LONDON METROPOLITAN UNIVERSITY

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Submitted To: Mr. Prashant Adhikari

Declaration: I understand that I am required to submit my assignment under the appropriate module page prior to the specified deadline, in order for it to be considered for marking. I acknowledge that any assignment submitted after the deadline will be deemed as a non-submission and will not be marked, resulting in a score of zero.

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1. Introduction

Linux is a powerful open-source operating system that can be widely used in various domains, including system administration, cybersecurity, and software development. This lab report focuses on gaining hands-on experience with essential Linux commands. It provides a foundation for managing files, users, and system processes efficiently. After practicing these commands, one can navigate and operate a Linux-based system and enhancing the ability to perform administrative tasks.

2. Objective

The main objective of this workshop is to be familiar with the Linux commands.

3. Required Tools

Linux or Linux based operating system. Here, I am using Kali Linux.

4. Linux commands

4.1 script a1script

This command creates a file named a1script and starts recording the terminal activities.

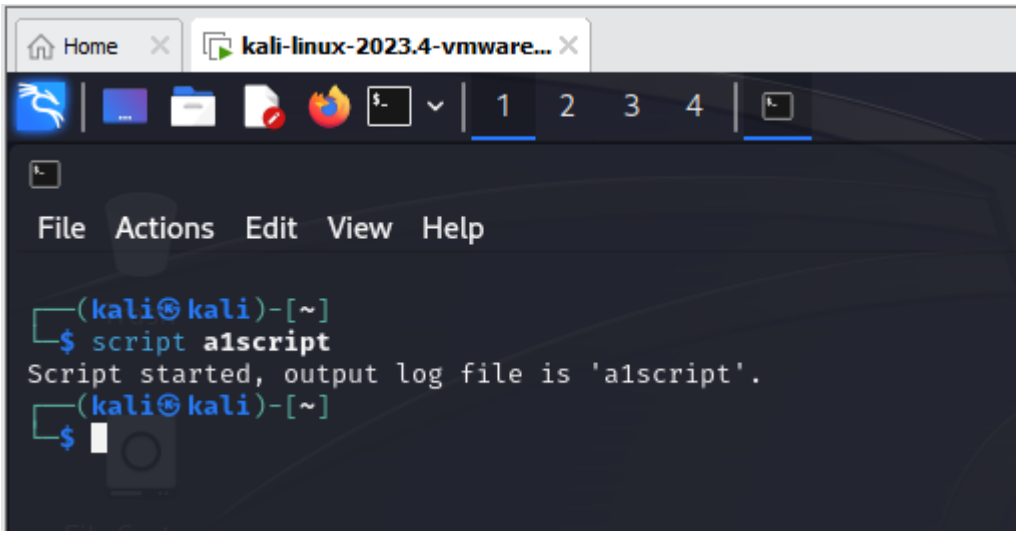

Figure 1: Script a1script started

4.2 whoami

This command displays the name of the current username. Here, the username is Kali

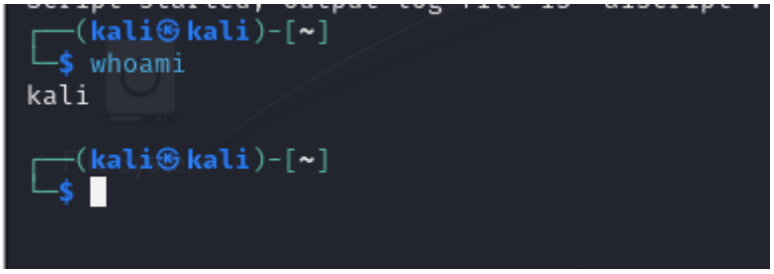

Figure 2: Current Username

4.3 who

This command shows all the users logged into the system.

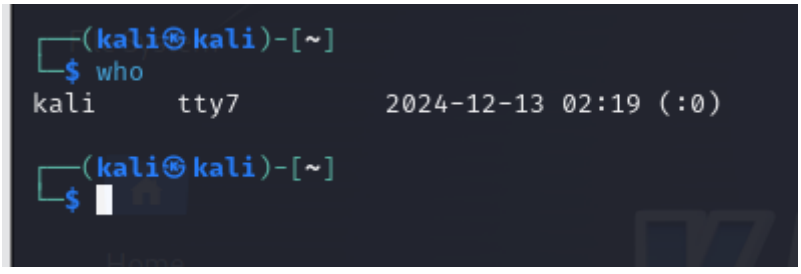

Figure 3: List of all users

4.4 finger kali

The ‘finger’ command provides additional account details like login name, home directory and last login. In the command ‘finger kali’, kali is the username. We can obtain the username by typing ‘whoami’ in the terminal.

