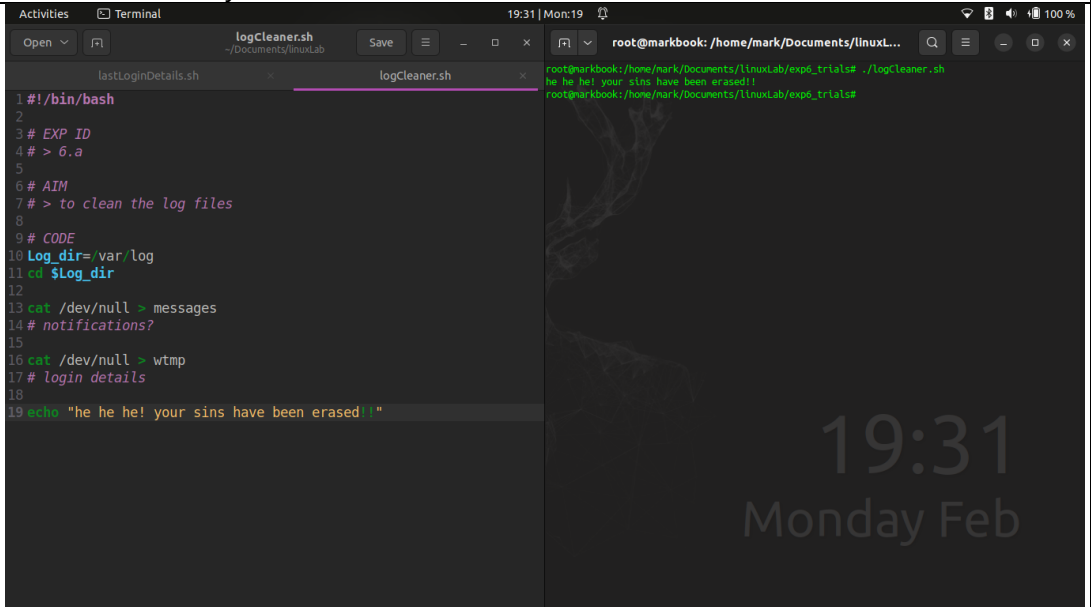
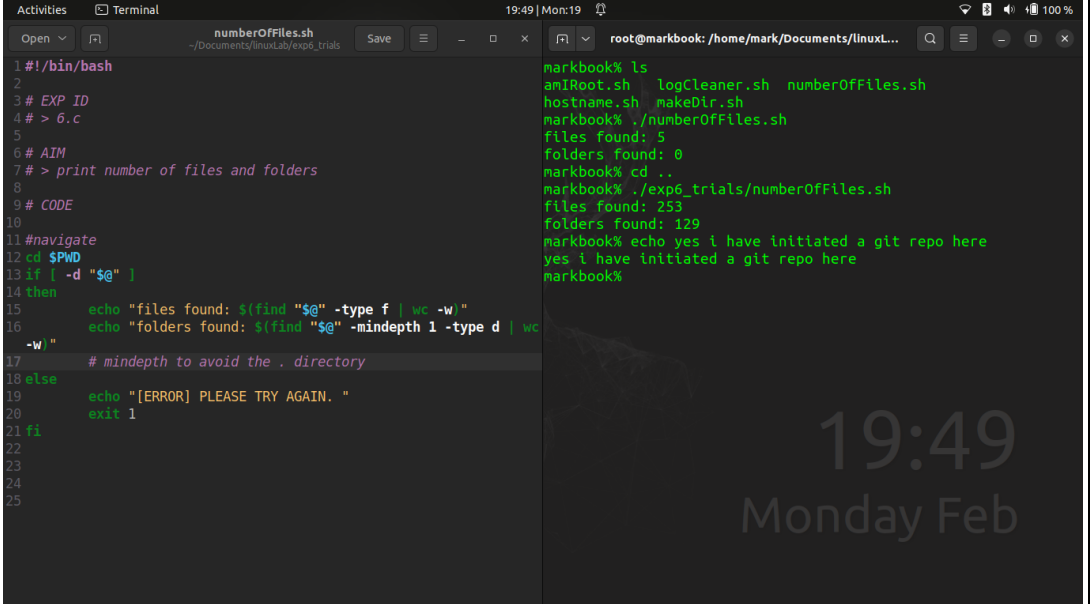
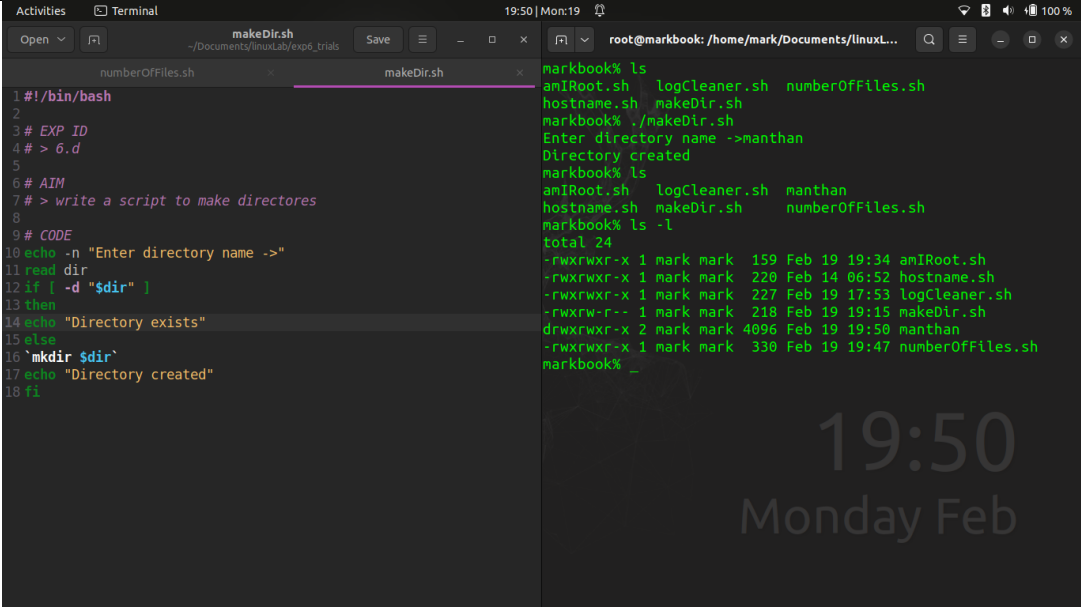


