

Experiment 2: Linux File Systems, Permissions, and Essential Commands

Name: Sartaj Singh Roll No.: 590029227 Date: 2025-09-23

Aim:

- To understand the structure of Linux file systems.
- To learn and practice essential navigation and file management commands.
- To explore file permissions and ownership, and manage them using Linux commands.
- To use user management, system information commands, and editing tools.
- To solve practical exercises and tasks for mastering Linux basics.

Requirements

- A Linux machine (Ubuntu/Debian/Linux Mint or similar).
 - User privileges to create, modify, and delete files.
 - Access to terminal and text editors like `nano` or `vim`.
-

Theory

Linux uses a hierarchical file system starting from the root `/`. Essential directories include `/home`, `/etc`, `/usr`, `/var`, `/bin`, and `/tmp`. File permissions are divided among **owner**, **group**, and **others**, with actions `r` (read), `w` (write), and `x` (execute). Navigation commands like `ls`, `pwd`, `cd`, and file operations (`cp`, `mv`, `rm`) form the basis of Linux usage. Editors (`nano`, `vim`) and commands for system info (`uname`, `df`, `top`, `history`) provide insights and control. Practice tasks build practical confidence.

Procedure & Observations

Section 1: File Systems and Permissions

We learned how Linux organizes directories, how to view and change file permissions using `chmod`, `chown`, and `chgrp`.

Section 2: Navigation and File Operations

Commands like `ls`, `pwd`, `cd`, `mkdir`, `rmdir`, `touch`, `cp`, `mv`, `rm` were practiced to manage files and directories.

Section 3: File Viewing and Editing

We used `cat`, `less`, `head`, `tail` to view file contents, and practiced editing with `nano` and `vim`.

Section 4: User Management

Commands `whoami`, `who`, `passwd`, `sudo` were practiced to understand users and privileges.

Section 5: System Information

Commands like `uname`, `df`, `top`, `htop`, `history` were used to gather system and process information.

Section 6: Practice Exercises

Hands-on practice included navigation, file operations, text editing, system exploration, and cleanup.

Practice Exercises

Exercise 1: File System Navigation

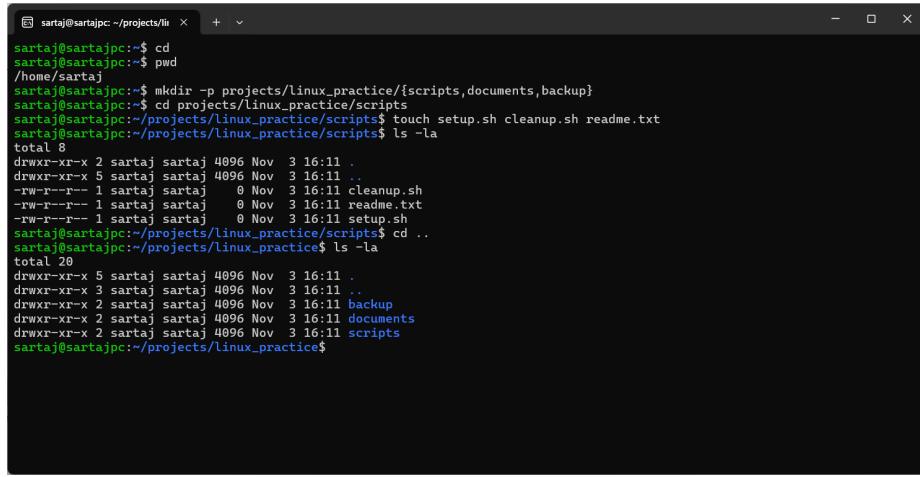
```
cd  
pwd  
mkdir -p projects/linux_practice/{scripts,documents,backup}  
cd projects/linux_practice/scripts  
touch setup.sh cleanup.sh readme.txt  
ls -la  
cd ..  
ls -la
```

Output:

Exercise 2: File Operations and Permissions

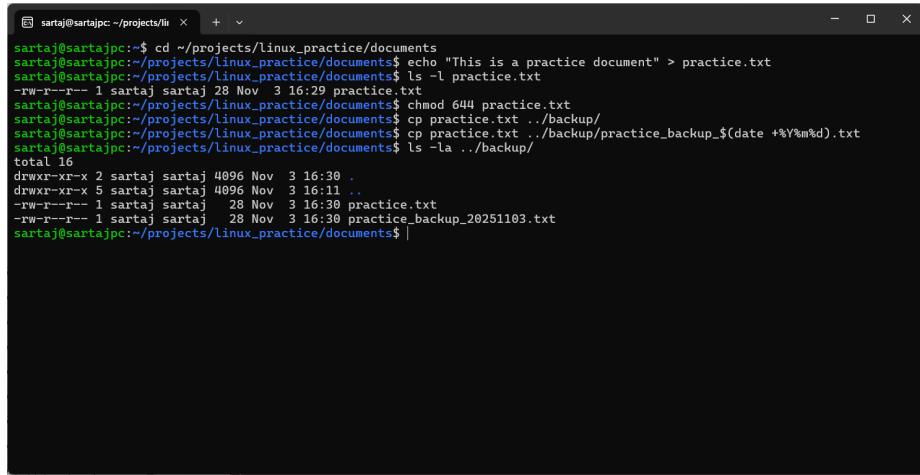
```
cd ~/projects/linux_practice/documents  
echo "This is a practice document" > practice.txt  
ls -l practice.txt  
chmod 644 practice.txt  
cp practice.txt ../backup/  
cp practice.txt ../backup/practice_backup_$(date +%Y%m%d).txt  
ls -la ../backup/
```