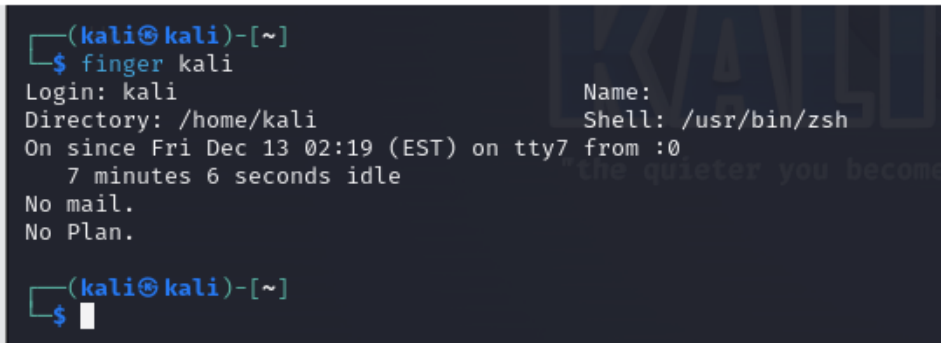

Figure 4: User account details

4.5 date

This command displays the current date and time of the system.

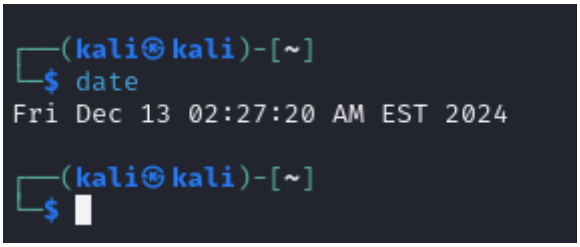

Figure 5:Current date and time

4.6.1 ls

This command displays all the visible files in the current directory as shown in the picture below.

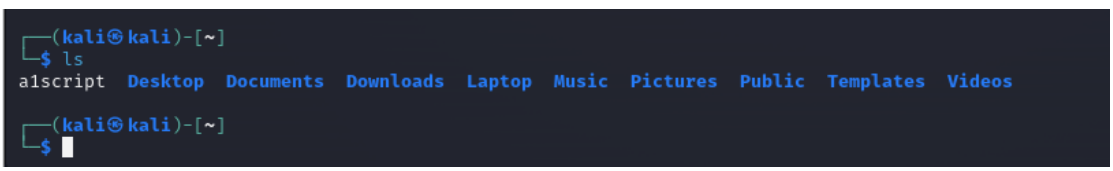

Figure 6: Visible files in current directory

4.6.2 ls -a

This command shows all the files including hidden files (those starting with dot '.') present in the current directory.

Figure 7: All files in current directory

4.6.3 ls -a -l

This command shows file permission, size, owners and modification times.

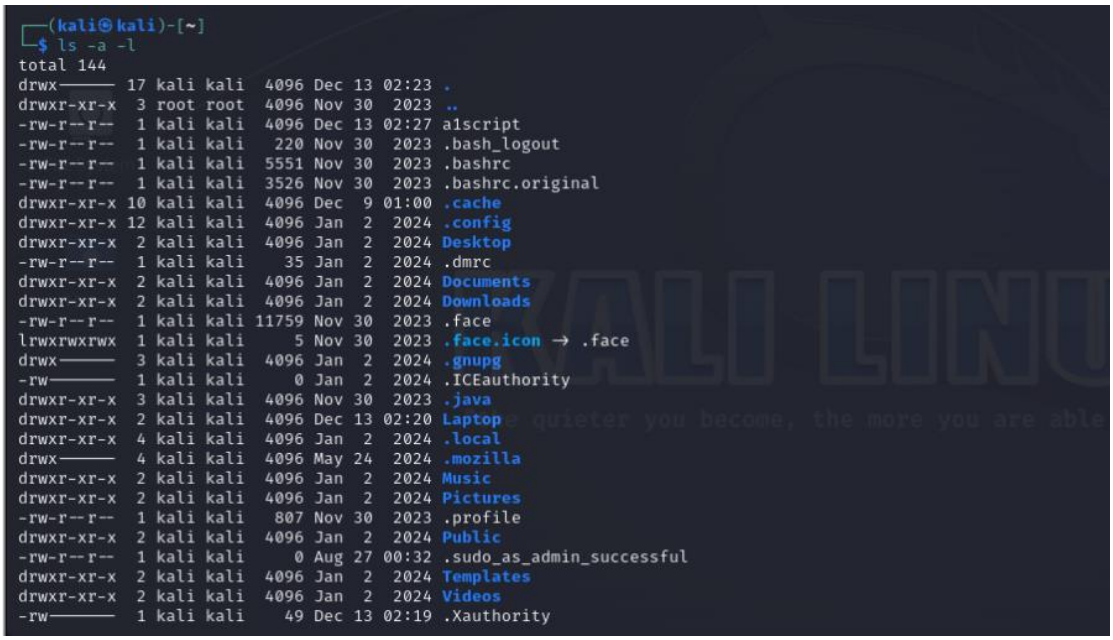

Figure 8: Details of files in current directory

4.7 What's the difference?

The command 'ls' displays the visible files only whereas the command 'ls -a' displays all the files including hidden files also and the command 'ls -a -l' displays all the files (including hidden files) with their file permission, size, owners and modification times.

