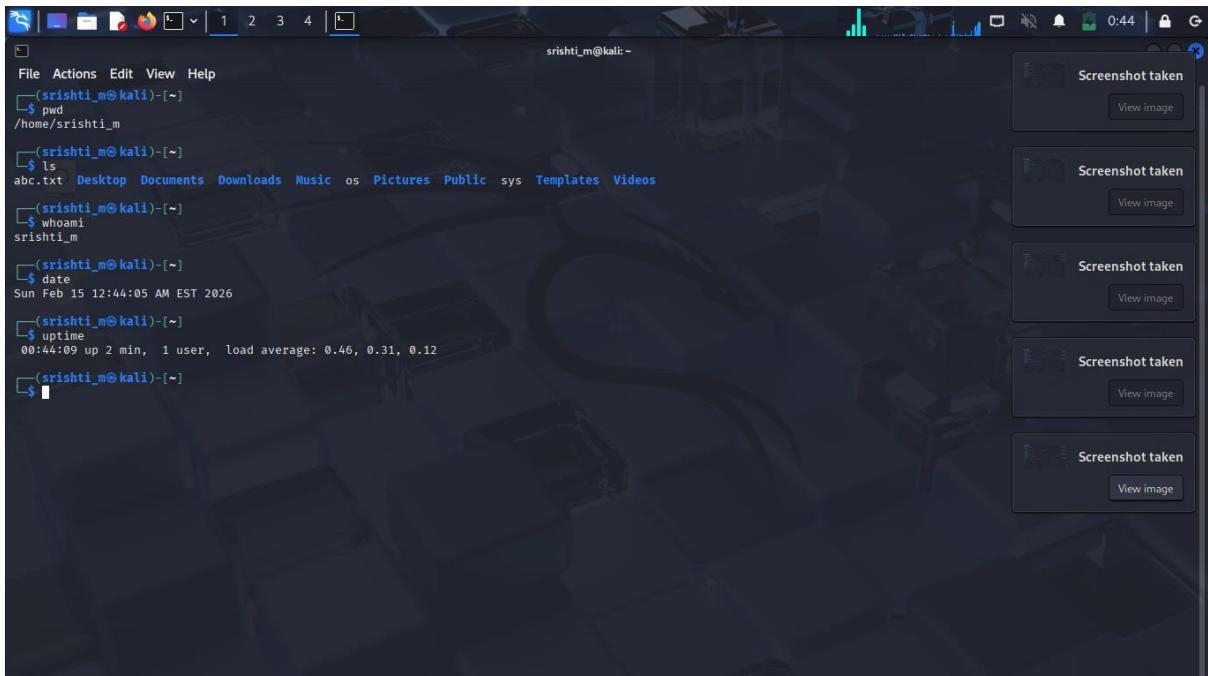


Experiment :- 1

Aim:-Exploring Linux System Commands, Run levels, And Help Utilities

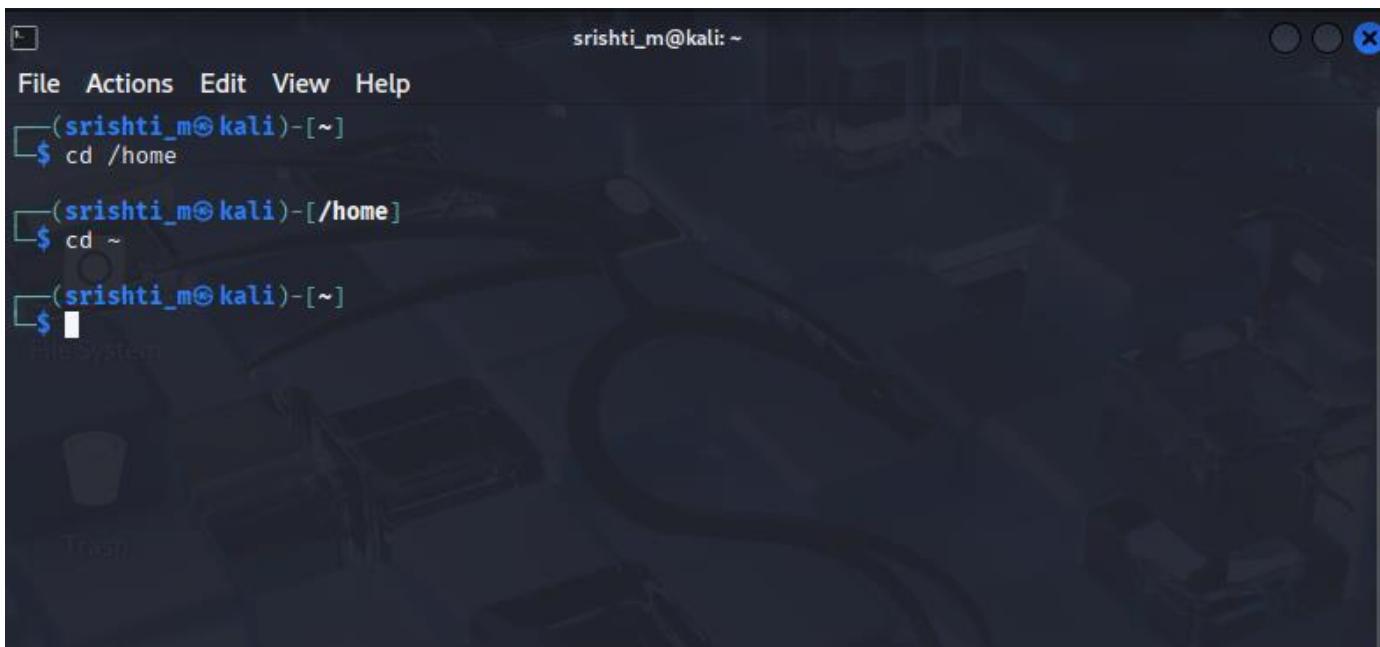
1. Log in to the Linux virtual machine.
2. Open the Terminal.
3. Execute basic system commands.



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "srishti_m@kali: ~". The terminal content displays the following basic system commands:

```
(srishti_m@kali)-[~]
$ pwd
/home/srishti_m
(srishti_m@kali)-[~]
$ ls
abc.txt Desktop Documents Downloads Music os Pictures Public sys Templates Videos
(srishti_m@kali)-[~]
$ whoami
srishti_m
(srishti_m@kali)-[~]
$ date
Sun Feb 15 12:44:05 AM EST 2026
(srishti_m@kali)-[~]
$ uptime
00:44:09 up 2 min, 1 user, load average: 0.46, 0.31, 0.12
(srishti_m@kali)-[~]
$
```

4. Navigate directories using.



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "srishti_m@kali: ~". The terminal content displays the following directory navigation commands:

```
(srishti_m@kali)-[~]
$ cd /home
(srishti_m@kali)-[/home]
$ cd ~
(srishti_m@kali)-[~]
$
```

5. Use manual pages to understand commands.

```
[srishti_m@kali]~]$ man ls  
[srishti_m@kali]~]$ man cd  
No manual entry for cd  
[srishti_m@kali]~]$
```

6. Exit the manual using the q key

```
srishti_m@kali:~  
File Actions Edit View Help  
LS(1) User Commands LS(1)  
NAME  
ls - list directory contents  
SYNOPSIS  
ls [OPTION] ... [FILE] ...  
DESCRIPTION  
List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.  
Mandatory arguments to long options are mandatory for short options too.  
-a, --all  
do not ignore entries starting with .  
-A, --almost-all  
do not list implied . and ..  
--author  
with -l, print the author of each file  
-b, --escape  
print C-style escapes for nongraphic characters  
--block-size=SIZE  
with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below  
Manual page ls(1) line 1 (press h for help or q to quit)
```