Output:



```
sartaj@sartajpc:~/projects/li ~ + ~
sartaj@sartajpc:~$ cd
sartaj@sartajpc:~$ pwd
/home/sartaj
sartaj@sartajpc:~$ mkdir -p projects/linux_practice/{scripts,documents,backup}
sartaj@sartajpc:~$ cd projects/linux_practice/scripts
sartaj@sartajpc:~/projects/linux_practice/scripts$ touch setup.sh cleanup.sh readme.txt
sartaj@sartajpc:~/projects/linux_practice/scripts$ ls -la
total 8
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:11 .
drwxr-xr-x 5 sartaj sartaj 4096 Nov  3 16:11 ..
-rw-r--r-- 1 sartaj sartaj    0 Nov  3 16:11 cleanup.sh
-rw-r--r-- 1 sartaj sartaj    0 Nov  3 16:11 readme.txt
-rw-r--r-- 1 sartaj sartaj    0 Nov  3 16:11 setup.sh
sartaj@sartajpc:~/projects/linux_practice/scripts$ cd ..
sartaj@sartajpc:~/projects/linux_practice$ ls -la
total 20
drwxr-xr-x 5 sartaj sartaj 4096 Nov  3 16:11 .
drwxr-xr-x 3 sartaj sartaj 4096 Nov  3 16:11 ..
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:11 backup
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:11 documents
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:11 scripts
sartaj@sartajpc:~/projects/linux_practice$
```

Figure 1: exp2_ex1



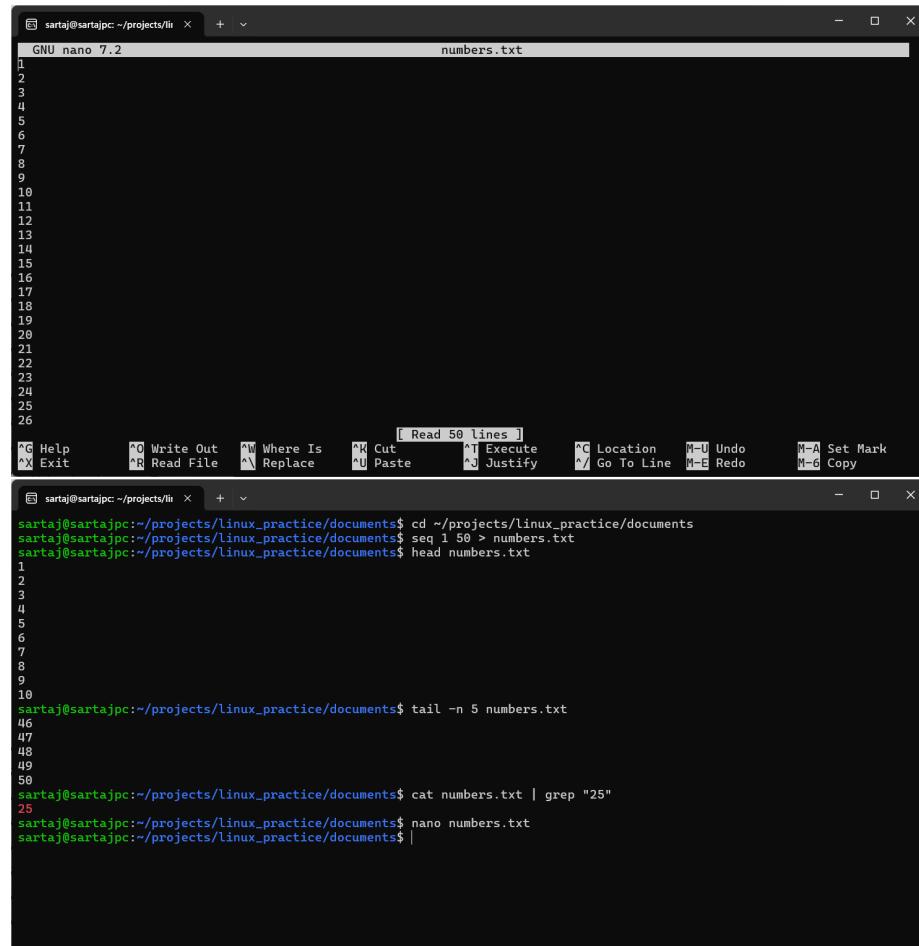
```
sartaj@sartajpc:~/projects/li ~ + ~
sartaj@sartajpc:~$ cd ~/projects/linux_practice/documents
sartaj@sartajpc:~/projects/linux_practice/documents$ echo "This is a practice document" > practice.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ ls -l practice.txt
-rw-r--r-- 1 sartaj sartaj 28 Nov  3 16:29 practice.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ chmod 644 practice.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ cp practice.txt ..../backup/
sartaj@sartajpc:~/projects/linux_practice/documents$ cp practice.txt ..../backup/practice_backup_$(date +%Y%m%d).txt
sartaj@sartajpc:~/projects/linux_practice/documents$ ls -la ..../backup/
total 16
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:38 .
drwxr-xr-x 3 sartaj sartaj 4096 Nov  3 16:11 ..
-rw-r--r-- 1 sartaj sartaj   28 Nov  3 16:38 practice.txt
-rw-r--r-- 1 sartaj sartaj 28 Nov  3 16:38 practice_backup_20251103.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ |
```

Figure 2: exp2_ex2

Exercise 3: Text Editing and Viewing

```
cd ~/projects/linux_practice/documents
seq 1 50 > numbers.txt
head numbers.txt
tail -n 5 numbers.txt
cat numbers.txt | grep "25"
nano numbers.txt
cat numbers.txt
```

Output:



The screenshot shows a terminal window with two panes. The top pane displays the contents of the 'numbers.txt' file, which is a sequence of integers from 1 to 50. The bottom pane shows the command history and the output of the commands entered:

```
sartaj@sartajpc:~/projects/linux_practice/documents$ cd ~/projects/linux_practice/documents
sartaj@sartajpc:~/projects/linux_practice/documents$ seq 1 50 > numbers.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ head numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
[Read 50 lines]
sartaj@sartajpc:~/projects/linux_practice/documents$ tail -n 5 numbers.txt
46
47
48
49
50
sartaj@sartajpc:~/projects/linux_practice/documents$ cat numbers.txt | grep "25"
25
sartaj@sartajpc:~/projects/linux_practice/documents$ nano numbers.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ |
```

The image shows two terminal windows side-by-side. The left window displays the contents of a file named 'numbers.txt' with line numbers 25 through 27. The right window shows various system exploration commands: uname -a, df -h, and history 10.

```

25
sartaj@sartajpc:~/projects/linux_practice/documents$ nano numbers.txt
sartaj@sartajpc:~/projects/linux_practice/documents$ cat numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27

sartaj@sartajpc:~$ uname -a
Linux sartajpc 6.6.87.2-microsoft-standard-WSL2 #1 SMP PREEMPT_DYNAMIC Thu Jun 5 18:30:46 UTC 2025 x86_64 x86_64 x86_64
GNU/Linux
sartaj@sartajpc:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
none            1.9G   0    1.9G  0% /usr/lib/modules/6.6.87.2-microsoft-standard-WSL2
none            1.9G  4.0K  1.9G  1% /mnt/wsl
drivers          427G  285G 143G 67% /usr/lib/wsl/drivers
/dev/sdd        1007G  1.7G  954G  1% /
none            1.9G  84K  1.9G  1% /mnt/wslg
none            1.9G   0    1.9G  0% /usr/lib/wsl/lib
rootfs          1.9G  2.7M  1.9G  1% /init
none            1.9G  548K  1.9G  1% /run
none            1.9G   0    1.9G  0% /run/lock
none            1.9G   0    1.9G  0% /run/shm
none            1.9G  76K  1.9G  1% /mnt/wslg/versions.txt
none            1.9G  76K  1.9G  1% /mnt/wslg/doc
C:\             427G  285G 143G 67% /mnt/c
D:\             49G  21G  29G 42% /mnt/d
tmpfs           1.9G  16K  1.9G  1% /run/user/1000
sartaj@sartajpc:~$ history 10
80 tail -n 5 numbers.txt
81 cat numbers.txt | grep "25"
82 nano numbers.txt
83 cat numbers.txt
84 clear
85 cd
86 clear
87 uname -a
88 df -h

```

Exercise 4: System Exploration

```

uname -a
df -h
history 10
who
whoami
top

```

Output:

```
sartaj@sartajpc ~
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	21568	12080	9136	S	0.0	0.3	0:01.09	systemd
2	root	20	0	3060	1664	1664	S	0.0	0.0	0:00.01	init-systemd[Ub]
7	root	20	0	3076	1792	1792	S	0.0	0.0	0:00.00	init
53	root	19	-1	66812	18748	17852	S	0.0	0.5	0:00.67	systemd-journal
101	root	20	0	25268	6400	4864	S	0.0	0.2	0:00.74	systemd-udevd
117	systemd+	20	0	21452	12672	10496	S	0.0	0.3	0:00.17	systemd-resolve
121	systemd+	20	0	91020	7680	6784	S	0.0	0.2	0:00.18	systemd-timesyn
166	root	20	0	4236	2432	2304	S	0.0	0.1	0:00.04	cron
167	message+	20	0	9632	4736	4352	S	0.0	0.1	0:00.14	dbus-daemon
180	root	20	0	17964	8448	7552	S	0.0	0.2	0:00.13	systemd-logind
182	root	20	0	1756096	12032	10112	S	0.0	0.3	0:00.43	wsl-pro-service
202	syslog	20	0	222588	5504	4352	S	0.0	0.1	0:00.14	rsyslogd
204	root	20	0	3160	1920	1792	S	0.0	0.1	0:00.01	agetty
207	root	20	0	3116	1792	1664	S	0.0	0.0	0:00.01	agetty
214	root	20	0	107024	22400	13056	S	0.0	0.6	0:00.13	unattended-upgr
318	root	20	0	3064	896	896	S	0.0	0.0	0:00.00	SessionLeader
319	root	20	0	3080	1024	1024	S	0.0	0.0	0:00.11	Relay(320)
320	sartaj	20	0	6072	5120	3456	S	0.0	0.1	0:00.29	bash
321	root	20	0	6696	4352	3712	S	0.0	0.1	0:00.01	login
412	sartaj	20	0	26296	11392	9344	S	0.0	0.3	0:00.12	systemd
413	sartaj	20	0	21148	3520	1792	S	0.0	0.1	0:00.00	(sd-pam)
426	sartaj	20	0	6056	5248	3584	S	0.0	0.1	0:00.01	bash
718	sartaj	20	0	9272	5120	3072	R	0.0	0.1	0:00.05	top


