .bash_history
W Oct 27 02:40:22:250960 19093:19093 DCV (LONG establishRemoteContext(DWORD, uint64_t*, bool)): Failed to send header
W Oct 27 02:40:22:251117 19093:19093 DCV (LONG establishRemoteContext(DWORD, uint64_t*, bool)): Failed to send header
[sudo] password for devops\akshaykumar87:
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a | grep .bash_history
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ history | less
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a . .. .bash_history
ls: cannot access .bash_history: No such file or directory
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. ..
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doc_2_1.png doc_4_1.png Docker_proj git_3_1.png git_6_1.png git_9_1.png lin_1_5.png lin_6.png linux_12_2.png shell_2.png shell_8.png
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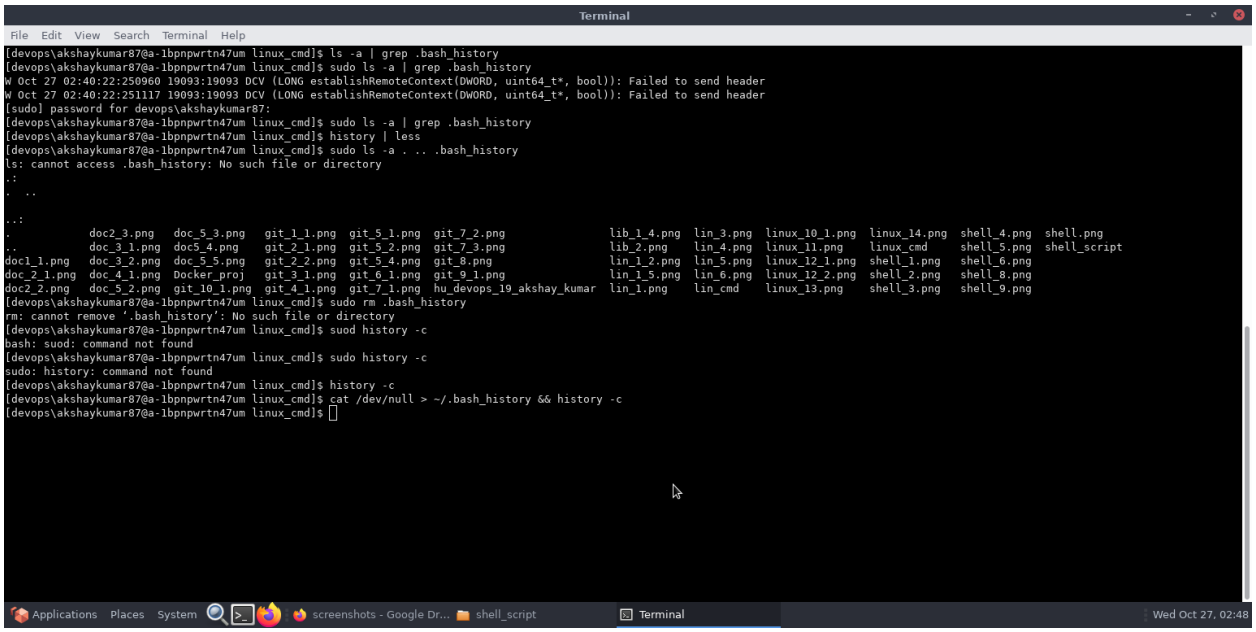
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$
Applications Places System
screenshots - Google Dr...
shell_script
Terminal
Wed Oct 27, 02:44