7. Use help options

```
srishti_m@kali: ~
File Actions Edit View Help
(srishti_m@kali)-[~]
$ man cd
No manual entry for cd

(srishti_m@kali)-[~]
$ ls --help
Usage: ls [OPTION] ... [FILE] ...
List information about the FILEs (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
-a, --all           do not ignore entries starting with .
-A, --almost-all   do not list implied . and ..
--author          with -l, print the author of each file
-b, --escape        print C-style escapes for nongraphic characters
--block-size=SIZE   with -l, scale sizes by SIZE when printing them;
                   e.g., '--block-size=M'; see SIZE format below

-B, --ignore-backups do not list implied entries ending with ~
-c                  with -lt: sort by, and show, ctime (time of last
                   change of file status information);
                   with -l: show ctime and sort by name;
                   otherwise: sort by ctime, newest first

-C                  list entries by columns
--color[=WHEN]      color the output WHEN; more info below
-d, --directory     list directories themselves, not their contents
-D, --dired          generate output designed for Emacs' dired mode
-f
-F, --classify[=WHEN] append indicator (one of */=>@!) to entries WHEN
--file-type         likewise, except do not append '*'
```

```
File Actions Edit View Help

└─(srishti_m㉿kali)-[~]
└─$ systemctl --help
systemctl [OPTIONS ...] COMMAND ...
Query or send control commands to the system manager.

Unit Commands:
list-units [PATTERN ...]           List units currently in memory
list-automounts [PATTERN ...]      List automount units currently in memory,
                                    ordered by path
list-paths [PATTERN ...]           List path units currently in memory,
                                    ordered by path
list-sockets [PATTERN ...]          List socket units currently in memory,
                                    ordered by address
list-timers [PATTERN ...]          List timer units currently in memory,
                                    ordered by next elapse
is-active PATTERN ...              Check whether units are active
is-failed [PATTERN ...]            Check whether units are failed or
                                    system is in degraded state
status [PATTERN ... |PID ...]       Show runtime status of one or more units
show [PATTERN ... |JOB ...]         Show properties of one or more
                                    units/jobs or the manager
cat PATTERN ...                   Show files and drop-ins of specified units
help PATTERN ... |PID ...          Show manual for one or more units
list-dependencies [UNIT ...]        Recursively show units which are required
                                    or wanted by the units or by which those
                                    units are required or wanted
start UNIT ...                    Start (activate) one or more units
stop UNIT ...                     Stop (deactivate) one or more units
reload UNIT ...                   Reload one or more units
```

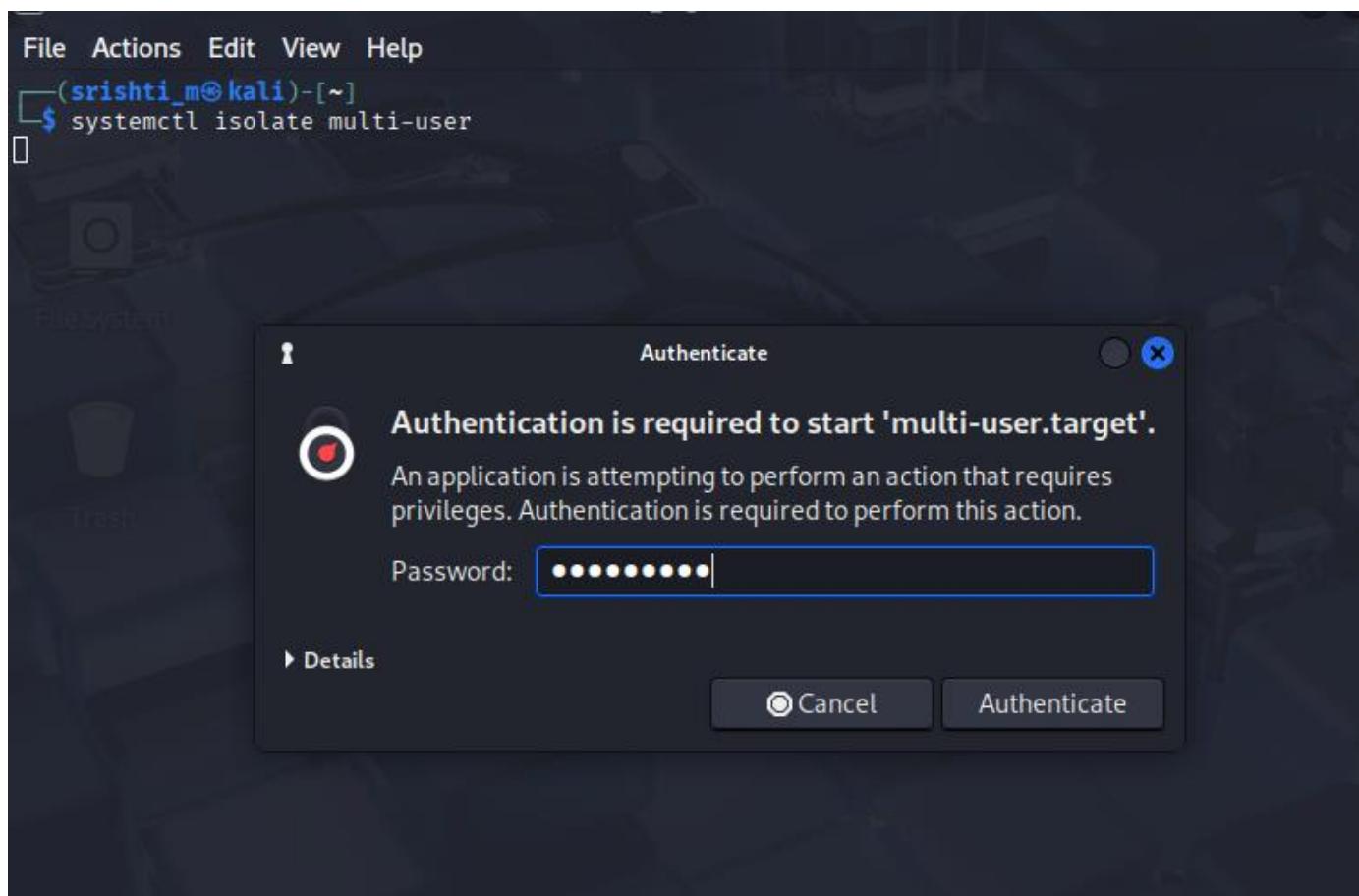
8. Check current run level / target

```
└─(srishti_m㉿kali)-[~]
└─$ runlevel
unknown

└─(srishti_m㉿kali)-[~]
└─$ systemctl get-default
graphical.target
```