4.8 cat /etc/passwd

This command shows the contents of the /etc/passwd file like user account details including usernames, UIDs and home directories.

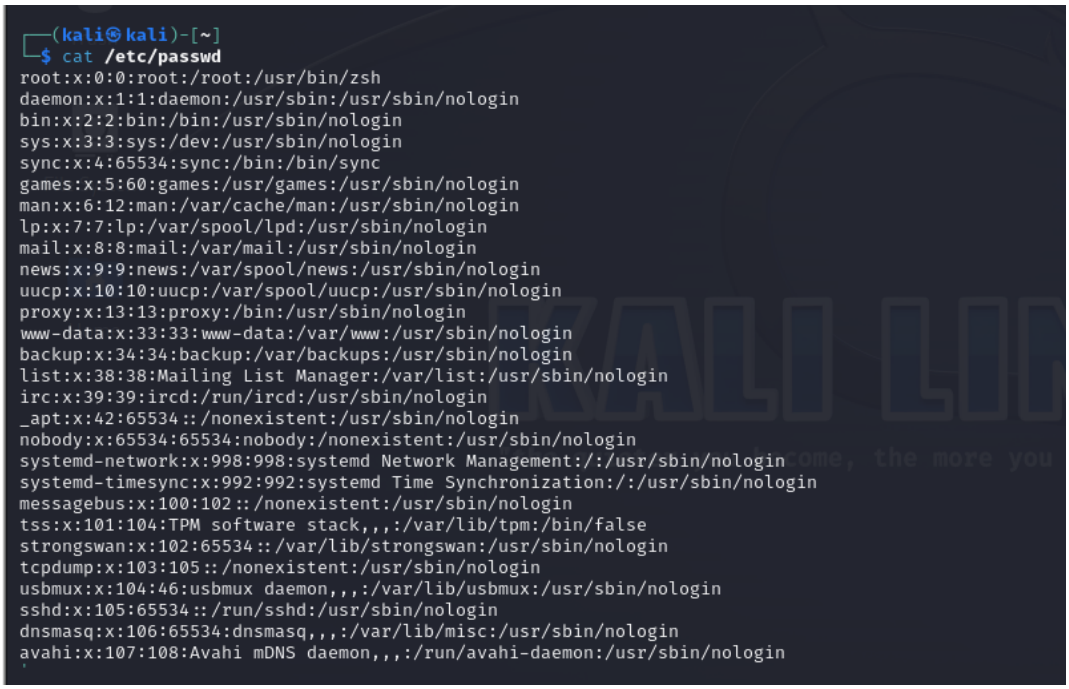

Figure 9: Contents of /etc/passwd

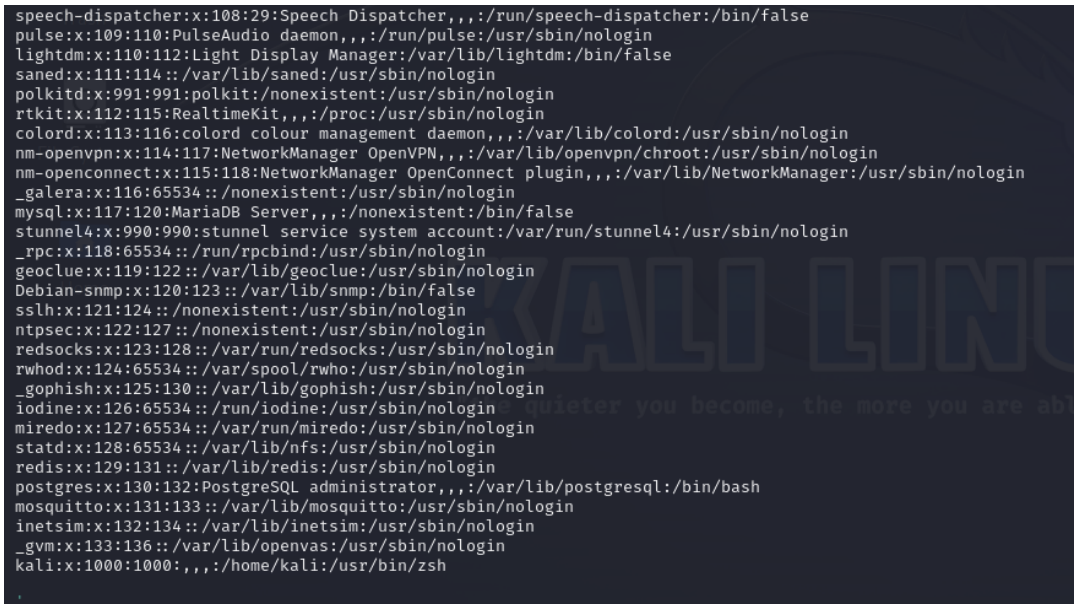

Figure 10: Contents of /etc/passwd

4.9 echo "This is a one-line file" > test1

The ‘echo’ command is used to create a single-line file. The command mentioned above writes the text “This is a one-line file” in the file test. If the file has any other content, the content will be overwritten.

