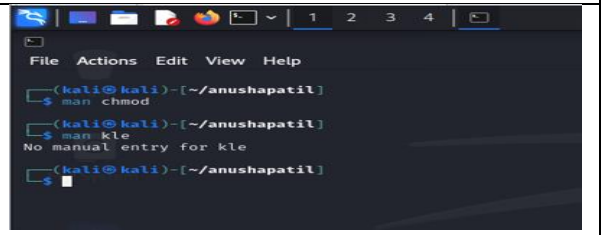
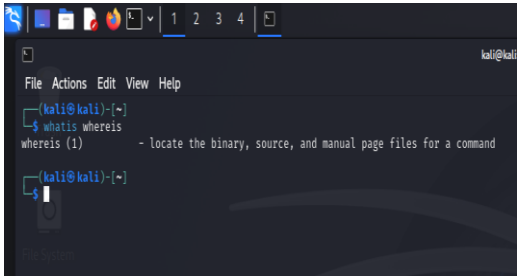
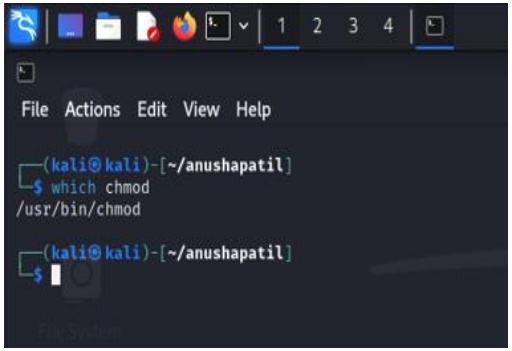
Topic Name:

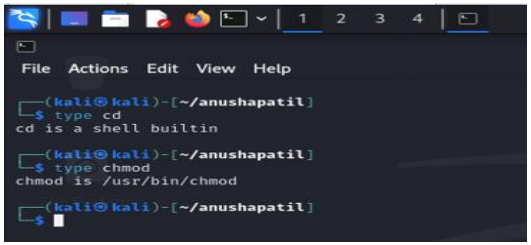
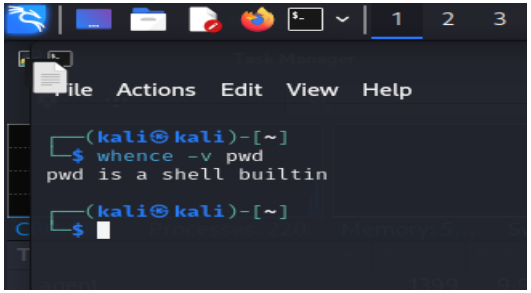
The main aim of this lab session is to provide hands-on experience on

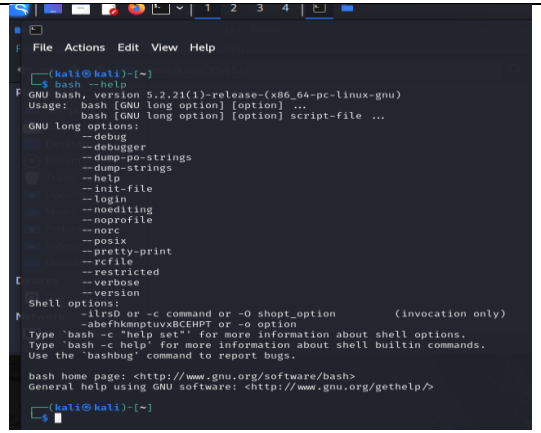
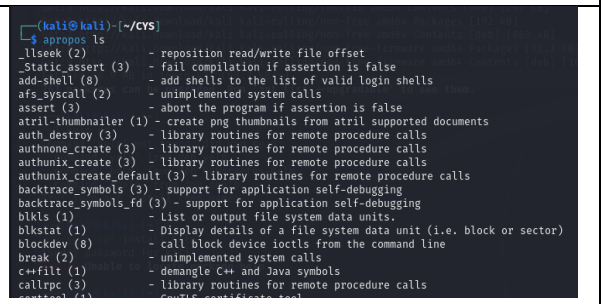
- Getting Help
- Basic Commands
- Navigation
- File System
- simple shell script

1. Getting Help

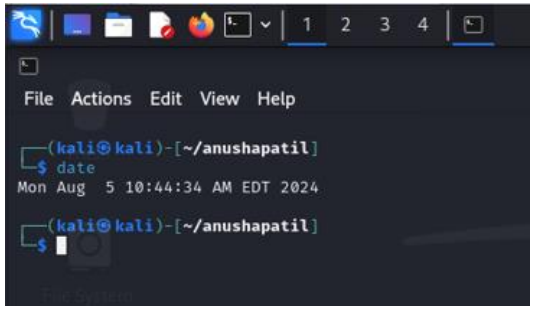
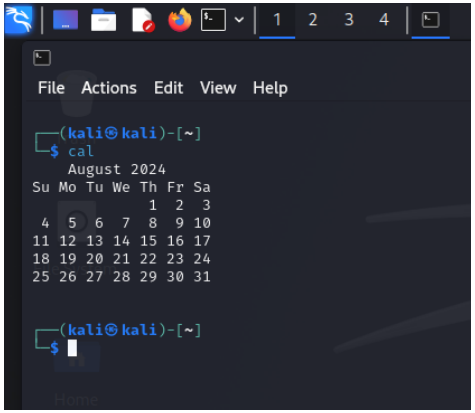
Task	Command Name	Syntax	Example	Screenshots
To get manual page for the known command	man	man <command>	man chmod	
To get manual page for the unknown command	man	man <command>	man kle	

