



# **\*SHELL PROGRAMMING LAB\***

## **ASSIGNMENT -2**

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# Assignment Content

## EXPERIMENT – 2

**TITLE:** Working with General Purpose Utility and File Commands

**Activities:**

A.Practice the following commands:

{ who, passwd,w, tty, lock, stty, script, clear, tput, uname, date, cal, calender, bc }

B.Practice on the various File Attributes:

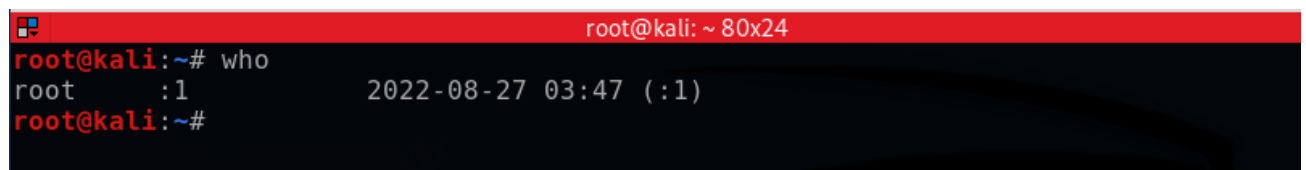
{ls, ls-l, ls -d, chmod, umask, chown, chgrp, touch, Change Permissions, ln, find }

Give the description of the command in a table format with execution screenshot.

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### 1.who

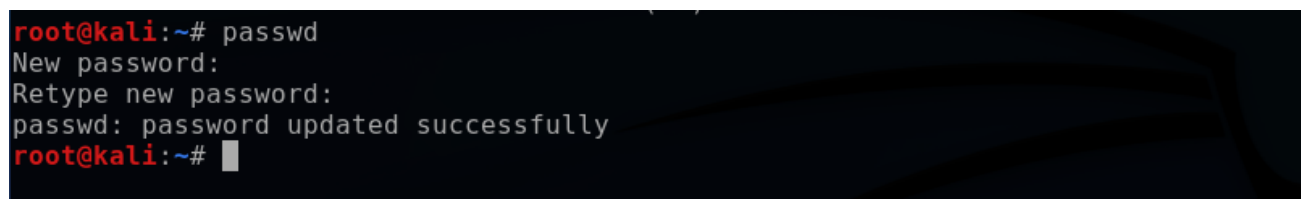
who command is a tool print information about users who are currently logged in.



```
root@kali: ~ 80x24
root@kali:~# who
root      :1                2022-08-27 03:47 (:1)
root@kali:~#
```

### 2.passwd

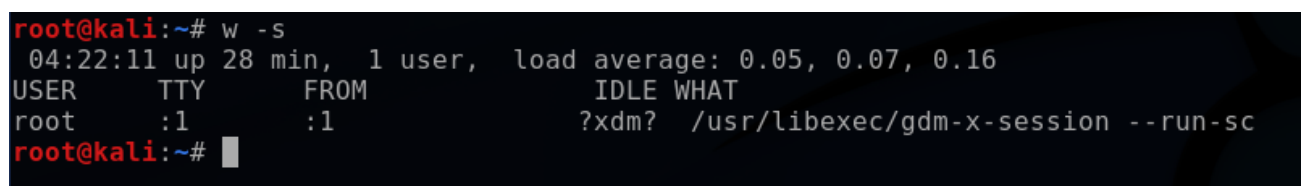
The passwd command changes passwords for user accounts.



```
root@kali:~# passwd
New password:
Retype new password:
passwd: password updated successfully
root@kali:~#
```

### 3. w

The w command is a built-in tool that allows administrators to view information about users that are currently logged in.



```
root@kali:~# w -s
04:22:11 up 28 min,  1 user,  load average: 0.05, 0.07, 0.16
USER      TTY      FROM          IDLE WHAT
root      :1                :1            ?xdm?  /usr/libexec/gdm-x-session --run-sc
root@kali:~#
```

### 4.tty

The tty command of terminal basically prints the file name of the terminal connected to standard input.

```
root@kali:~# sudo tty
/dev/pts/1
root@kali:~#
```

#### 5. stty

stty command in Linux is used to change and print terminal line settings. Basically, this command shows or changes terminal characteristics.

```
root@kali:~# stty
speed 38400 baud; line = 0;
-brkint -imaxbel iutf8
root@kali:~#
```

#### 6. script

script command in Linux is used to make typescript or record all the terminal activities. After executing the script command it starts recording everything printed on the screen including the inputs and outputs until exit.

```
root@kali:~# script
Script started, output log file is 'typescript'.
root@kali:~# ls
Desktop          f1.txt          NoOfLines.txt   Templates
Documents        f2.txt          Pictures         text.txt
Downloads        file.txt        Public          typescript
embedded-browser-no-sandbox.json Music           sorted_text.txt Videos
root@kali:~# cd Desktop
root@kali:~/Desktop# ls
root@kali:~/Desktop#
```

#### 7. clear

clear is a standard Unix computer operating system command that is used to clear the terminal screen.

```
root@kali:~# ls
Desktop          f1.txt          NoOfLines.txt   Templates
Documents        f2.txt          Pictures         text.txt
Downloads        file.txt        Public          typescript
embedded-browser-no-sandbox.json Music           sorted_text.txt Videos
root@kali:~# cd
root@kali:~# cd Desktop
root@kali:~/Desktop# clear
```