Figure 11: Creating one line file

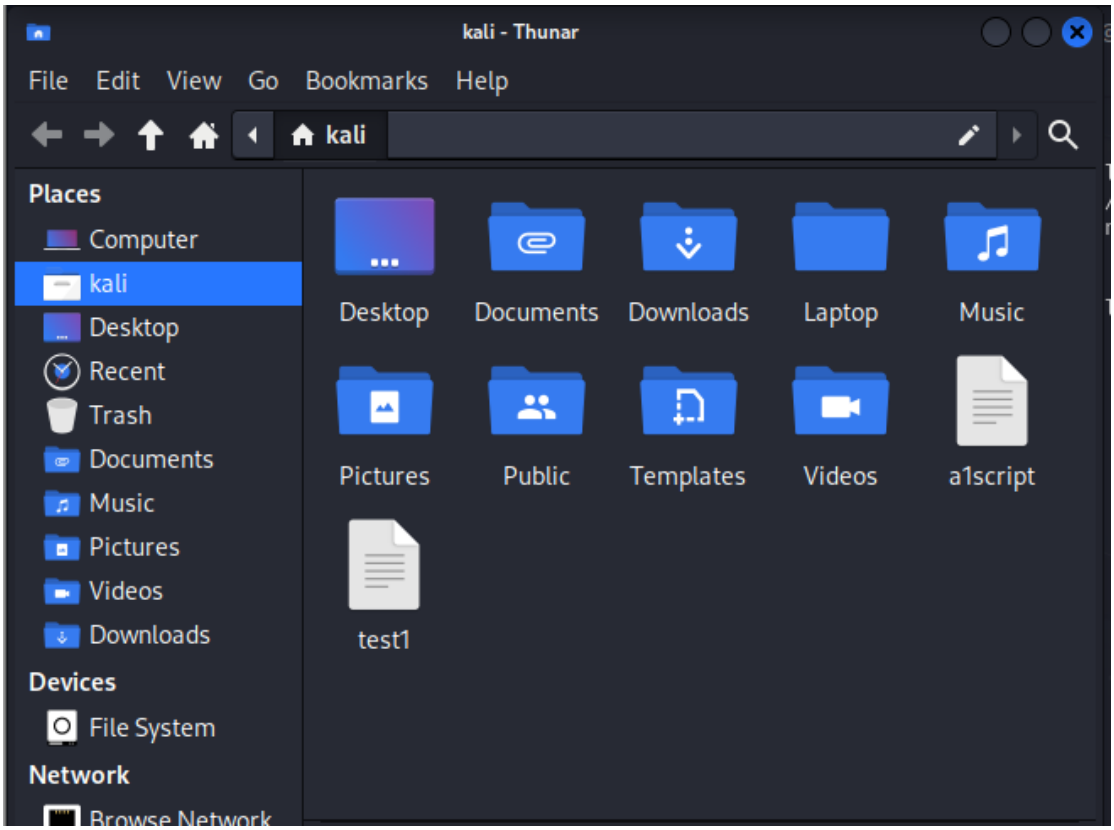

Figure 12: test1 file created

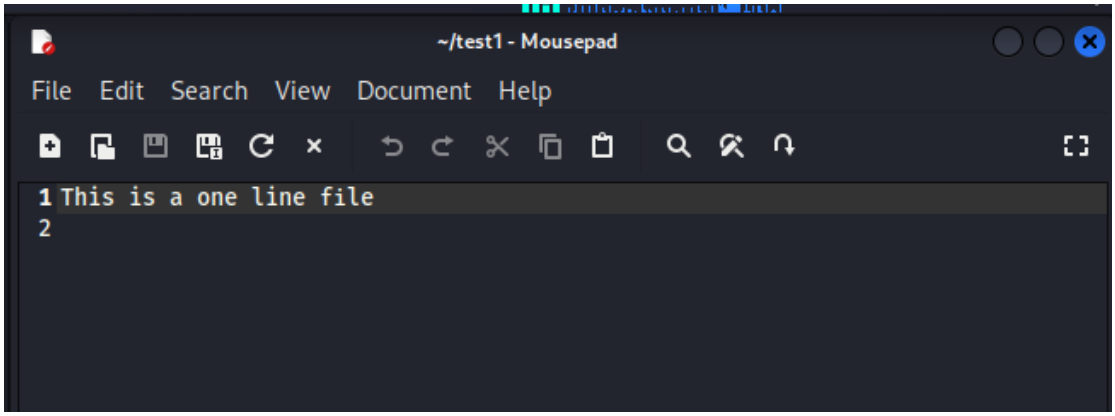

Figure 13: Contents of test1 file

4.10 Creating another file with texts.

cat > test2

This is file two.