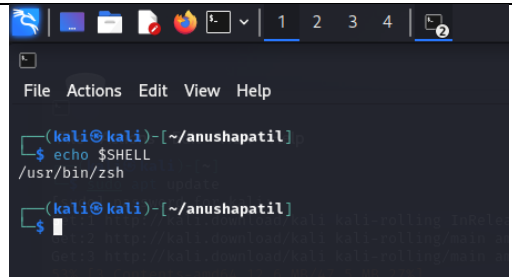
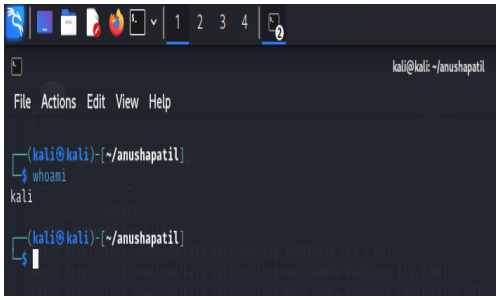
To know the source file binary	whatis whereis	whatis whereis	whatis whereis	
To know the path of the command	which	which <command>	which chmod	

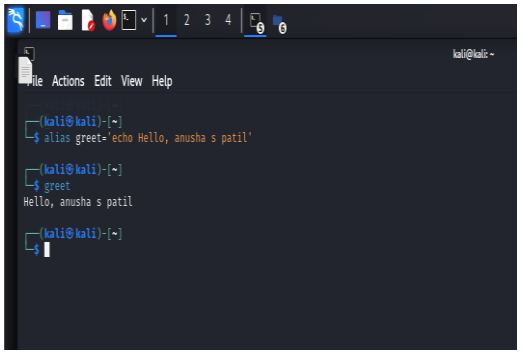
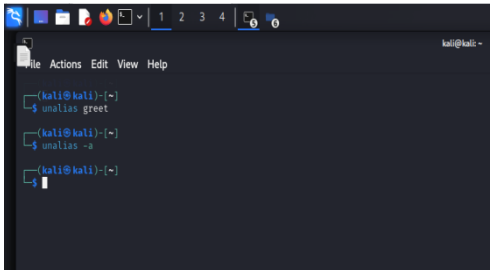
To know the command is external or internal	type	type <command>	type cd type chmod	
To get help for the internal command	whence	whence <command>	whence –v cd	

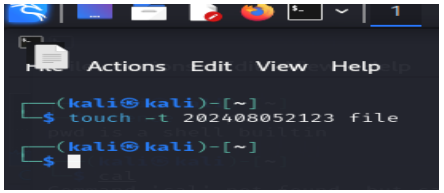
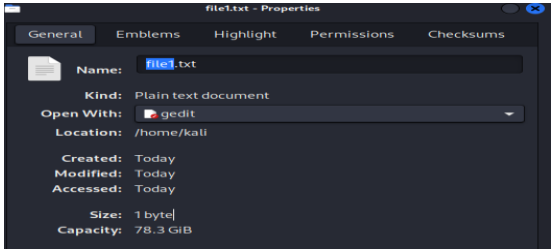
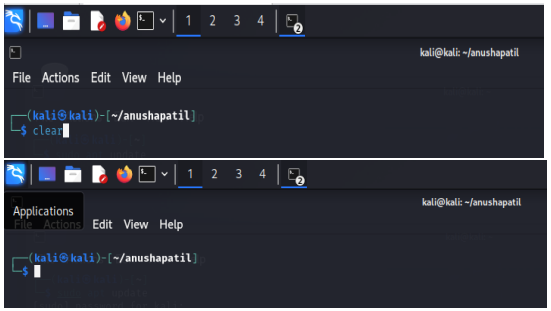
To list out bash commands	help	bash --help	bash --help	
To know the usage of the command	apropos	apropos <command>	apropos ls	

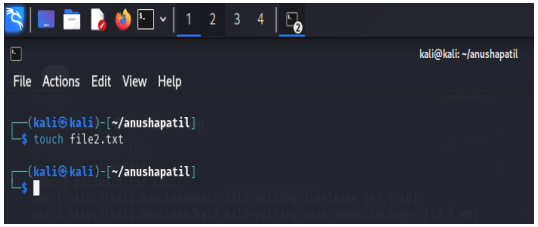
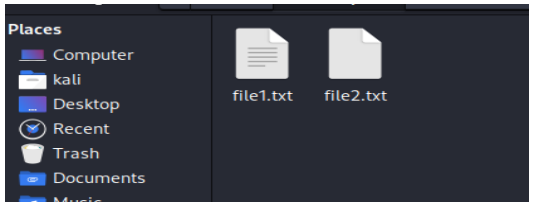
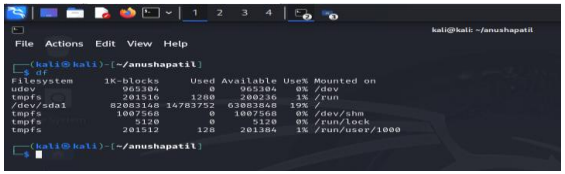
2. Basic Commands