	Experiment No : 6	Date :
Title	Delete all log files, Create Directories, Check user, print file and folder	
Aim	a. Write a shell script to delete all log files present inside your var/log directory b. Write script to check if user is root user c. Write script to print number of files and folders d. Write Script to Create Directories	
Hardware Requirement	Personal Computer	
Software Requirement	Linux Operating System(Ubuntu 20.04) , Shell-Interpreter Nano or Vi or Vim or gedit text editor	
Theory	<p>The log file is a file that records either events that occur in an operating system or other software runs. In here, the Linux servers have log files which keep messages about the server, including the kernel, services, and applications running on it. And the log files are located at the /var/log directory.</p> <p>Mainly there are four types of log files generated in a Linux based environment and they are:</p> <ul style="list-style-type: none"> • Application Logs. • Event Logs. • Service Logs. • System Logs. <p>Uses of Linux log files</p> <p>From the log files, one can observe and find the details on server performance, security, error messages, and underlying issues. Hence any issue that the server is undergoing one can get the clue by detailed view on the log files.</p> <p>Hence by reviewing the log files one can solve the existing issues and can take precautions for the issues that may cause in future!</p> <p>Log Files can also be viewed with following command</p> <ul style="list-style-type: none"> • Viewing logs with less • Viewing logs with dmesg • Viewing logs with tail 	

	(ref : https://www.linux.com/topic/desktop/viewing-linux-logs-command-line/)
statement	a. Write a shell script to delete all log files present inside your var/log directory
Shell Script	<pre>#!/bin/bash # EXP ID # > 6.a # AIM # > to clean the log files # CODE Log_dir=/var/log cd \$Log_dir cat /dev/null > messages # notifications? cat /dev/null > wtmp # login details echo "he he he! your sins have been erased!!"</pre>
Output	 <p>The screenshot shows a terminal window with the following output:</p> <pre>1 #!/bin/bash 2 3 # EXP ID 4 # > 6.a 5 6 # AIM 7 # > to clean the log files 8 9 # CODE 10 Log_dir=/var/log 11 cd \$Log_dir 12 13 cat /dev/null > messages 14 # notifications? 15 16 cat /dev/null > wtmp 17 # login details 18 19 echo "he he he! your sins have been erased!!"</pre> <p>The terminal window title is "logCleaner.sh" and the prompt is "root@markbook: /home/mark/Documents/linuxLab/exp6_trials#". The output shows the script being executed successfully, with the final echo statement outputting "he he he! your sins have been erased!!".</p>

statement	b. Write script to check if user is root user
Shell Script	<pre>#!/bin/bash # EXP ID # > 4.6 # AIM # > check if the user is root user # CODE if ["\$UID" -eq 0] then echo "i am gROOT" else echo "you are not root" fi</pre>
Output	 <pre>Activities Terminal 19:33 Mon:19 Open amIRoot.sh Save root@markbook: /home/mark/Documents/linuxL... 1 #!/bin/bash 2 3 # EXP ID 4 # > 4.6 5 6 # AIM 7 # > check if the user is root user 8 9 # CODE 10 if ["\$UID" -eq 0] 11 then 12 echo "i am gROOT" 13 else 14 echo "you are not root" 15 fi 16 markbook% ./amIRoot.sh you are not root markbook% sudo bash amIRoot.sh i am gROOT markbook% _</pre>
statement	c. Write script to print number of files and folders
Shell Script	<pre>#!/bin/bash # EXP ID # > 6.c</pre>