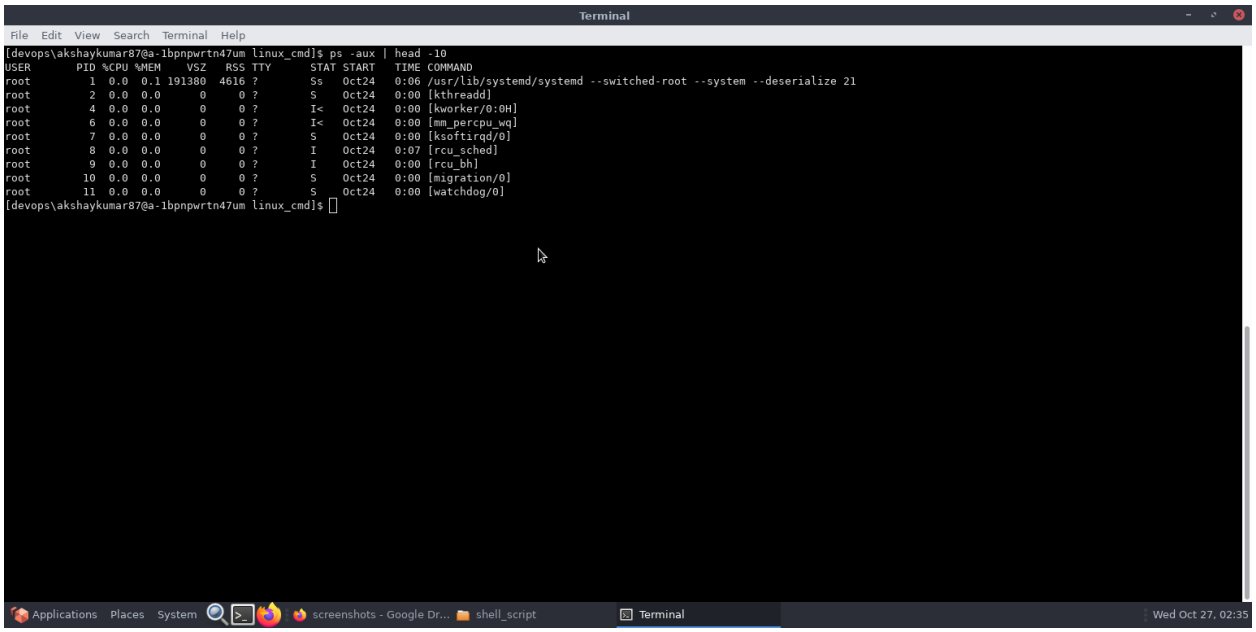

Terminal
File Edit View Search Terminal Help
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ ls -a | grep .bash_history
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a | grep .bash_history
W Oct 27 02:40:22:250960 19093:19093 DCV (LONG establishRemoteContext(DWORD, uint64_t*, bool)): Failed to send header
W Oct 27 02:40:22:251117 19093:19093 DCV (LONG establishRemoteContext(DWORD, uint64_t*, bool)): Failed to send header
[sudo] password for devops\akshaykumar87:
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a | grep .bash_history
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ history | less
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo ls -a . .. .bash_history
ls: cannot access .bash_history: No such file or directory
.:
. ..
..:
. doc2_3.png doc_5_3.png git_1_1.png git_5_1.png git_7_2.png lib_1_4.png lin_3.png linux_10_1.png linux_14.png shell_4.png shell.png
.. doc_3_1.png doc5_4.png git_2_1.png git_5_2.png git_7_3.png lib_2.png lin_4.png linux_11.png linux_cmd shell_5.png shell_script
doc1_1.png doc_3_2.png doc_5_5.png git_2_2.png git_5_4.png git_8.png lin_1_2.png lin_5.png linux_12_1.png shell_1.png shell_6.png
doc_2_1.png doc_4_1.png Docker_proj git_3_1.png git_6_1.png git_9_1.png lin_1_5.png lin_6.png linux_12_2.png shell_2.png shell_8.png
doc2_2.png doc_5_2.png git_10_1.png git_4_1.png git_7_1.png hu_devops_19_akshay_kumar lin_1.png lin_cmd linux_13.png shell_3.png shell_9.png
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo rm .bash_history
rm: cannot remove '.bash_history': No such file or directory
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ suod history -c
bash: suod: command not found
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ sudo history -c
sudo: history: command not found
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ history -c
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$ cat /dev/null > ~/.bash_history && history -c
[devops\akshaykumar87@a-1bpnpwrtn47um linux_cmd]$
Applications Places System
screenshots - Google Dr...
shell_script
Terminal
Wed Oct 27, 02:48

11. **Detecting which process has the highest priority in the system. Now find out what its purpose is.**

Answer:

For this the executable command is: ps –aus head -10

Easily seen below:

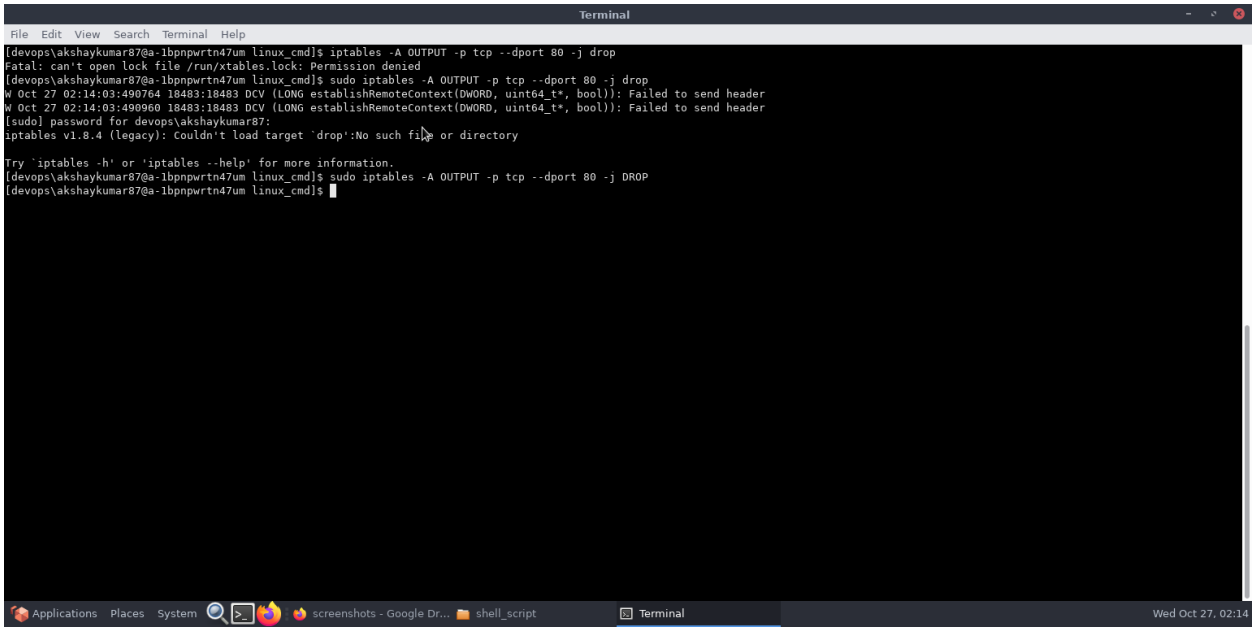


12. **Perform the below tasks on the firewall using iptables:**
    a. **Block outgoing connections on port 80**
    b. **Allow incoming connections on port 3306**
    c. **Allow both incoming and connections on port 80, 443 and 22**
    d. **Block Facebook on Iptable firewall**