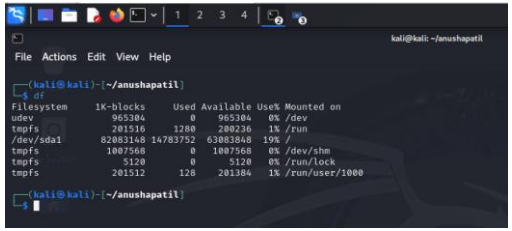
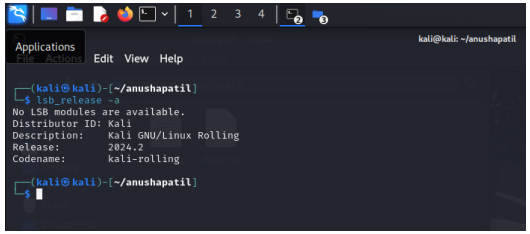
Task	Command Name	Syntax	Example	Screenshots
To know today's date	date	date	date	
To print calendar	cal	cal	cal	

To print kernel version	uname -r or cat /proc/version	uname -r or cat /proc/version	uname -r or cat /proc/version	
To print default shell	echo $SHELL	echo $SHELL	echo $SHELL	
To print currently logged in user	whoami	whoami	whoami	

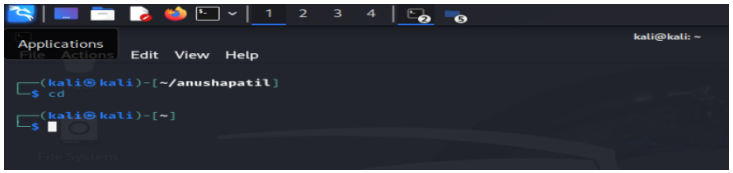
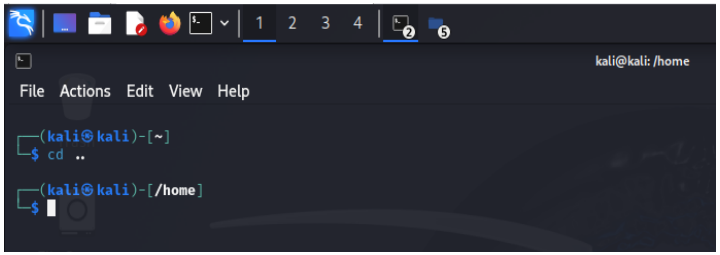
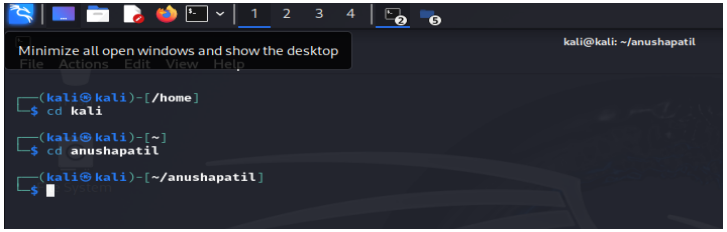
To create shortcut for command	alias	alias shortcut_name=command	alias greet = ‘echo Hello, anusha s patil’	
To delete shortcut	unalias	unalias shortcut_name	unalias greet unalias -a	

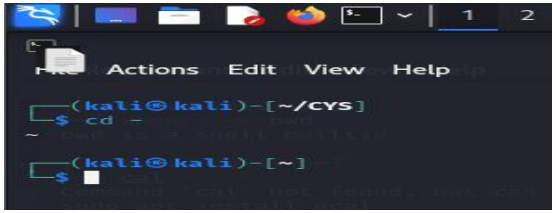
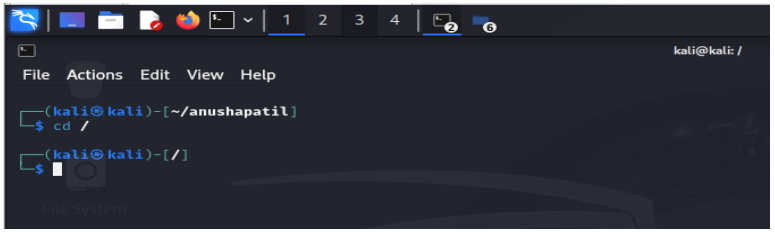
To change the timestamp of the file	touch	touch –t <yearmonthdaytime>	touch -t 202308052223 d1	 
To clear the screen	clear	clear	clear	

To create empty files	touch	touch.filename	touch d1.txt	 
To know disk usage	df	df	df	

To know free space in the system	df	df	df	
To know about the linux release	lsb_release -a	lsb_release -a	lsb_release -a	

3. Navigation

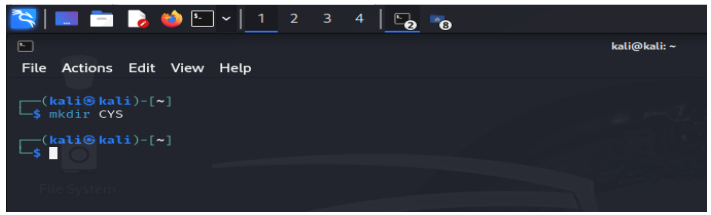
Task	Command	Syntax	Screenshots
To navigate home directory	cd	cd	
To navigate to the parent directory	cd ..	cd ..	
To navigate to the child directory	cd <directory_name>	cd <directory_name>	