```
sartaj@sartajpc ~
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	21568	12080	9136	S	0.0	0.3	0:01.09	systemd


```
sartaj@sartajpc ~
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	21568	12080	9136	S	0.0	0.3	0:01.09	systemd

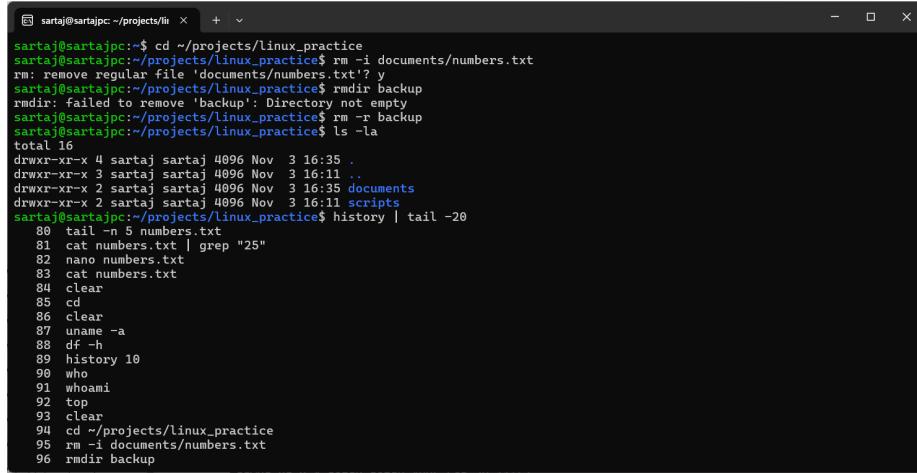

```
sartaj@sartajpc ~
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	21568	12080	9136	S	0.0	0.3	0:01.09	systemd

Exercise 5: Cleanup

```
cd ~/projects/linux_practice
rm -i documents/numbers.txt
rmdir backup
rm -r backup
ls -la
history | tail -20
```

Output:



```

sartaj@sartajpc:~/projects/linux_practice
sartaj@sartajpc:~/projects/linux_practice$ rm -i documents/numbers.txt
rm: remove regular file 'documents/numbers.txt'? y
sartaj@sartajpc:~/projects/linux_practice$ rmdir backup
rmdir: failed to remove 'backup': Directory not empty
sartaj@sartajpc:~/projects/linux_practice$ rm -r backup
sartaj@sartajpc:~/projects/linux_practice$ ls -la
total 16
drwxr-xr-x  4 sartaj sartaj 4096 Nov  3 16:35 .
drwxr-xr-x  3 sartaj sartaj 4096 Nov  3 16:11 ..
drwxr-xr-x  2 sartaj sartaj 4096 Nov  3 16:35 documents
drwxr-xr-x  2 sartaj sartaj 4096 Nov  3 16:11 scripts
sartaj@sartajpc:~/projects/linux_practice$ history | tail -20
 80 tail -n 5 numbers.txt
 81 cat numbers.txt | grep "25"
 82 nano numbers.txt
 83 cat numbers.txt
 84 clear
 85 cd
 86 clear
 87 uname -a
 88 df -h
 89 history 10
 90 who
 91 whoami
 92 top
 93 clear
 94 cd ~/projects/linux_practice
 95 rm -i documents/numbers.txt
 96 rmdir backup

```

Figure 3: ex2_ex5

Question Bank / Lab Exam Tasks

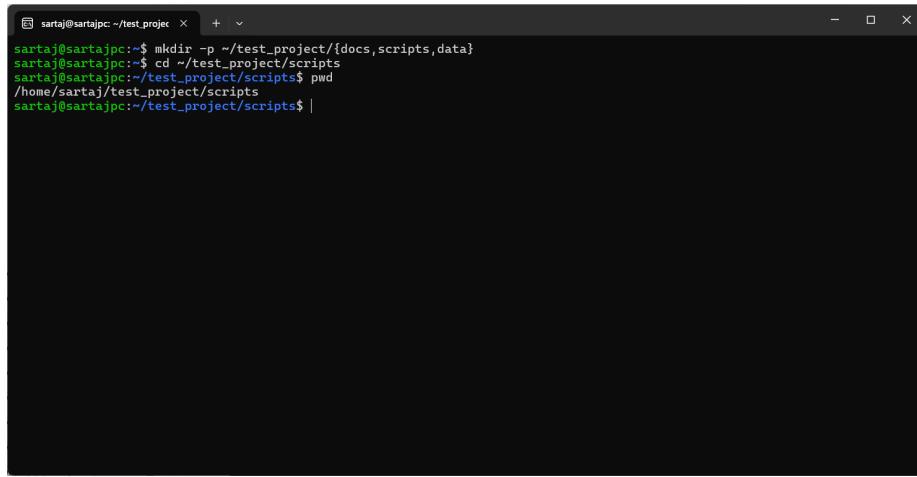
Task 1: Directory Navigation

```

mkdir -p ~/test_project/{docs,scripts,data}
cd ~/test_project/scripts
pwd

```

Output:



```

sartaj@sartajpc:~/test_project
sartaj@sartajpc:~/test_project$ mkdir -p ~/test_project/{docs,scripts,data}
sartaj@sartajpc:~/test_project$ cd ~/test_project/scripts
sartaj@sartajpc:~/test_project/scripts$ pwd
/home/sartaj/test_project/scripts
sartaj@sartajpc:~/test_project/scripts$

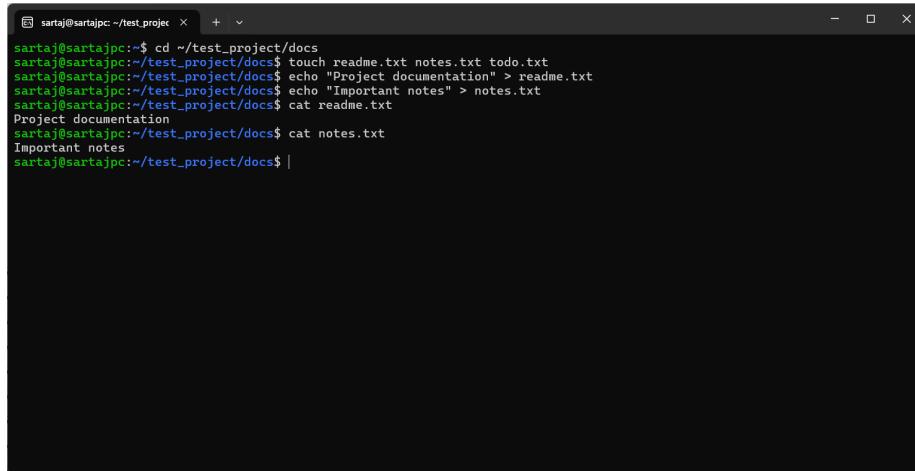
```