It has several lines.

Three lines, in fact.

^D i.e. CTRL-D

The ‘cat’ command is used to input the multi-line content. Here, the file ‘test2’ is created. Then, we wrote multiple lines. We can press ‘Ctrl+D’ to save and exit.

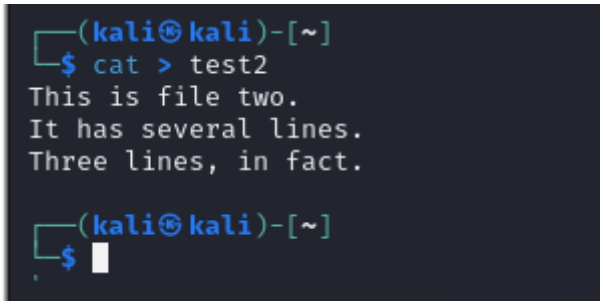

Figure 14: Creating test2 file with text

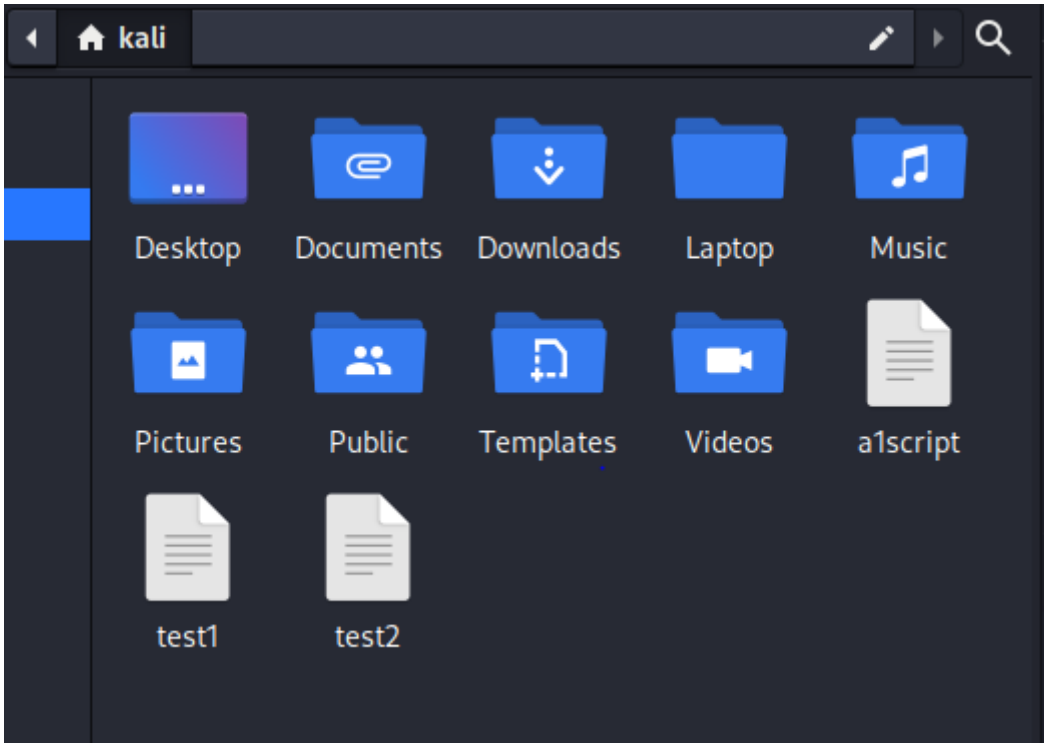

Figure 15: test2 file created

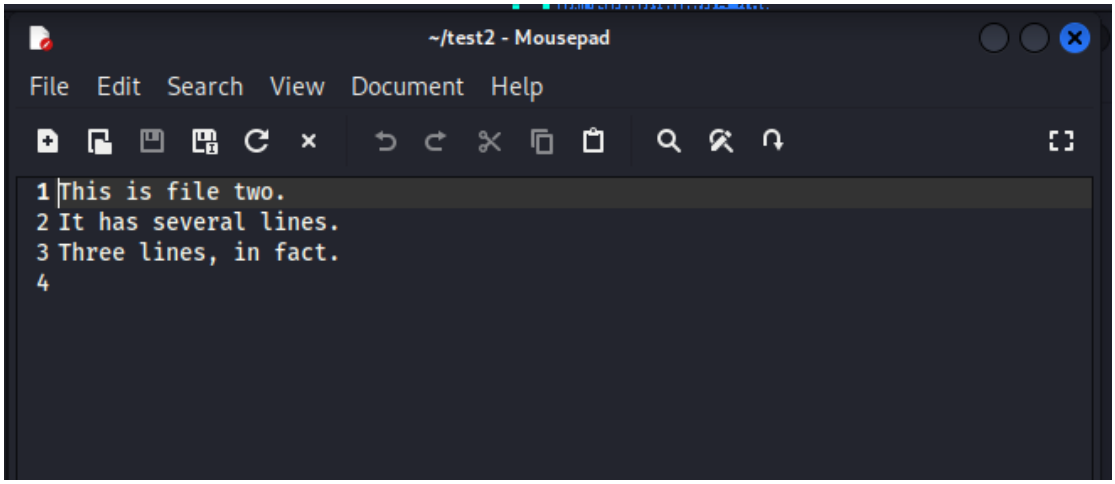

Figure 16: Contents of test2 file

4.11 Combine test1 and test2

The command ‘test2 >> test1’ combines the contents of the files test1, and test2. Then, store it in the file test1. The contents of the file test2 remains as it is.

