

## Topic Name:

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

- Explore file structure
- File management commands
- Absolute path and Relative path
- Globbing
- Scripting

## File Structure

1. Under the root directory there are many files like

/bin , /boot , /dev , /etc , ....

Find out the importance of those files

Example : /etc is for user account details

S.No	Directory	Usage
1	/	Root directory
2	/bin	Binary files ede
3	/boot	Contains all the files required for the linux boot process.
4	/dev	Special device files for all the devices.
5	/etc	Houses configuration files for system services and daemons.
6	/home	Personal workspace for each user.
7	/lib	Shared libraray images and kernel modules that are essential for booting the system and running commands in the root filesystem.
8	/proc	A virtual file system that providens information about the systems kernel and process.
9	/sbin	System administatration commands and binaries that are primarily used by the system administrator.
10	/tmp	A temporary storage locations for files and directories that are created and accessed during system runtime.
11	/var	A standard directory that stores variable files,or filles that change frequently while the system is running.QVV
12		
13		

2. In Linux, there are three different files

Regular file

Directory

Special file

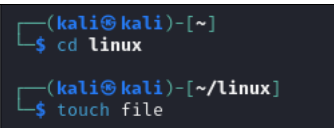
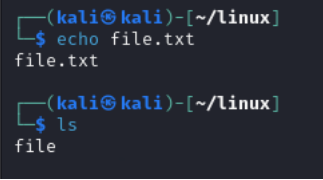
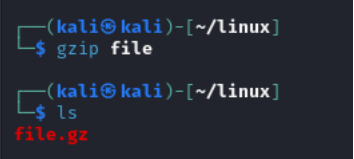
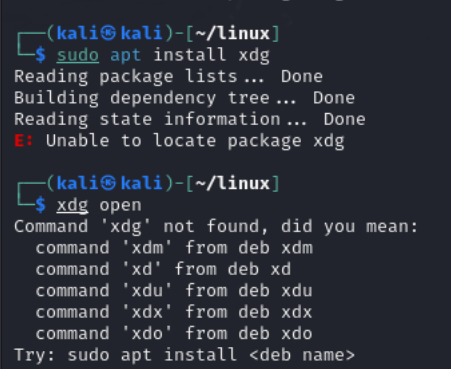
Block file

Character file

Socket file

Pipe file

Fill the below table:

File Type	Represented by (Hint ls)	Role	How to create	How to check	Location	Screen shot
Regular file	‘-‘	Stores data such as text	‘Touch filename’	NA	Anywhere in file system.	 <pre> (kali㉿kali)-[~] \$ cd linux (kali㉿kali)-[~/linux] \$ touch file </pre>
- Text file	.txt,.html,.csv.	Stores human readable text	Text	NA	Anywhere in file system.	 <pre> (kali㉿kali)-[~/linux] \$ echo file.txt file.txt (kali㉿kali)-[~/linux] \$ ls file </pre>
- Compressed file	.zip,.rar.	Stores data in compressed files	Compression utilities	NA	Anywhere in file system	 <pre> (kali㉿kali)-[~/linux] \$ gzip file (kali㉿kali)-[~/linux] \$ ls file.gz </pre>
- Image	.jpg,.png,.gif.	Stores visual data	NA	NA	Anywhere in file system	 <pre> (kali㉿kali)-[~/linux] \$ sudo apt install xdg Reading package lists... Done Building dependency tree... Done Reading state information... Done E: Unable to locate package xdg  (kali㉿kali)-[~/linux] \$ xdg open Command 'xdg' not found, did you mean:   command 'xdm' from deb xdm   command 'xd' from deb xd   command 'xdu' from deb xdu   command 'xdx' from deb xdx   command 'xdo' from deb xdo Try: sudo apt install &lt;deb name&gt; </pre>



pipe file		Interprocess communication	NA	NA	System level	<pre> (kali@kali)~/nithesh \$ mkfifo hacker  (kali@kali)~/nithesh \$ ls CLI example.txt file file_name filename hacker  (kali@kali)~/nithesh \$ ls -l total 16 drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI -rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt prw-r--r-- 1 kali kali 0 Aug 9 14:08 file -rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name -rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_fold prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz -rw-r--r-- 1 kali kali 0 Aug 6 12:54 time </pre>
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3. Globbing : **Globbing** is a pattern matching mechanism used to specify a set of filenames. It's particularly useful for working with multiple files at once.