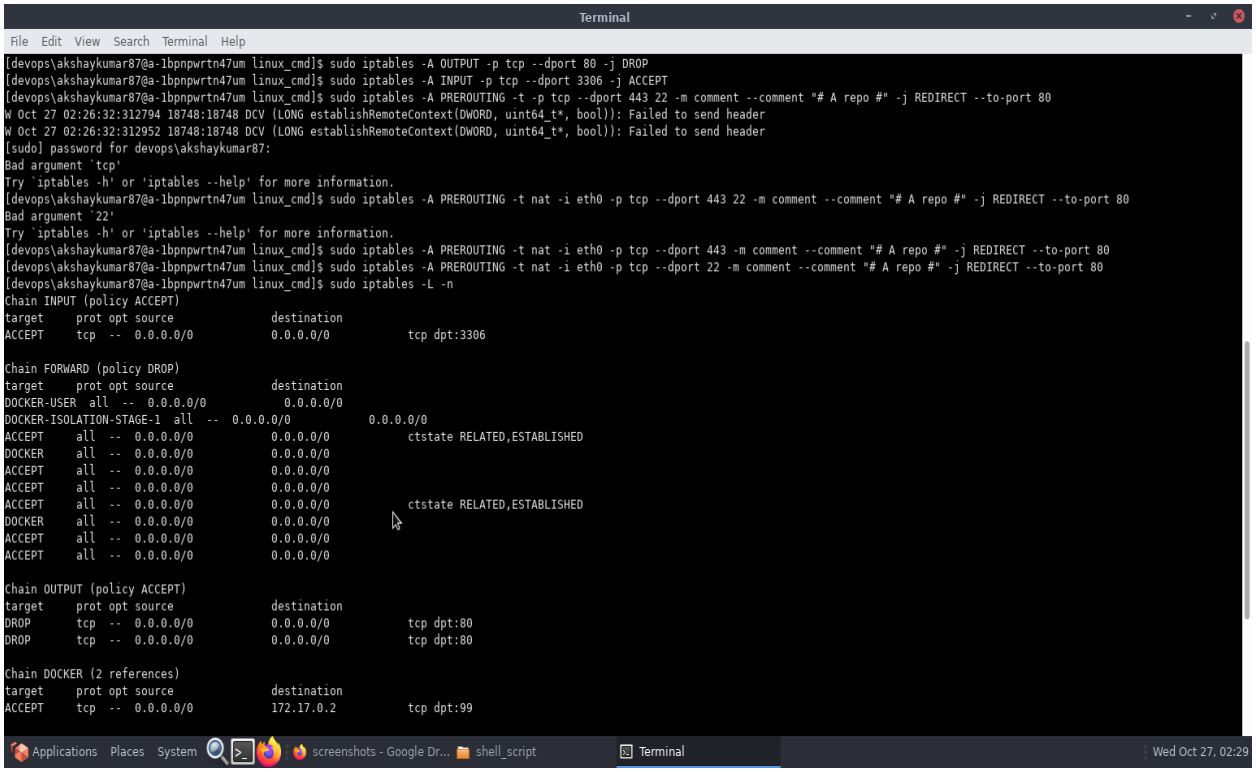
Answer:

All are summarized in using 2 screenshots. In the first one it is doing the dropping part using iptables.

Commands shown:



Here showing the Redirection part and showing the iptables for the details.