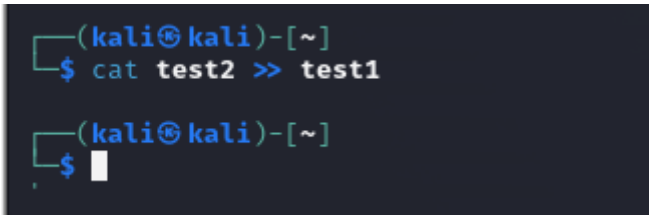

Figure 17: Combining files test1 and test2

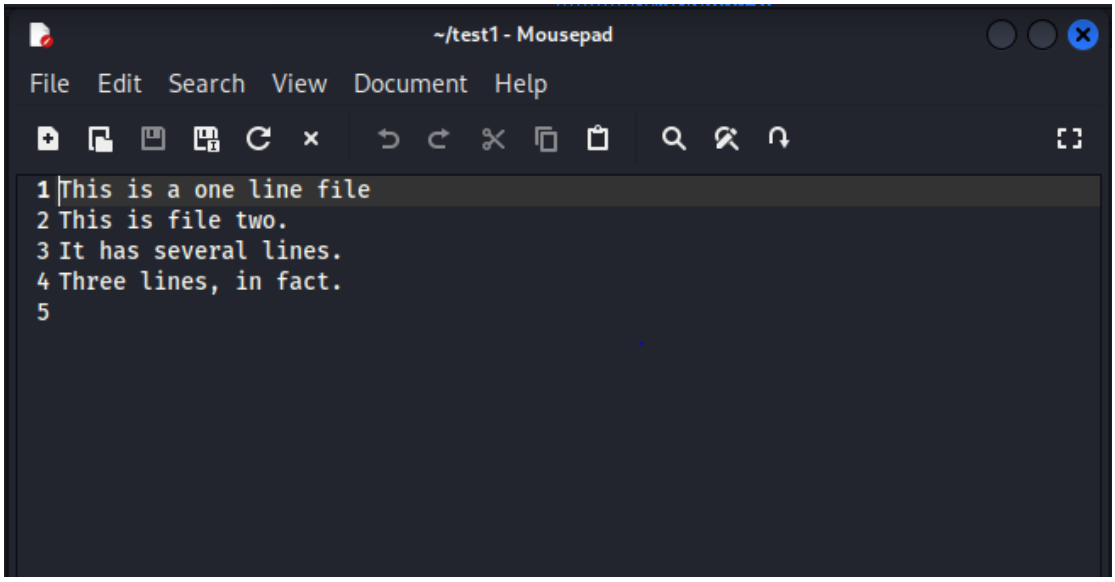

Figure 18: Contents of test1 after combining

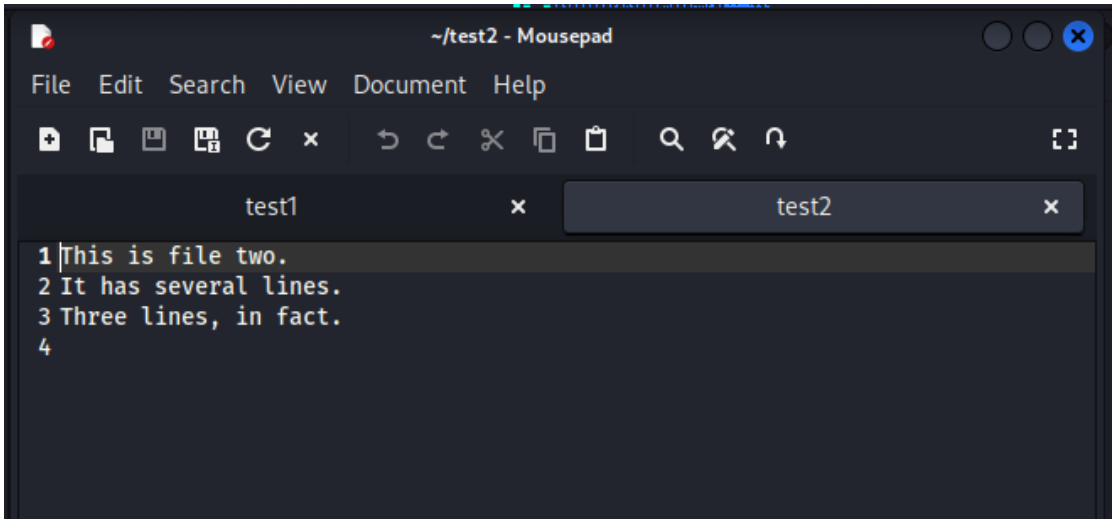

Figure 19: Contents of test2 after combining

4.12 Exit the script

The command ‘exit a1script’ stops recording the terminal activities.

