## PRACTICAL 3

## PART A

**Aim : Monitoring and Managing Linux Processes**

1. List down all processes with their states sorted by their CPU Usage. Identify current running process.

**Top**

1. List down all processes associated with current user.

**Ps -u**

1. List down all processes associated with their terminal and their states. Identify current running process.

**Ps a**

1. Compare the output of “ps lx” and “ps l” commands.

**Ps lx**

**Ps l**

1. List down all the names and numbers of all available signals.

**kill –l**

1. Run the “sleep 10000” in background. (i.e. sleep 10000 &)

**Sleep 10000&**

1. Check the PID of sleep process and kill it using PID.

**PID**

1. Apply w command and observer the output

**W**

1. Open the firefox browser. Check the processes associated with firefox.

**Top**

1. Kill all processes associated with firefox by its name.

**Kill firefox**

1. Give the difference between kill and pkill.

kill terminates processes based on Process ID number (PID), while the kill

all and pkill

commands terminate running processes based on their names and other attributes

1. Run “lscpu” command and observer the output.

**lscpu**

## PART B

**Aim : Control Services and daemons**

1. List all services on your system.(systemctl list-units --type=service)

**Systemctl list-units –type=system**

1. Check whether the ssh service is active or not. (sudosystemctl status service\_name)

**sudosystemctl status service\_name**

1. If the package is not available, i nstall ssh package (sudo apt-get install ssh)

**sudo apt-get install ssh**

1. If the service is available and active, check the process state usng ps –p PID

**ps –p <PID>**

1. Add the firewall rule to allow remote service using ssh(sudo ufw allow ssh)

**sudo ufw allow ssh**

1. Check your IP address

**Ip a**

1. Access another user terminal using ssh

**Sudo ssh administrator@<any pc’s ip address>**

1. Stop the service and check the status

**Exit**

1. Disable the service and check the status

**System**

1. Enable it again and check the status

**Exit**

1. Restart the service and check the status

**System**

1. Observe the analyze the output of be low mentioned command
   1. systemctl is-active ssh
   2. systemctl is-enabled ssh
   3. systemctl is- failed ssh

**systemctl is-active ssh**

**systemctl is-enabled ssh**

**systemctl is- failed ssh**

# I/o Redirection

## Aim: Improve Command Line Productivity

1. Create a file named “newfile.txt” and insert a text into created file as follow:

The operating system is a system program that serves as an interface between the computing system and the end-user.

**Cat > newfile.txt**

1. Redirect the output of “newfile.txt” file to file “new.txt” using command.

**Cat newfile.txt>new.txt**

1. Type command cat, then enter key and enter some text. Observe the output.

**Cat**

1. Type command i) cat <newfile.txt ii) cat newfile.txt. Interpret the output in both cases.

**Cat < newfile.txt**

**Cat newfile.txt**

1. Type command cat – and enter any text.

**Cat –**

1. Use both redirection operator < and > at once to redirect the output of one file to another.

**Cat newfile.txt < copy.txt > copy1.txt**

1. Summarize the use of cat command with redirection operator based on your done exercise.

**cat** command is used for redirect the output or to print the content of the

file.we also can append the characaters in file using **cat** command

1. Try following command andinterpret the output:
   1. ls >filelist

**ls>filelist //show all file name**

* 1. cat newfile.txt new.txt >> report

**cat newfile.txt new.txt >> report //in report it will display combine output**

* 1. cat newfile.txt > newfile.txt

**cat newfile.txt > newfile.txt // same file will copied in same filename**

* 1. date; who **// user login date**
  2. date; who>logfile /**/copied in logfile**
  3. (date; who) > logfile **//show all detail including user**

# Piping

1. ls | wc –l **//count of file**
2. ls | less
3. store the value of count in file named “countfile” using pipeline.
4. Try command who | sort and observe the output. **//sorting user**
5. Strore the sorted output in file named “sortedlist”
6. Try cal 1996 | head -10
7. Who | sort – logfile >newfile **//combine output**