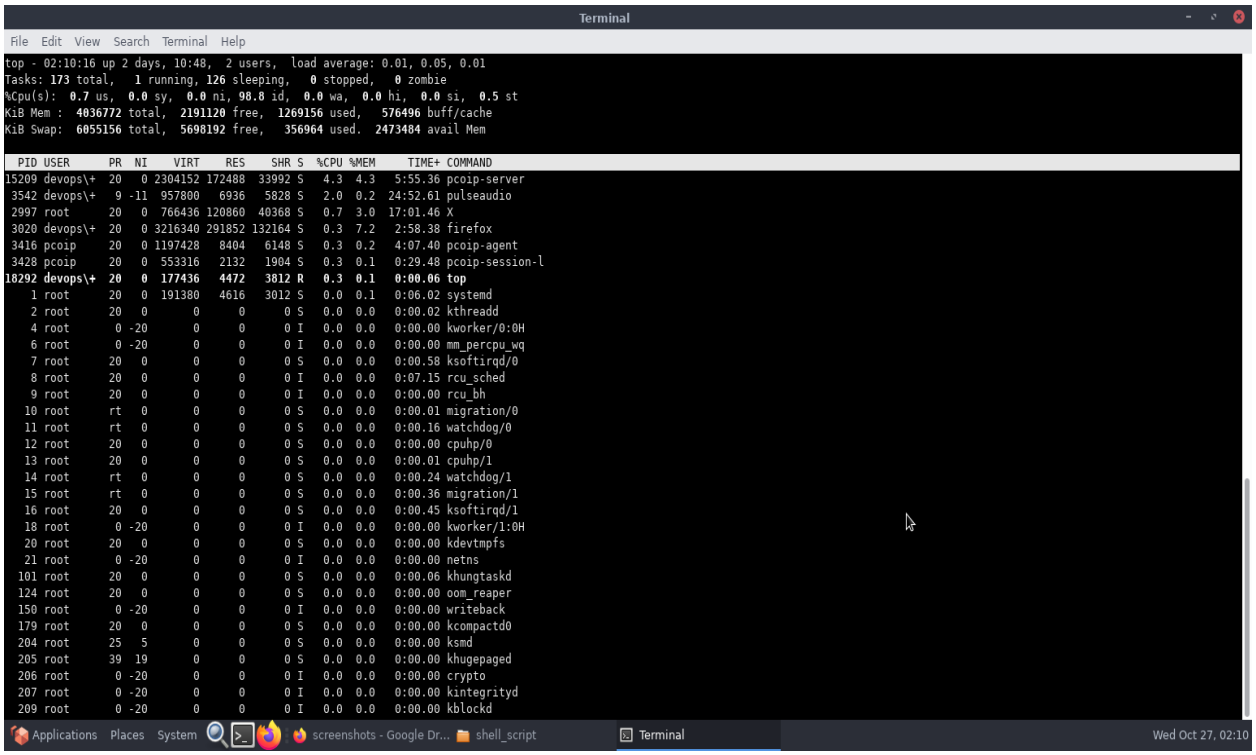


13. Get Tasks, Threads, Running Processes, Load Average and Uptime using htop command.

Answer:

This can be done using htop command.

Showing using the screenshots:

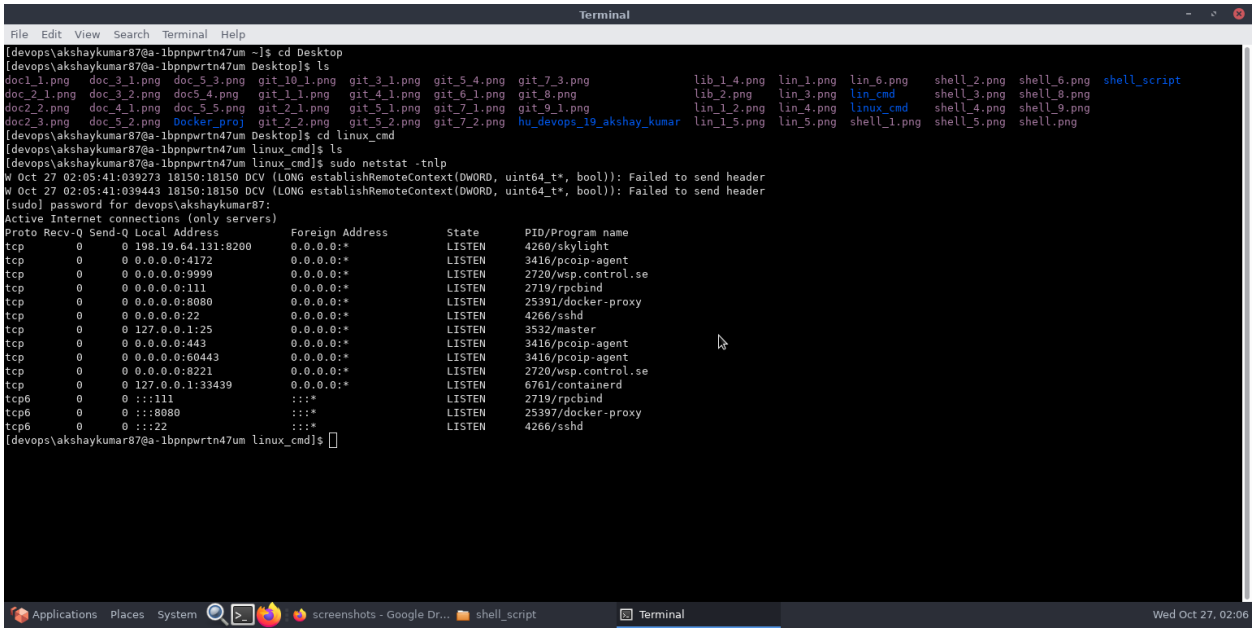


14. **Using netstat command, perform the below operations**
    a. To display all the active list of listening port connections.
    b. To display only the active listening TCP ports.
    c. Netstat command in Linux will help to display all the active UNIX port connections.

Answer:

Following are the commands used for the above:

Netstat -tnlp



THANK YOU!