Figure 4: exp2_t1

Task 2: File Creation and Content

```
cd ~/test_project/docs
touch readme.txt notes.txt todo.txt
echo "Project documentation" > readme.txt
echo "Important notes" > notes.txt
cat readme.txt
cat notes.txt
```

Output:

A screenshot of a terminal window titled 'sartaj@sartajpc: ~/test_project'. The window contains the following text:

```
sartaj@sartajpc:~/test_project$ cd ~/test_project/docs
sartaj@sartajpc:~/test_project/docs$ touch readme.txt notes.txt todo.txt
sartaj@sartajpc:~/test_project/docs$ echo "Project documentation" > readme.txt
sartaj@sartajpc:~/test_project/docs$ echo "Important notes" > notes.txt
sartaj@sartajpc:~/test_project/docs$ cat readme.txt
Project documentation
sartaj@sartajpc:~/test_project/docs$ cat notes.txt
Important notes
sartaj@sartajpc:~/test_project/docs$ |
```

The terminal window has a dark background and light-colored text. It shows the user's command history and the output of the 'cat' command.

Figure 5: exp2_t2

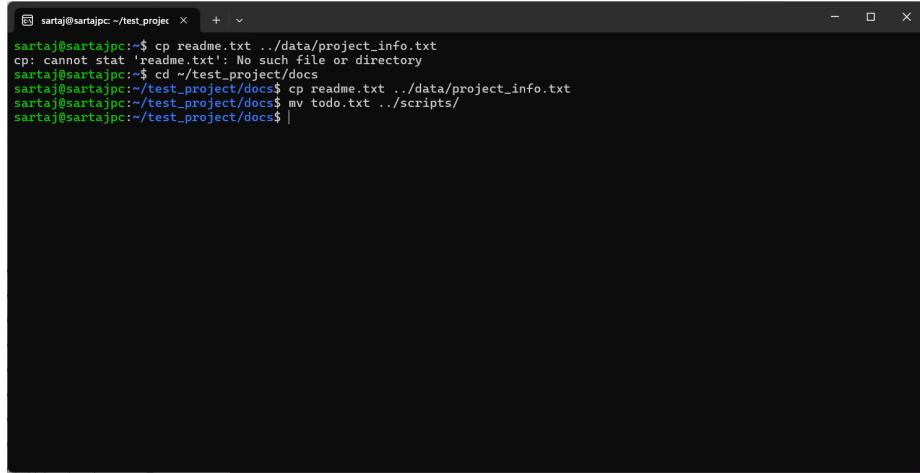
Task 3: File Operations

```
cp readme.txt ../data/project_info.txt
mv todo.txt ../scripts/
```

Output:

Task 4: File Permissions

```
cd ~/test_project/scripts
echo "#!/bin/bash" > backup.sh
echo "echo Backup complete" >> backup.sh
```

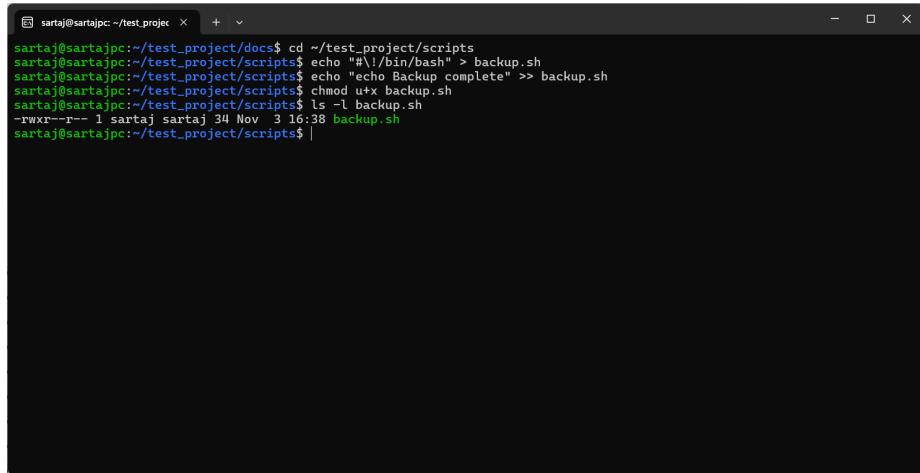


```
sartaj@sartajpc:~/test_project$ cp readme.txt ../data/project_info.txt
cp: cannot stat 'readme.txt': No such file or directory
sartaj@sartajpc:~/test_project$ cd ~/test_project/docs
sartaj@sartajpc:~/test_project/docs$ cp readme.txt ../data/project_info.txt
sartaj@sartajpc:~/test_project/docs$ mv todo.txt ./scripts/
sartaj@sartajpc:~/test_project/docs$ |
```