Alternate command to cd	pushd	pushd <directory_name>	
To go back to the previous directory	cd -	cd -	
To go to the root directory	cd /	cd /	

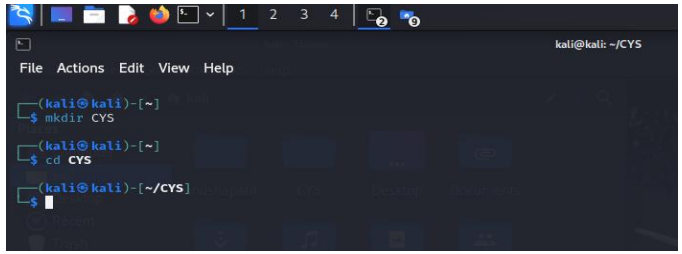
4. File System

Task	Syntax	Command
How to identify the file system		

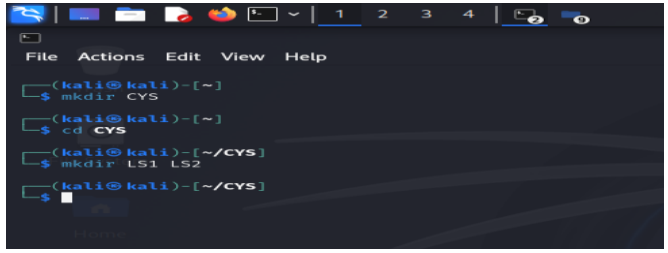
a. Create Folder “CYS”



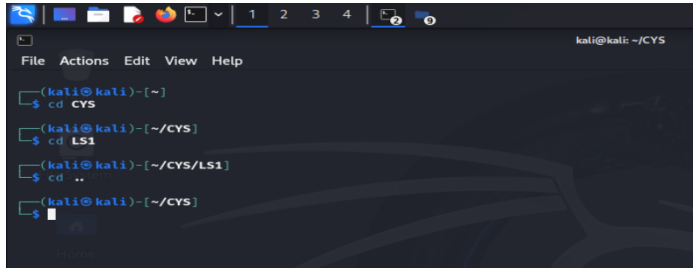
b. Navigate to CYS



c. Create folder LS1 and LS2 under CYS

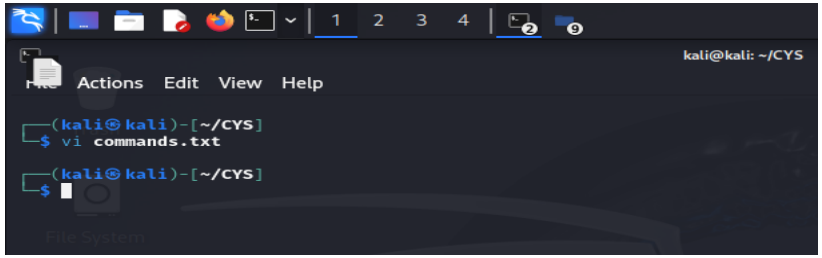


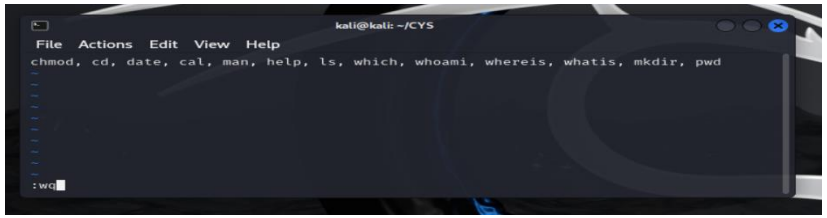
d. Go back to CYS



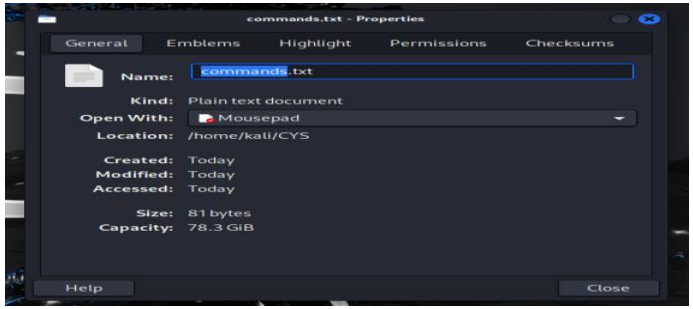
e. Working with Files

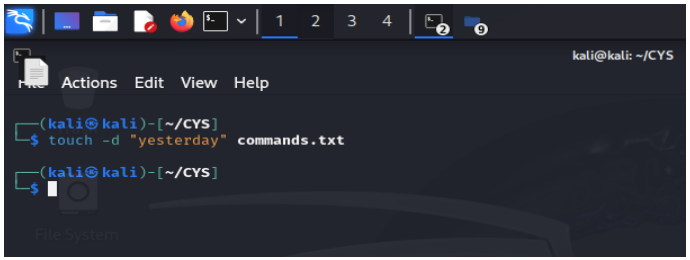
i. Add commands which you learnt during lab session in the file commands.txt