	<pre> # AIM # > print number of files and folders # CODE #navigate cd \$PWD if [-d "\$@"] then echo "files found: \$(find "\$@" -type f wc -w)" echo "folders found: \$(find "\$@" -mindepth 1 -type d wc -w)" # mindepth to avoid the . directory else echo "[ERROR] PLEASE TRY AGAIN. " exit 1 fi </pre>
Output	 <pre> 1 #!/bin/bash 2 3 # EXP ID 4 # > 6.c 5 6 # AIM 7 # > print number of files and folders 8 9 # CODE 10 11 #navigate 12 cd \$PWD 13 if [-d "\$@"] 14 then 15 echo "files found: \$(find "\$@" -type f wc -w)" 16 echo "folders found: \$(find "\$@" -mindepth 1 -type d wc -w)" 17 # mindepth to avoid the . directory 18 else 19 echo "[ERROR] PLEASE TRY AGAIN. " 20 exit 1 21 fi 22 23 24 25 </pre> <pre> markbook% ls amIRoot.sh logCleaner.sh numberOfFiles.sh hostname.sh makeDir.sh markbook% ./numberOfFiles.sh files found: 5 folders found: 0 markbook% cd .. markbook% ./exp6_trials/numberOfFiles.sh files found: 253 folders found: 129 markbook% echo yes i have initiated a git repo here yes i have initiated a git repo here markbook% </pre>
statement	d. Write Script to Create Directories
Shell Script	<pre> #!/bin/bash # EXP ID # > 6.d </pre>

	<pre># AIM # > write a script to make directoroes # CODE echo -n "Enter directory name ->" read dir if [-d "\$dir"] then echo "Directory exists" else `mkdir \$dir` echo "Directory created" fi</pre>
Output	
Conclusion	Learned about log files and the concept of root user in linux.
Signature	

Grade	
Date	
	Experiment No : 6A
Title	Accepts the hostname and IP address
Aim	Write a script that accepts the hostname and IP address as command-line arguments and adds them to the /etc/hosts file.
Hardware Requirement	Personal Computer
Software Requirement	Linux Operating System(Ubuntu 20.04) , Shell-Interpreter Nano or Vi or Vim or gedit text editor

Theory	<p>HostName</p> <p>A host name is a unique name or label assigned to any device that is connected to a specific computer network. It facilitates the differentiation of different machines or devices connected to the Internet, a network and/or both. Allotted and assigned host names are based on the naming system used.</p> <p>IPaddress</p> <p>An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network. Computers use IP addresses to communicate with each other both over the internet as well as on other networks.</p> <p>Sed Command</p> <p>Sed command or Stream Editor is very powerful utility offered by Linux/Unix systems. It is mainly used for text substitution , find & replace but it can also perform other text manipulations like insertion, deletion, search etc. With SED, we can edit complete files without actually having to open it.</p>
Shell Script	<pre>#!/bin/bash # EXP ID # > 6A # AIM # > accept hostname and ip address and add to /ect/hosts # CODE read -p "Enter hostname: " hname read -p "Enter IP address of the host: " ip # sed -i.bkp "\$a \$hname \$ip: /etc/hosts" echo "\$ip \$hname" >> /etc/hosts # the >> makes it append the file and > makes it trunkate the file</pre>

Output

```
Activities Terminal 20:09 | Mon:19 100%
Open hostname.sh Save ~ - □ x root@markbook: /home/mark/Documents/linuxL...
1 #!/bin/bash
2
3 # EXP ID
4 # > GA
5
6 # AIM
7 # > accept hostname and ip address and add to /etc/hosts
8
9 # CODE
10 read -p "Enter hostname: " hname
11 read -p "Enter IP address of the host: " ip
12 # sed -i.bkp "$a $hname $ip: /etc/hosts"
13
14 echo "$ip $hname" >> /etc/hosts
15 # the >> makes it append the file and > makes it truncate the
   file
16
```

```
markbook% ls
amIRoot.sh hostname.sh makeDir.sh
file logCleaner.sh numberOfFiles.sh
markbook% ./hostname.sh
Enter hostname: manthan
Enter IP address of the host: 192.168.7.7
./hostname.sh: line 14: /etc/hosts: Permission denied
markbook% sudo ./hostname.sh
Enter hostname: manthan
Enter IP address of the host: 192.168.7.7
markbook% cat /etc/hosts
127.0.0.1 localhost
127.0.1.1 markbook

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

192.168.7.7 manthan
markbook%
```

Conclusion

Learned to add server address in /etc/host file in linux.

Signature

[illegible]