Figure 6: exp2_t3

```
chmod u+x backup.sh
ls -l backup.sh
```

Output:



```
sartaj@sartajpc:~/test_project$ cd ~/test_project/scripts
sartaj@sartajpc:~/test_project/scripts$ echo "#!/bin/bash" > backup.sh
sartaj@sartajpc:~/test_project/scripts$ echo "echo Backup complete" >> backup.sh
sartaj@sartajpc:~/test_project/scripts$ chmod u+x backup.sh
sartaj@sartajpc:~/test_project/scripts$ ls -l backup.sh
-rwxr--r-- 1 sartaj sartaj 34 Nov  3 16:38 backup.sh
sartaj@sartajpc:~/test_project/scripts$ |
```

Figure 7: exp2_t4

Task 5: File Viewing

```
seq 1 20 > numbers.txt  
head -n 5 numbers.txt  
tail -n 3 numbers.txt  
grep "1" numbers.txt
```

Output:

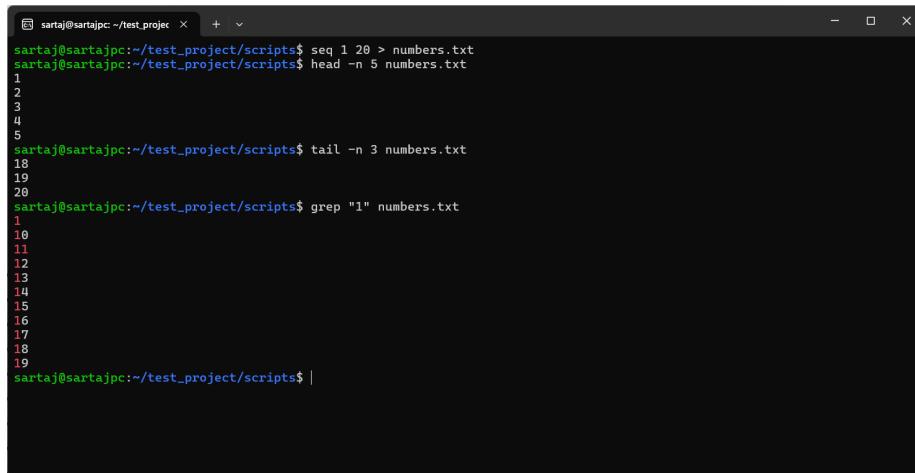
A screenshot of a terminal window titled 'sartaj@sartajpc: ~/test_projec'. The window contains a command-line session. The user runs 'seq 1 20 > numbers.txt', then 'head -n 5 numbers.txt', which outputs the first five lines: 1, 2, 3, 4, 5. Next, they run 'tail -n 3 numbers.txt', which outputs the last three lines: 18, 19, 20. Finally, they run 'grep "1" numbers.txt', which outputs all lines containing the digit '1': 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19.

Figure 8: exp2_t5

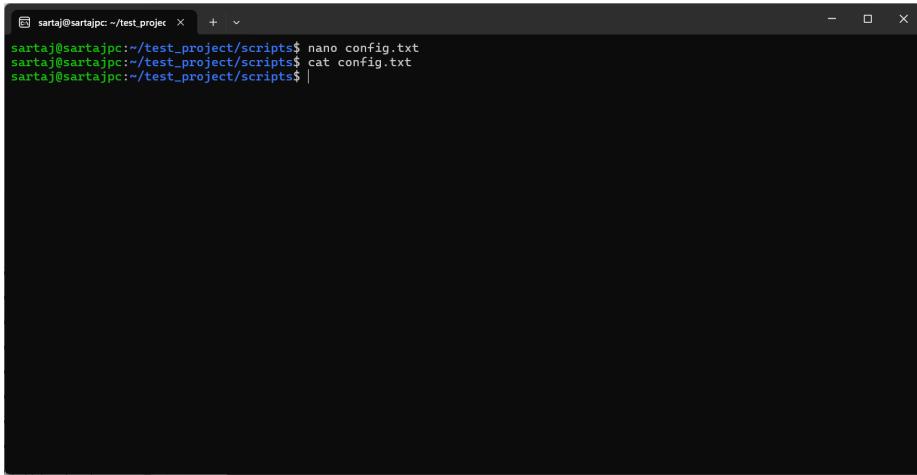
Task 6: Text Editing

```
nano config.txt  
cat config.txt
```

Output:

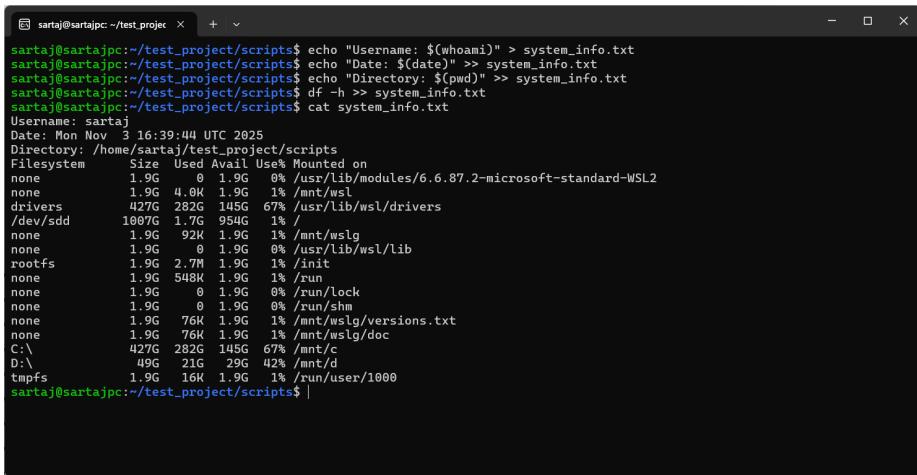
Task 7: System Information

```
echo "Username: $(whoami)" > system_info.txt  
echo "Date: $(date)" >> system_info.txt  
echo "Directory: $(pwd)" >> system_info.txt  
df -h >> system_info.txt  
cat system_info.txt
```



```
sartaj@sartajpc:~/test_project$ nano config.txt
sartaj@sartajpc:~/test_project$ cat config.txt
sartaj@sartajpc:~/test_project$ |
```