#### 8. tput

tput command accepts the terminal commands and output the control code sequences for that terminal. Using tput you can control the color and cursor of your terminal.

```

root@kali:~/Desktop# cd
root@kali:~# tput
Usage: tput [options] [command]

Options:
  -S <<      read commands from standard input
  -T TERM     use this instead of $TERM
  -V         print curses-version
  -x         do not try to clear scrollbar

Commands:
  clear      clear the screen
  init       initialize the terminal
  reset      reinitialize the terminal
  capname    unlike clear/init/reset, print value for capability "capname"
root@kali:~# tput cols
80
root@kali:~# tput lines
24

```

#### 9. uname

To display system information, use the `uname` command.

```

root@kali:~# uname
Linux
root@kali:~# uname -a
Linux kali 5.15.0-kali3-amd64 #1 SMP Debian 5.15.15-2kali1 (2022-01-31) x86_64 GNU/Linux

```

#### 10. date

date command is used to display the system date and time.

#### 11. cal

cal command is a calendar command in Linux which is used to see the calendar of a specific month or a whole year.

```

root@kali:~# date
Sat Aug 27 04:50:12 AM CDT 2022
root@kali:~# cal
      August 2022
Su Mo Tu We Th Fr Sa
  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
28 29 30 31

root@kali:~#

```

#### 12. bc

bc (Basic Calculator) is a command line utility that offers everything you expect from a simple scientific or financial calculator.

```
root@kali:~# x=`echo "var=500;var%=7;var" | bc`  
root@kali:~# echo $x  
3
```

### 13. ls

The ls command is used to list files or directories in Linux and other Unix-based operating systems.

### 14. ls -l

ls -l use a long listing format

### 15. ls -d

-d --directory

list directories themselves, not their contents

```
root@kali:~# ls  
Desktop    embedded-browser-no-sandbox.json  file.txt      Pictures      Templates  Videos  
Documents  f1.txt                               Music         Public        text.txt  
Downloads  f2.txt                               NoOfLines.txt sorted_text.txt typescript  
root@kali:~# ls -l  
total 64  
drwxr-xr-x 2 root root 4096 Mar  8 14:33 Desktop  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Documents  
drwxr-xr-x 2 root root 4096 May 16 20:09 Downloads  
-rwxr-xr-x 1 root root  160 Sep 16  2021 embedded-browser-no-sandbox.json  
-rw-r--r-- 1 root root   13 Aug 26 03:18 f1.txt  
-rw-r--r-- 1 root root    7 Aug 26 03:25 f2.txt  
-rw-r--r-- 1 root root   14 Aug 26 02:56 file.txt  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Music  
-rw-r--r-- 1 root root   89 Aug 26 03:40 NoOfLines.txt  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Pictures  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Public  
-rw-r--r-- 1 root root   32 Aug 26 03:03 sorted_text.txt  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Templates  
-rw-r--r-- 1 root root   32 Aug 26 03:02 text.txt  
-rw-r--r-- 1 root root 2874 Aug 27 04:36 typescript  
drwxr-xr-x 2 root root 4096 Feb 21  2022 Videos  
root@kali:~# ls -d  
.  
root@kali:~# cd Desktop  
root@kali:~/Desktop# ls -d  
.
```

### 16. chmod

The chmod command is used to change the access mode of a file.

```
root@kali:~/Desktop# ls -l
total 4
-rw-r--r-- 1 root root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop# chmod u=r text.txt
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 root root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop#
```

## 17.umask

The umask command in Linux is used to set default permissions for files or directories the user creates.

```
root@kali:~/Desktop# umask
0022
```

## 18.chown

The command chown, an abbreviation of change owner, is used on Unix and Unix-like operating systems to change the owner of file system files, directories.

```
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 root root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop# sudo chown ayush text.txt
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 ayush root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop#
```

## 19.chgrp

chgrp command in Linux is used to change the group ownership of a file or directory. All files in Linux belong to an owner and a group.

```
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 ayush root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop# sudo chgrp g1 text.txt
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 ayush g1 32 Aug 26 03:02 text.txt
root@kali:~/Desktop#
```

## 20.touch

The touch command's primary function is to modify a timestamp. Commonly, the utility is used for file creation.

```
root@kali:~/Desktop# touch lastOne.exe
root@kali:~/Desktop# ls
lastOne.exe  text.txt
```

## 21. Change Permissions

```
root@kali:~/Desktop# ls -l
total 4
-rw-r--r-- 1 root root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop# chmod u=r text.txt
root@kali:~/Desktop# ls -l
total 4
-r--r--r-- 1 root root 32 Aug 26 03:02 text.txt
root@kali:~/Desktop#
```

## 22.ln

The ln command is used to create **links** to files or directories.

```
root@kali:~/Desktop# ln text.txt test/
root@kali:~/Desktop# ls test/
text.txt
root@kali:~/Desktop#
```

## 23.find

Find is used to find files and directories and perform subsequent operations on them.

```
root@kali:~# cd Desktop/
root@kali:~/Desktop# find text.txt
text.txt
root@kali:~/Desktop# ls
lastOne.exe  test  text.txt
root@kali:~/Desktop#
```