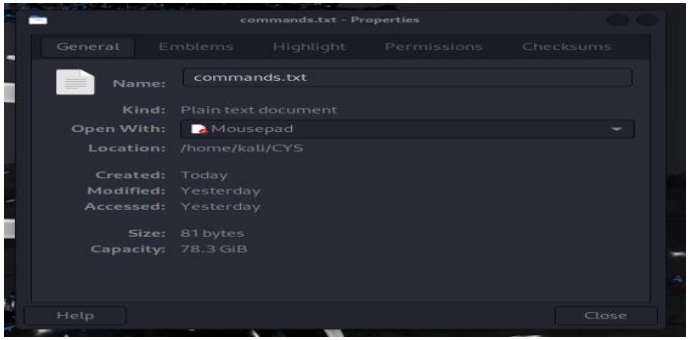




ii. Change the timestamp of the file to yesterday

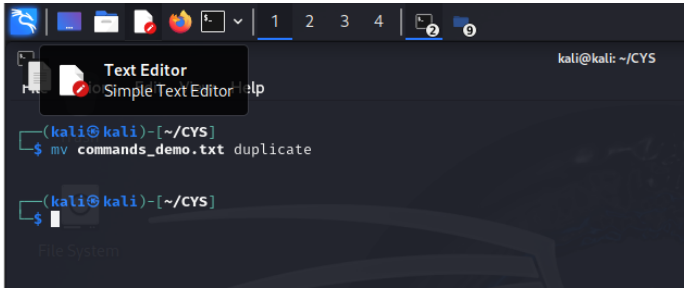


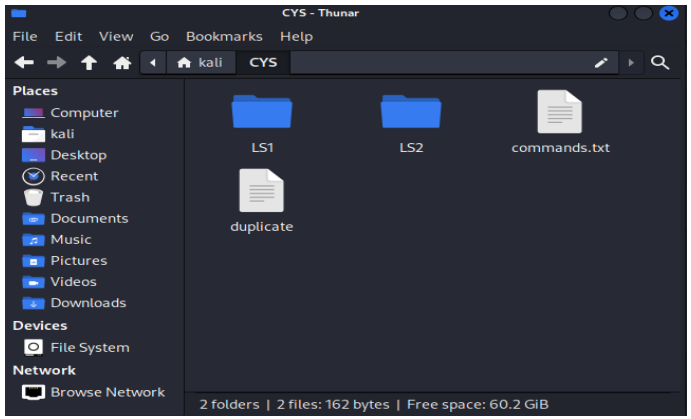




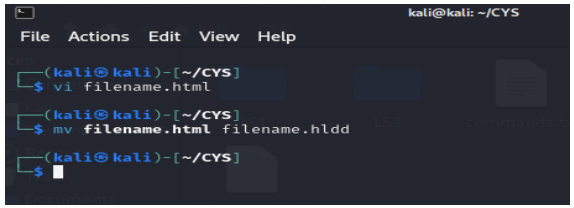
iii. Copy the contents from the file commands.txt to commands_demo.txt

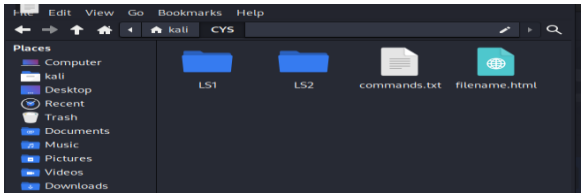
iv. Rename the file commands_demo.txt to duplicate