Figure 20: Ending the recording of terminal activities

The recorded script ‘a1script’ can be viewed again by opening the file again later when needed, by using the command ‘cat a1script’. A part of it is shown in the picture below:

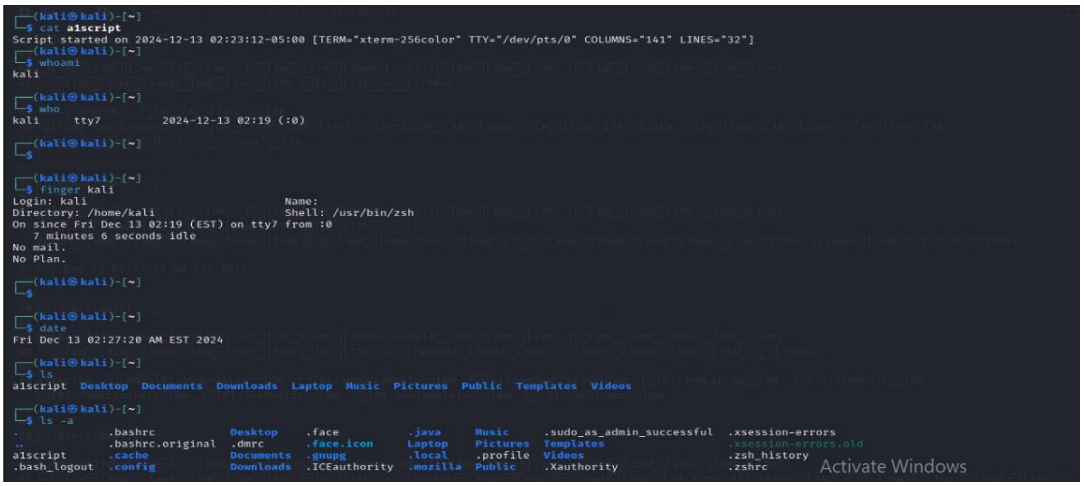

Figure 21: Recorded content in a1script (1)

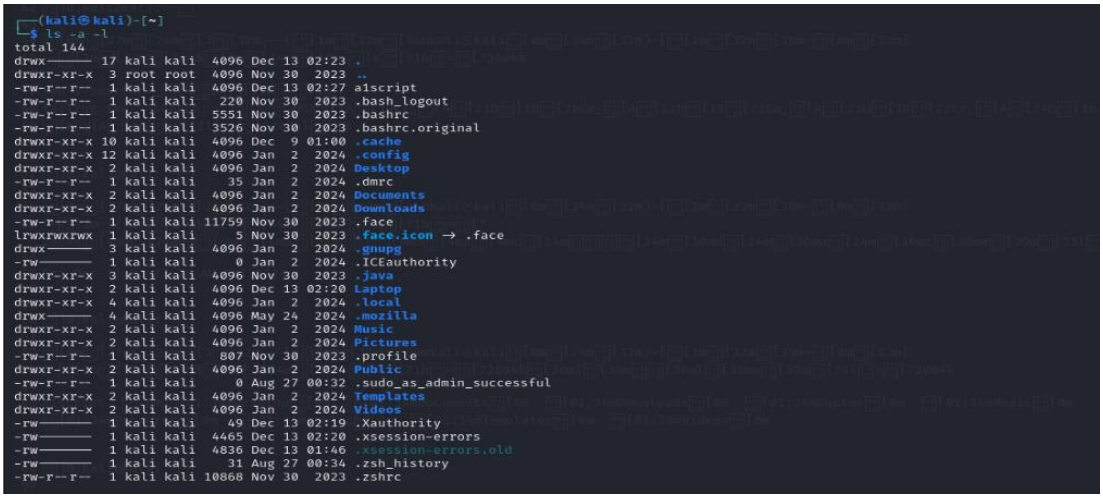

Figure 22: Recorded content in a1script (2)