Switch to multi-user mode:-

```
srishti_m@kali:~  
File Actions Edit View Help  
└─(srishti_m@kali)-[~]  
$ systemctl isolate multi-user
```



```
File Actions Edit View Help
status [PATTERN ... |PID ... ]
show [PATTERN ... |JOB ... ]

cat PATTERN ...
help PATTERN ... |PID ...
list-dependencies [UNIT ... ]

start UNIT ...
stop UNIT ...
reload UNIT ...
restart UNIT ...
try-restart UNIT ...
reload-or-restart UNIT ...

Show runtime status of one or more units
Show properties of one or more
units/jobs or the manager
Show files and drop-ins of specified units
Show manual for one or more units
Recursively show units which are required
or wanted by the units or by which those
units are required or wanted
Start (activate) one or more units
Stop (deactivate) one or more units
Reload one or more units
Start or restart one or more units
Restart one or more units if active
Reload one or more units if possible,

—(srishti_m@kali)-[~]
$ runlevel
unknown

—(srishti_m@kali)-[~]
$ systemctl get-default
graphical.target

—(srishti_m@kali)-[~]
$ systemctl isolate graphical.target

—(srishti_m@kali)-[~]
$ systemctl isolate graphical.target

—(srishti_m@kali)-[~]
$ clear
```

9. Practice auto-completion by typing partial command names and pressing Tab.

10. Clear the terminal screen: Clear

```
srishti_m@kali: ~
File Actions Edit View Help
status [PATTERN ... |PID ... ]
show [PATTERN ... |JOB ... ]

cat PATTERN ...
help PATTERN ... |PID ...
list-dependencies [UNIT ... ]

start UNIT ...
stop UNIT ...
reload UNIT ...
restart UNIT ...
try-restart UNIT ...
reload-or-restart UNIT ...

Show runtime status of one or more units
Show properties of one or more
units/jobs or the manager
Show files and drop-ins of specified units
Show manual for one or more units
Recursively show units which are required
or wanted by the units or by which those
units are required or wanted
Start (activate) one or more units
Stop (deactivate) one or more units
Reload one or more units
Start or restart one or more units
Restart one or more units if active
Reload one or more units if possible,

—(srishti_m@kali)-[~]
$ runlevel
unknown

—(srishti_m@kali)-[~]
$ systemctl get-default
graphical.target

—(srishti_m@kali)-[~]
$ systemctl isolate graphical.target

—(srishti_m@kali)-[~]
$ systemctl isolate graphical.target

—(srishti_m@kali)-[~]
$ clear
```

```
(srishti_m@kali)-[~]$
```

Expected Output

- Successful execution of basic Linux commands.
- Display of manual pages and help documentation.
- Identification of current system run level / target.
- Improved familiarity with Linux command usage.

Result :- Basic Linux system commands, run levels, and help utilities were successfully explored and executed. The student gained practical understanding of Linux command-line interaction and documentation mechanisms.