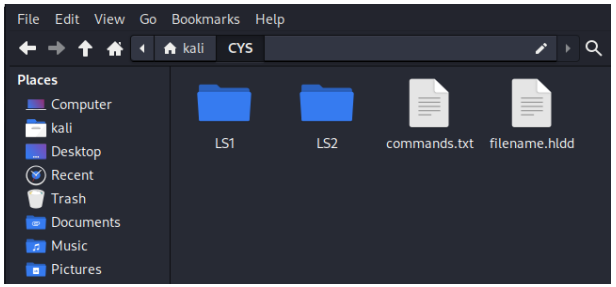




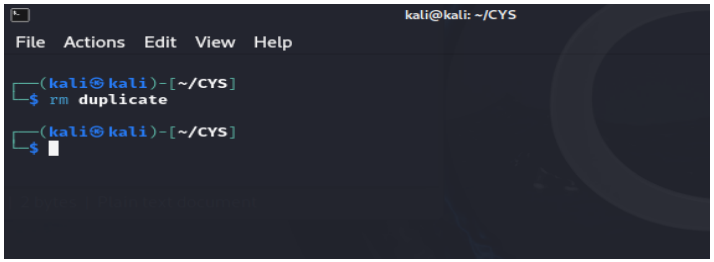
v. Rename all .html to .hldd



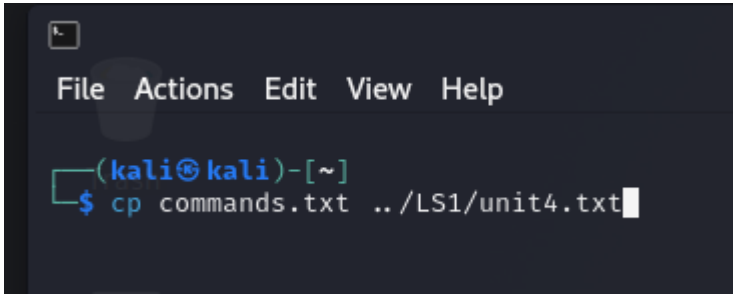




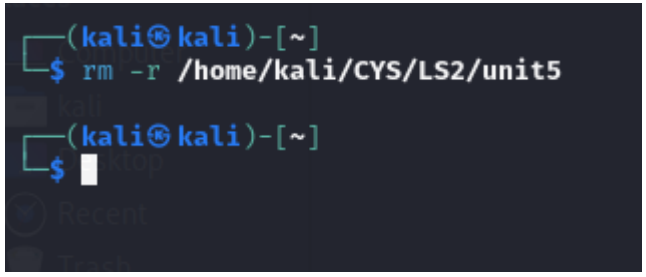
vi. Delete the file duplicate



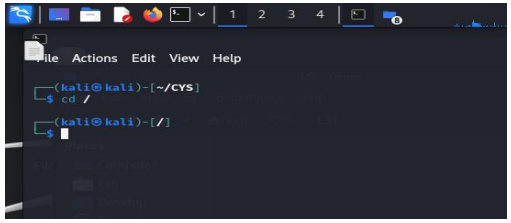
vii. Copy the contents commands.txt to unit4 and unit5 (using relative path)



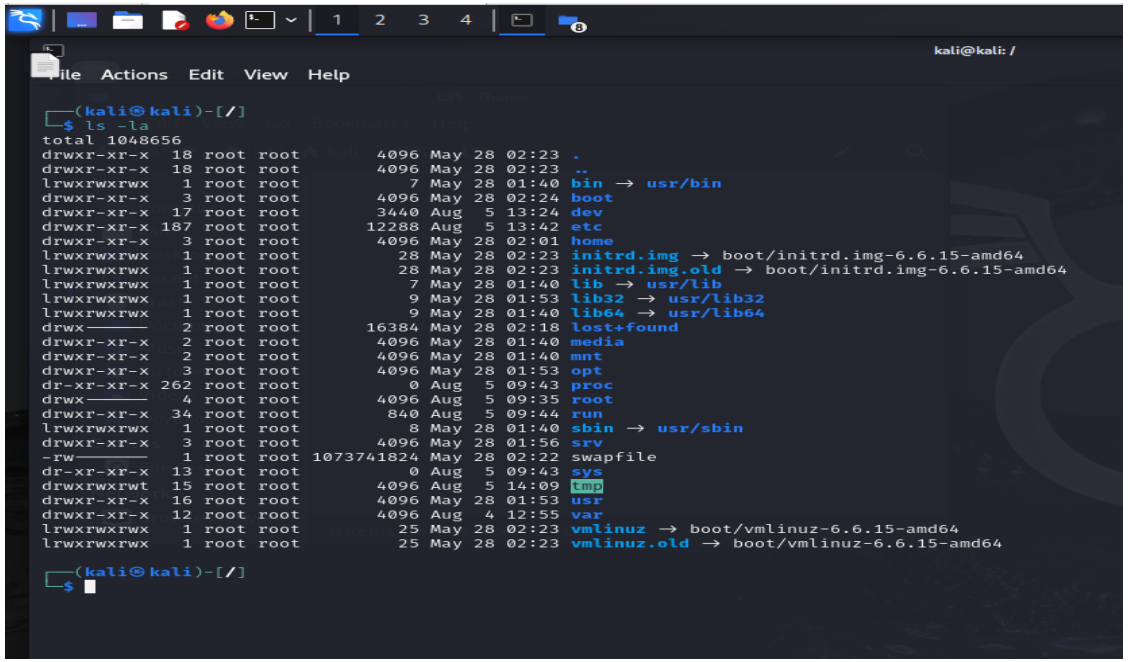
viii. Delete the contents from unit5 (using absolute path)