4. Go back to CYS

```

(kali@kali)~/nithesh
PS> cd cys

```

5. Create multiple subdirectories using single command

```

(kali@kali)~/nithesh/cys
PS> touch file1 file2 file3

```

6. LS

```

(kali@kali)~/nithesh/cys
PS> ls
unit1 unit2 unit3

```

7. Unit1

8. command

9. Glob

```

(kali@kali)~/nithesh/cys
PS> bash unit[1-3]
unit1: unit1: Is a directory

```

10. Unit2

11. command

12. Grep

```

(kali@kali)~/nithesh/cys
PS> grep "pattern" unit2
/usr/bin/grep: unit2: Is a directory

```

13. Unit3

14. Constructs

```

(kali@kali)~/nithesh/cys
PS> cd.. Unit3

(kali@kali)~/nithesh
PS> echo "Hello, World!"
Hello, World!

```

- 15.

- 16.

17. Navigate to unit1/glob

```

(kali@kali)~/nithesh/cys
PS> cd unit1

(kali@kali)~/nithesh/cys/unit1
PS> cd unit1/glob

```

18. Create the following files :

- 19. Commands.txt
- 20. Commands1.txt
- 21. Commands2.txt
- 22. page1.html
- 23. page2.html
- 24. page3.html
- 25. file1
- 26. file10
- 27. file11
- 28. file2
- 29. File2
- 30. File3
- 31. file33
- 32. fileAB
- 33. filea
- 34. fileA
- 35. fileAAA
- 36. file(
- 37. file 2

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> touch Commands.txt Commands1.txt Commands2.txt page1.html page2.html page3.html file1 file10 file11 file2 File2 File3 f
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls
Commands1.txt  Commands2.txt  Commands.txt  'file('  file1  file10  file11  'file 2'  file2  File2  File3  file33
```

- 38.
- 39. List all files starting with file
- 40. List all files starting with File

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls File*
'file('  file1  file10  file11  'file 2'  file2  File2  File3  file33  filea  fileA  fileAAA  fileAB
```

- 41. List all files starting with file and ending in a number.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls file*[0-9]
file1  file10  file11  'file 2'  file2  File2  File3  file33
```

- 42. List all files starting with file and ending with a letter

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls file*[a-zA-Z]
filea  fileA  fileAAA  fileAB
```

- 43. List all files starting with File and having a digit as fifth character.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls File???[0-9]*
/usr/bin/ls: cannot access 'File???[0-9]*': No such file or directory
```

- 44. List all files starting with File and having a digit as fifth character and nothing else.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls File???[0-9]
/usr/bin/ls: cannot access 'File???[0-9]': No such file or directory
```

- 45. List (with ls) all files starting with a letter and ending in a number.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls [a-zA-Z]*[0-9]
file1  file10  file11  'file 2'  file2  File2  File3  file33
```

- 46. List (with ls) all files that have exactly five characters.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls ?????
'file(' file1 file2 File2 File3 filea fileA
```

47. List (with ls) all files that start with f or F and end with 3 or A.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls [fF]*[3A]
File3 file33 filea fileA fileAAA
```

48. List (with ls) all files that start with f have i or R as second character and end in a number.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls f[iR]*[0-9]
file1 file10 file11 'file 2' file2 File2 File3 file33
```

49. List all files that do not start with the letter F.

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls | grep -v '^F'
Commands1.txt
Commands2.txt
Commands.txt
file(
file1
file10
file11
file 2
file2
file33
filea
fileA
fileAAA
fileAB
page1.html
page2.html
page3.html
```

50. Remove all the \*.html

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> rm *.html

(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> rm *.html
/usr/bin/rm: cannot remove '*.html': No such file or directory

(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> ls
Commands1.txt Commands2.txt Commands.txt 'file(' file1 file10 file11 'file 2' file2 File2 File3 file33
```

51. Rename \*.txt to \*.json

52.

a. Go back to CYS

```
(kali@kali)-[/home/kali/nithesh/cys/unit1]
PS> cd ..

(kali@kali)-[/home/kali/nithesh/cys]
```

b. Create multiple subdirectories using single command

```
LS
Unit1
command
glob
Unit2
command
grep
Unit3
constructs
```

c. Navigate to unit1/glob

d. Create the following files :

```
Commands.txt
Commands1.txt
Commands2.txt
page1.html
page2.html
page3.html
file1
file10
file11
file2
File2
File3
file33
fileAB
filea
fileA
fileAAA
file(
file 2
```