Figure 9: exp2_t6



```
sartaj@sartajpc:~/test_project$ echo "Username: $(whoami)" > system_info.txt
sartaj@sartajpc:~/test_project$ echo "Date: $(date)" >> system_info.txt
sartaj@sartajpc:~/test_project$ echo "Directory: $(pwd)" >> system_info.txt
sartaj@sartajpc:~/test_project$ df -h >> system_info.txt
sartaj@sartajpc:~/test_project$ cat system_info.txt
Username: sartaj
Date: Mon Nov  3 16:39:44 UTC 2025
Directory: /home/sartaj/test_project/scripts
Filesystem      Size  Used  Avail Use% Mounted on
none            1.9G   0    1.9G  0% /usr/lib/modules/6.6.87.2-microsoft-standard-WSL2
none            1.9G  4.0K  1.9G  1% /mnt/wsl
drivers          427G  282G  145G  67% /usr/lib/wsl/drivers
/dev/sdd        1007G  1.7G  954G  1% /
none            1.9G  92K  1.9G  1% /mnt/wslg
none            1.9G   0    1.9G  0% /usr/lib/wsl/lib
rootfs           1.9G  2.7M  1.9G  1% /init
none            1.9G  548K  1.9G  1% /run
none            1.9G   0    1.9G  0% /run/lock
none            1.9G   0    1.9G  0% /run/shm
none            1.9G  76K  1.9G  1% /mnt/wslg/versions.txt
none            1.9G  76K  1.9G  1% /mnt/wslg/doc
C:\             427G  282G  145G  67% /mnt/c
D:\             49G  21G  29G  42% /mnt/d
tmpfs           1.9G  16K  1.9G  1% /run/user/1000
sartaj@sartajpc:~/test_project$ |
```

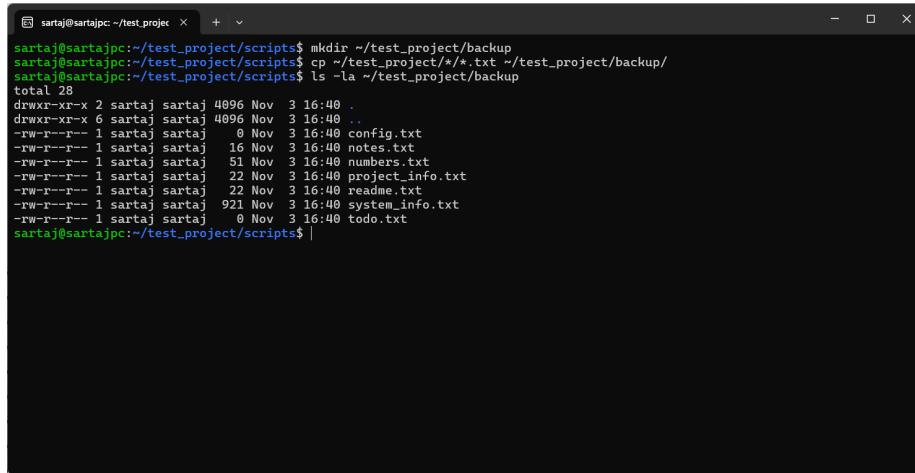
Figure 10: exp2_t7

Output:

Task 8: File Organization

```
mkdir ~/test_project/backup  
cp ~/test_project/*/*.txt ~/test_project/backup/  
ls -la ~/test_project/backup
```

Output:



The screenshot shows a terminal window with the following session:

```
sartaj@sartajpc:~/test_project$ mkdir ~/test_project/backup  
sartaj@sartajpc:~/test_project/scripts$ cp ~/test_project/*/*.txt ~/test_project/backup/  
sartaj@sartajpc:~/test_project/scripts$ ls -la ~/test_project/backup/  
total 28  
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:48 .  
drwxr-xr-x 6 sartaj sartaj 4096 Nov  3 16:48 ..  
-rw-r--r-- 1 sartaj sartaj     0 Nov  3 16:48 config.txt  
-rw-r--r-- 1 sartaj sartaj   16 Nov  3 16:48 notes.txt  
-rw-r--r-- 1 sartaj sartaj   51 Nov  3 16:48 numbers.txt  
-rw-r--r-- 1 sartaj sartaj  22 Nov  3 16:48 project_info.txt  
-rw-r--r-- 1 sartaj sartaj  22 Nov  3 16:48 readme.txt  
-rw-r--r-- 1 sartaj sartaj 921 Nov  3 16:48 system_info.txt  
-rw-r--r-- 1 sartaj sartaj     0 Nov  3 16:40 todo.txt  
sartaj@sartajpc:~/test_project/scripts$
```