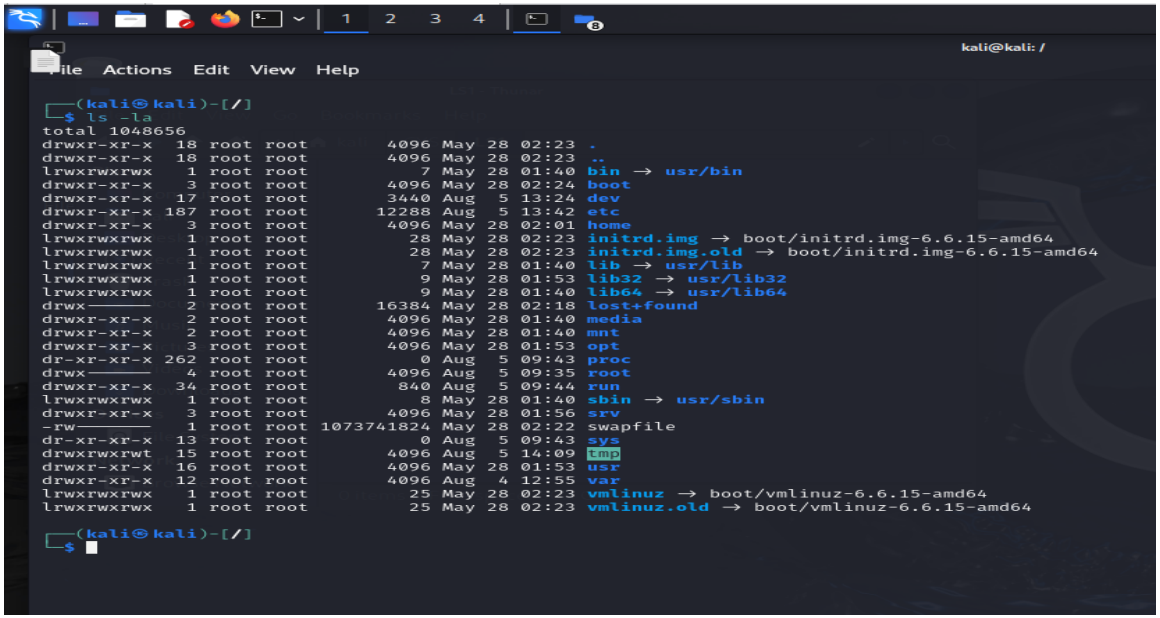
ix. Navigate to root



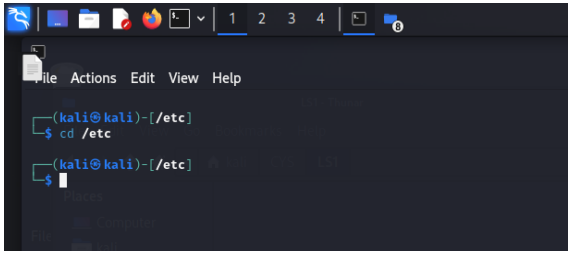
x. List all the files under root



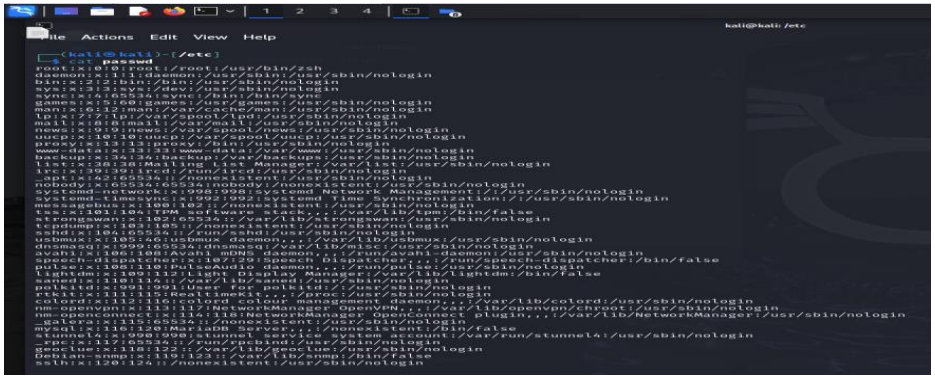
xi. Explore all the folders (Do not delete any folder)