- i. List all files starting with file
- ii. List all files starting with File
- iii. List all files starting with file and ending in a number.
- iv. List all files starting with file and ending with a letter
- v. List all files starting with File and having a digit as fifth character.
- vi. List all files starting with File and having a digit as fifth character and nothing else.
- vii. List (with ls) all files starting with a letter and ending in a number.
- viii. List (with ls) all files that have exactly five characters.
- ix. List (with ls) all files that start with f or F and end with 3 or A.
- x. List (with ls) all files that start with f have i or R as second character and end in a number.
- xi. List all files that do not start with the letter F.
- xii. Remove all the \*.html
- xiii. Rename \*.txt to \*.json

### 53. Absolute path and relative path

Use rm, mv, cp, ls with absolute path and relative path as per your choice.

```
(kali@kali)-[/home/kali/nithesh]
PS> ls
CLI  cys  example.txt  file  file1  'file[1..3]'  file2  file3  file_name  filename  hacker  hello1  new_folder  nithesh

(kali@kali)-[/home/kali/nithesh]
PS> rm 'file[1..3]'

(kali@kali)-[/home/kali/nithesh]
PS> ls
CLI  cys  example.txt  file  file1  file2  file3  file_name  filename  hacker  hello1  new_folder  nithesh  parent_folder  pipef...
```

### 54. Wildcards

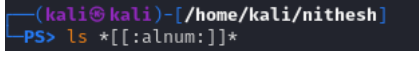
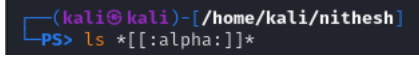
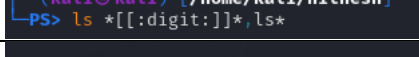
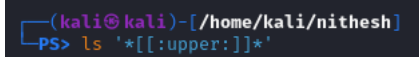

Not ation	Use	Exa mple	Screenshot

*	Matches any number of characters	ls *.txt will list all	<pre>(kali@kali)-[/home/kali] PS&gt; cd nithesh  (kali@kali)-[/home/kali/nithesh] PS&gt; ls CLI  cys  example.txt  file1  file2  file3  file_name  filename  hacker  hel</pre> <pre>(kali@kali)-[/home/kali/nithesh] PS&gt; ls *.txt example.txt</pre>
?	Matches exactly one character	ls file?.txt	<pre>(kali@kali)-[/home/kali/nithesh] PS&gt; ls file? file1  file2  file3</pre>
[ ]	Matches any one character within the brackets	ls file[123].txt	<pre>(kali@kali)-[/home/kali/nithesh] PS&gt; ls file[123] file1  file2  file3</pre>
[! ]	Matches any character that is not a member of the set of characters	ls file[!123].txt	<pre>(kali@kali)-[/home/kali/nithesh] PS&gt; ls file[!123] file1  file2  file3</pre>
{ }	Matches any string within	ls file{1,2,3}	<pre>(kali@kali)-[/home/kali/nithesh/cys] PS&gt; touch file1 file2 file3</pre>



	the brac es		
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#### More on Character class

Notation	Use	Example	Screenshot
[[:alnum:]]	Matches any alphanumeric character	ls *[[[:alnum:]]]*	
[[:alpha:]]	Matches any alphabetic character	ls *[[[:alpha:]]]*	
[[:digit:]]	Matches any digit (0-9)	ls *[[[:digit:]]]*	
[[:lower:]]	Matches any lowercase letter	ls *[[[:lower:]]]*	
[[:upper:]]	Matches any uppercase letter	ls *[[[:upper:]]]*	

#### 4. change permission

- a) Change the permission set of /work/readme.txt so that only the user (owner) can read,write, and execute it. Use absolute mode.

```
(kali㉿kali)-[/home/kali/nithesh]
PS> chmod 700 /home/kali/nithesh

(kali㉿kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[[:alnum:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:digit:]]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:lower:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_folder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[[:upper:]]]*'
```

- b) Change the permission set of /work/readme.txt so that any user can read it, the group can read/write to it and the user (owner) can read/write/execute it. Use absolute mode.

```
(kali㉿kali)-[/home/kali/nithesh]
PS> chmod 764 /home/kali/nithesh

(kali㉿kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[[:alnum:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:digit:]]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:lower:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[[:upper:]]]*'
```

- c) Change the permission set of /bin/bash so that only the user (owner) can read/write/execute, group, and any user can execute it. However, whenever anyone executes it, it should run with the privileges of the owner user. Use absolute mode.

```
(kali㉿kali)-[/home/kali/nithesh]
PS> chmod 551 /home/kali/nithesh

(kali㉿kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[[:alnum:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:alpha:]]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:digit:]]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[[:lower:]]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[[:upper:]]]*'
```