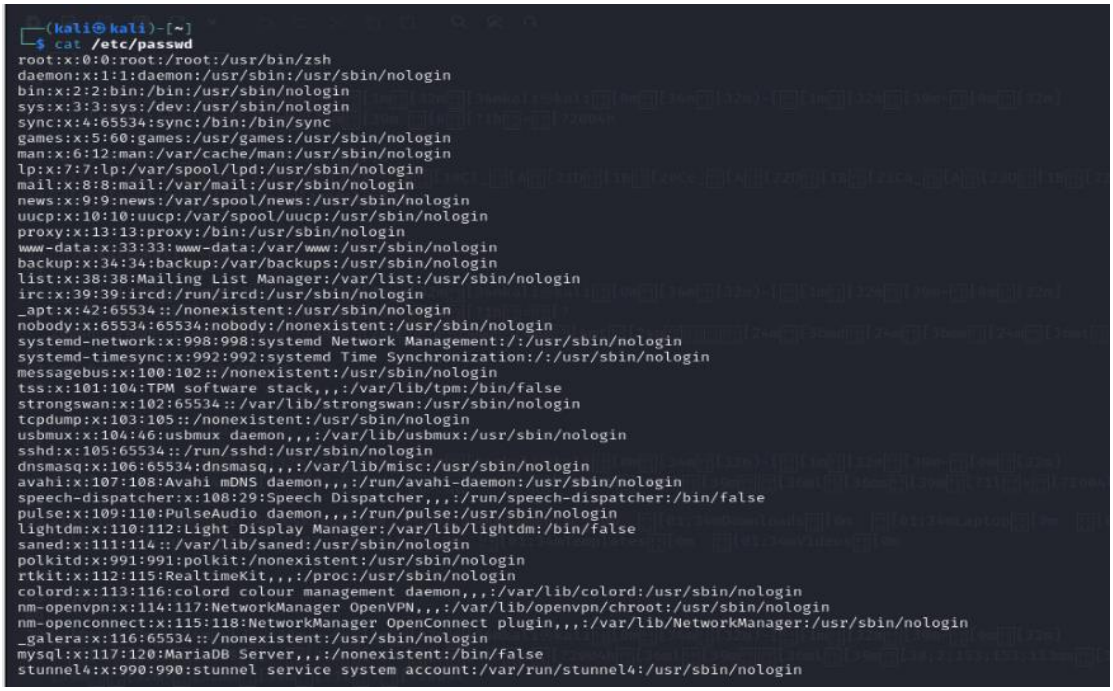

Figure 23: Recorded content in a1script (3)

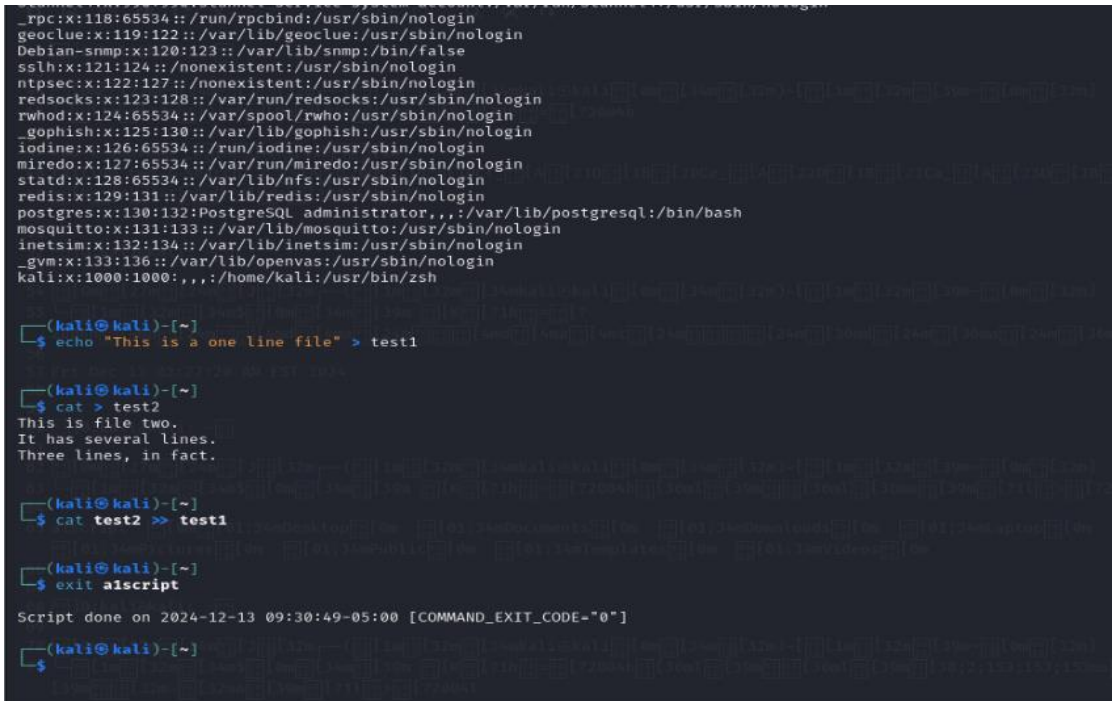

Figure 24: Recorded content in a1script (4)

5 Conclusion

This lab provides an introduction to fundamental Linux commands and their practical applications in managing files, directories, and system information. These commands are essential building blocks for anyone working with Linux-based systems, as they enable us to interact with the operating system efficiently. By mastering commands such as whoami, ls, and cat, we can perform essential tasks like identifying system users, organizing files, and manipulating content.