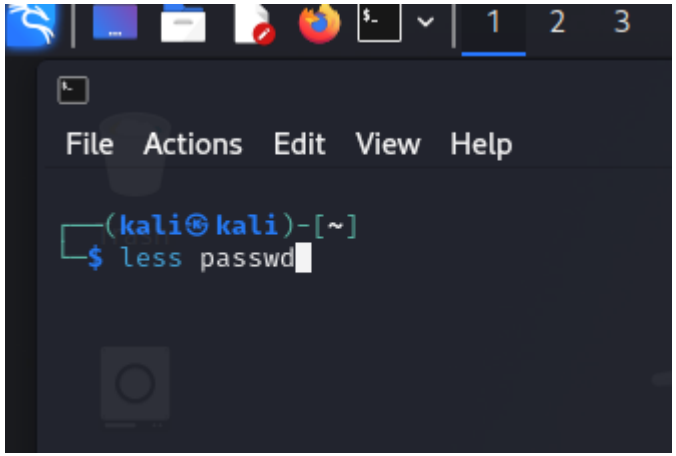
xii. Navigate to /etc/passwd



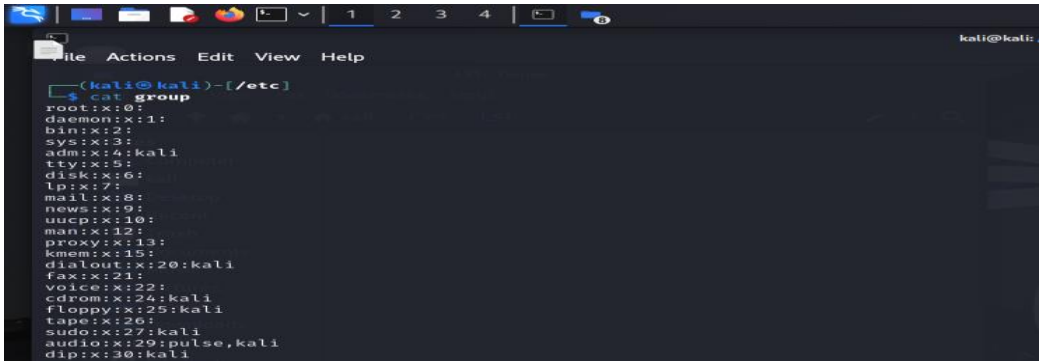
xiii. Open the file passwd



xiv. Explore the file passwd



xv. Navigate to /etc/group and explore



f. Difference between

i. GUI vs. CLI

GUI	CLI
User interact with the system with graphical elements such as icons, menus, images, etc.	Users interact with the system using various commands in the command prompt window.
GUI requires various input devices to interact with the system, such as a keyboard, mouse, etc	CLI requires only a keyboard to enter commands.
GUI is relatively simpler to use and is more user- friendly.	CLI is not very user-friendly because the user needs to memorize a lot of commands.
GUI is slower and prioritize ease of use over speed.	CLI is relatively faster and excels in efficiency for professional users.
GUI consumes more RAM and processing power.	CLI consumes less RAM and processing power.

ii. man vs info

man	info
Typically provides detailed information on command usage, options, examples, and related commands.	Often provides more comprehensive and narrative-style documentation than man pages, with the ability to include more context, cross-references, and hierarchical structuring.
Displays the manual page for a command or function.	Displays more extensive documentation formatted using the Texinfo system.
Manual pages are divided into sections like NAME, SYNOPSIS, DESCRIPTION, OPTIONS, EXAMPLES, SEE ALSO, etc.	Organized into nodes and sections, allowing navigation through the document using links and menus.
Each man page is usually specific to a single command or function.	Can cover broader topics, sometimes encompassing multiple commands or concepts in a more integrated way.
Syntax: man <command> Ex: man ls	Syntax: info <command> Ex: info ls

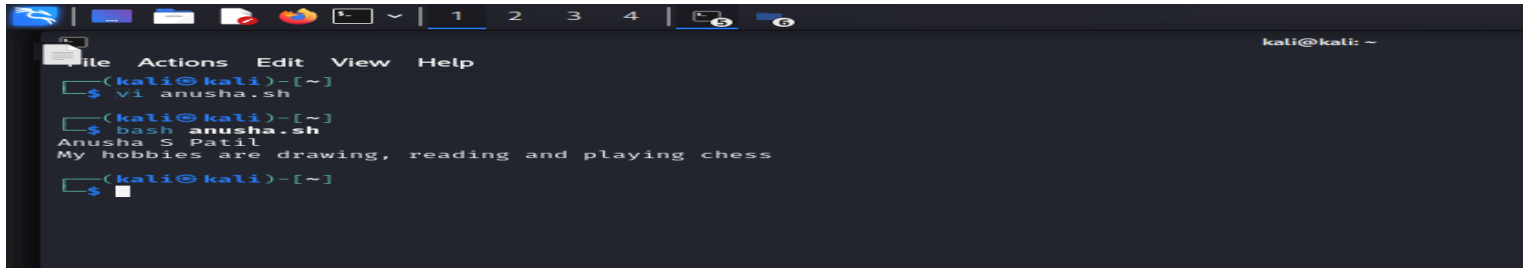
iii. which vs. whereis

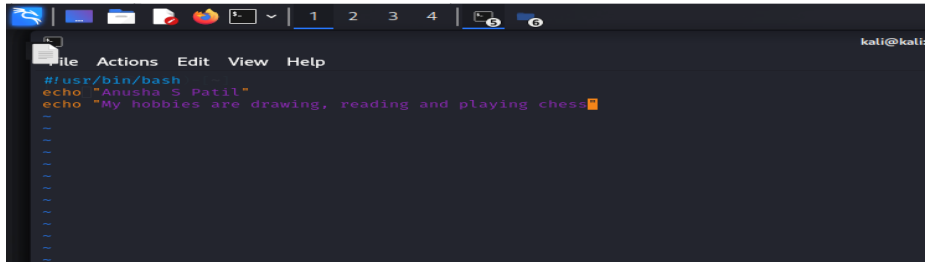
which	whereis
Identifies the location of executables in the user's path.	'whereis' searches predefined directories and can find binaries, sources, and man pages.
'which' provides the path to the executable only.	'whereis' provides paths to the binary, source code, and manual page files.
Use 'which' to find out which executable will run when a command is entered.	Use 'whereis' to locate all related files (binary, source, man page) for a command.
Syntax: which <command> Ex: which ls	Syntax: whereis <command> Ex: whereis ls

iv. Terminal vs shell

terminal	shell
A terminal is an interface that allows users to interact with the computer.	A shell is an interface between the kernel and the software.
Focuses on providing a user interface for text input and output.	Excutes commands entered by user, manages the execution of programs, and provides scripting capabilities.
Ex: GNOME Terminal, xterm, Console, Windows Terminal	Ex: bash(Bourne Again Shell), zsh(Z Shell), sh(Bourne Shell), csh(C shell), fish(Friendly Interactive Shell)

g. Write a simple shell script to print your name and your hobbies!





Interesting commands to Explore

Banner

History

Note: Include your screenshots

Evaluation :

Marks : 10 (Deadline : 4 – Originality :3 – Completeness :3)

Deadline: 06.08.2024

"All our dreams can come true if we have the courage to pursue them."

- Walt Disney