- d) Change the permission set of /work/readme.txt so that only the user (owner) can read, write, and execute it. Use relative mode.

```

(kali@kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[:alnum:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:digit:]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:lower:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[:upper:]]*'

```

- e) Change the permission set of /work/readme.txt so that any user can read it, the group can read/write to it and the user (owner) can read/write/execute it. Use relative mode.

```

(kali@kali)-[/home/kali/nithesh]
PS> chmod u=rwx,g=rw,o=r /home/kali/nithesh

(kali@kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[:alnum:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:digit:]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:lower:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[:upper:]]*'

```

- f) Change the permission set of /work/readme.txt so that only the user (owner) can read/write/ execute, group, and any user can execute it. However, whenever anyone executes it, it should run with the privileges of the group. Use absolute mode.

```

(kali@kali)-[/home/kali/nithesh]
PS> chmod 2751 /home/kali/nithesh

(kali@kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[:alnum:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:digit:]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:lower:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[:upper:]]*'

```

- g) Change the permission set of /work/readme.txt so that only the owner can rename or delete this file while maintaining the existing permissions. Use absolute mode.

```

(kali@kali)-[/home/kali/nithesh]
PS> chmod +t /home/kali/nithesh

(kali@kali)-[/home/kali/nithesh]
PS> ls -l
total 60
drwxrwxr-x 2 kali kali 4096 Aug 16 10:43 '*[[:alnum:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:42 alnum
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:alpha:]]*,ls'
drwxr-xr-x 4 kali kali 4096 Aug 6 13:22 CLI
drwxr-xr-x 8 kali kali 4096 Aug 12 10:24 cys
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:digit:]]*,ls'
-rw-r--r-- 1 kali kali 0 Aug 6 12:30 example.txt
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file1
-rw-r--r-- 1 kali kali 0 Aug 12 10:18 file2
-rw-rw-r-- 1 kali kali 0 Aug 12 10:18 file3
-rw-r--r-- 1 kali kali 0 Aug 6 12:38 file_name
-rw-r--r-- 1 kali kali 0 Aug 5 12:34 filename
prw-r--r-- 1 kali kali 0 Aug 9 14:09 hacker
drwxr-xr-x 2 kali kali 4096 Aug 10 05:56 hello1
drwxrwxr-x 2 kali kali 4096 Aug 16 10:49 '*[[:lower:]]*'
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 ls
drwxr-xr-x 2 kali kali 4096 Aug 6 14:06 new_folder
drwxr-xr-x 2 kali kali 4096 Aug 6 11:11 nithesh
drwxr-xr-x 3 kali kali 4096 Aug 6 14:06 parent_foldder
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile
prw-r--r-- 1 kali kali 0 Aug 9 14:08 pipefile.gz
drwxr-xr-x 2 kali kali 4096 Aug 10 06:00 testdir
-rw-r--r-- 1 kali kali 0 Aug 6 12:54 time
drwxrwxr-x 2 kali kali 4096 Aug 16 10:46 '*[[:upper:]]*'

```

- h) What are the default permissions for the new file?

The default permissions for a new file are typically `rw-r--r--` (644)

- i) What was the command to view the file permissions?

`ls -l`

- j) Change chmod.exercises permissions to `-r--r--r--`

**chmod 444 chmod.exercises**

k) Change the file permissions to Read only for the owner, group and all other users.

**chmod 444 <filename>**

l) What was the command for changing the file permissions to -r--r--r--?

**chmod 444 <filename>**

m) Change chmod.exercises permissions to -rw-r-----

**chmod 640 chmod.exercises**

n) Change the file permissions to match the following:

- a. owner: Read and Write
- b. group: Read
- c. other: no permissions (None)

**chmod 640 <filename>**

o) What was the command for changing the file permissions to -rw-r-----?

**chmod 640 <filename>**

p) Change chmod.exercises permissions to -rwxr-x—x

**chmod 751 chmod.exercises**

q) Change the file permissions to match the following:

- a. owner: Read, Write and Execute
- b. group: Read and Execute
- c. other: Execute

**chmod 751 <filename>**

r) What was the command for changing the file permissions to -rwxr-x--x?

**chmod 751 <filename>**

Evaluation :

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

Deadline: 06.08.2024

In life there are no shortcuts. All things are connected. For success there is no fast lane.  
Work hard. Focus your energy, practice, remain honest, Truthful, loyal and committed.

-unknown