Figure 11: exp2_t8

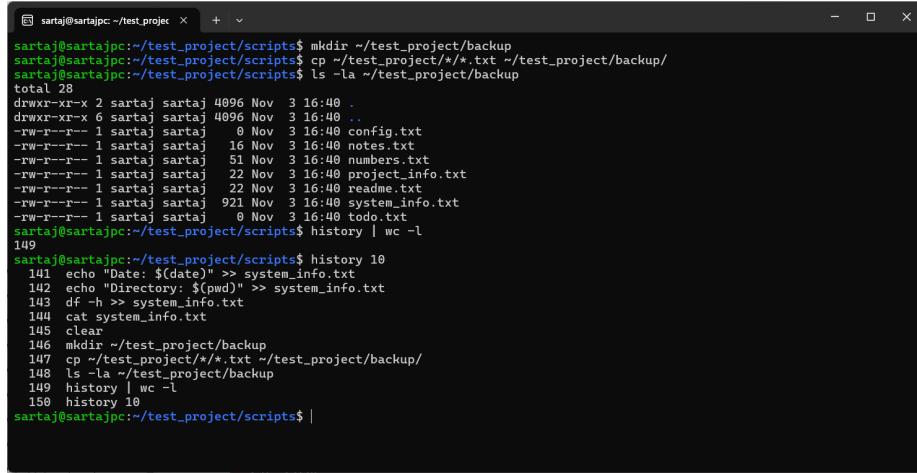
Task 9: Process and History

```
history | wc -l  
history 10
```

Output:

Task 10: Comprehensive Cleanup

```
chmod 754 backup.sh  
find ~/test_project -type f | wc -l > summary.txt  
find ~/test_project -type d | wc -l >> summary.txt  
cat summary.txt
```



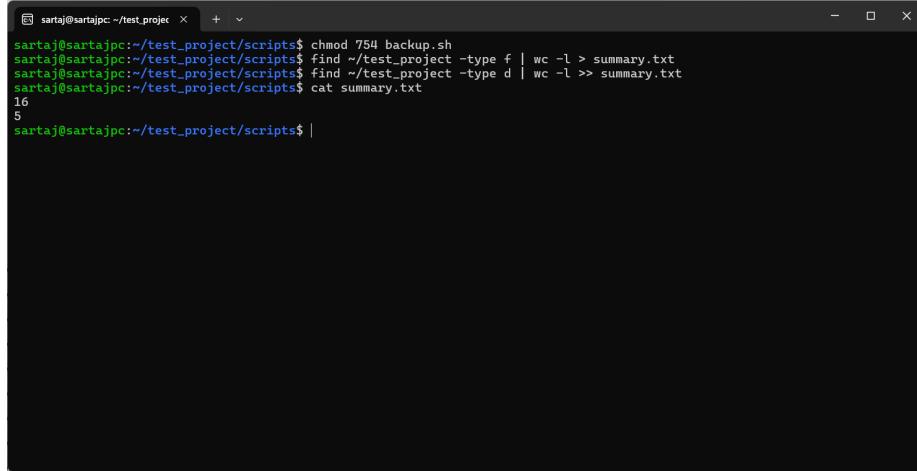
```

sartaj@sartajpc:~/test_project$ mkdir ~/test_project/backup
sartaj@sartajpc:~/test_project/scripts$ cp ~/test_project/*/*.txt ~/test_project/backup/
sartaj@sartajpc:~/test_project/scripts$ ls -la ~/test_project/backup/
total 28
drwxr-xr-x 2 sartaj sartaj 4096 Nov  3 16:48 .
drwxr-xr-x 6 sartaj sartaj 4096 Nov  3 16:48 ..
-rw-r--r-- 1 sartaj sartaj   0 Nov  3 16:48 config.txt
-rw-r--r-- 1 sartaj sartaj  16 Nov  3 16:48 notes.txt
-rw-r--r-- 1 sartaj sartaj  51 Nov  3 16:48 numbers.txt
-rw-r--r-- 1 sartaj sartaj  22 Nov  3 16:48 project_info.txt
-rw-r--r-- 1 sartaj sartaj  22 Nov  3 16:48 readme.txt
-rw-r--r-- 1 sartaj sartaj 921 Nov  3 16:48 system_info.txt
-rw-r--r-- 1 sartaj sartaj   0 Nov  3 16:48 todo.txt
sartaj@sartajpc:~/test_project/scripts$ history | wc -l
149
sartaj@sartajpc:~/test_project/scripts$ history 10
141 echo "Date: $(date)" >> system_info.txt
142 echo "Directory: $(pwd)" >> system_info.txt
143 df -h >> system_info.txt
144 cat system_info.txt
145 clear
146 mkdir ~/test_project/backup
147 cp ~/test_project/*/*.txt ~/test_project/backup/
148 ls -la ~/test_project/backup
149 history | wc -l
150 history 10
sartaj@sartajpc:~/test_project/scripts$ |

```

Figure 12: exp2_t9

Output:



```

sartaj@sartajpc:~/test_project$ chmod 754 backup.sh
sartaj@sartajpc:~/test_project/scripts$ find ~/test_project -type f | wc -l > summary.txt
sartaj@sartajpc:~/test_project/scripts$ find ~/test_project -type d | wc -l >> summary.txt
sartaj@sartajpc:~/test_project/scripts$ cat summary.txt
16
5
sartaj@sartajpc:~/test_project/scripts$ |

```

Figure 13: exp2_t10

Result

- Explored Linux file system structure.
- Practiced file operations, editing, and permissions.
- Learned user and system management commands.
- Completed practical exercises and lab exam-style tasks.

Challenges Faced & Learning Outcomes

- Challenge 1: Managing complex directory structures.
- Challenge 2: Remembering symbolic vs numeric permissions.
- Challenge 3: Using `find`, `grep`, and redirection effectively.

Learning:

- Mastered Linux navigation, file handling, and permissions.
- Gained practical knowledge of user/system management.
- Practiced exam-style tasks to solidify learning.

Conclusion

This experiment comprehensively covered **Linux file systems, permissions, commands, editing, user management, and system info**. The tasks ensured thorough practice, making it a complete foundation for Linux proficiency.