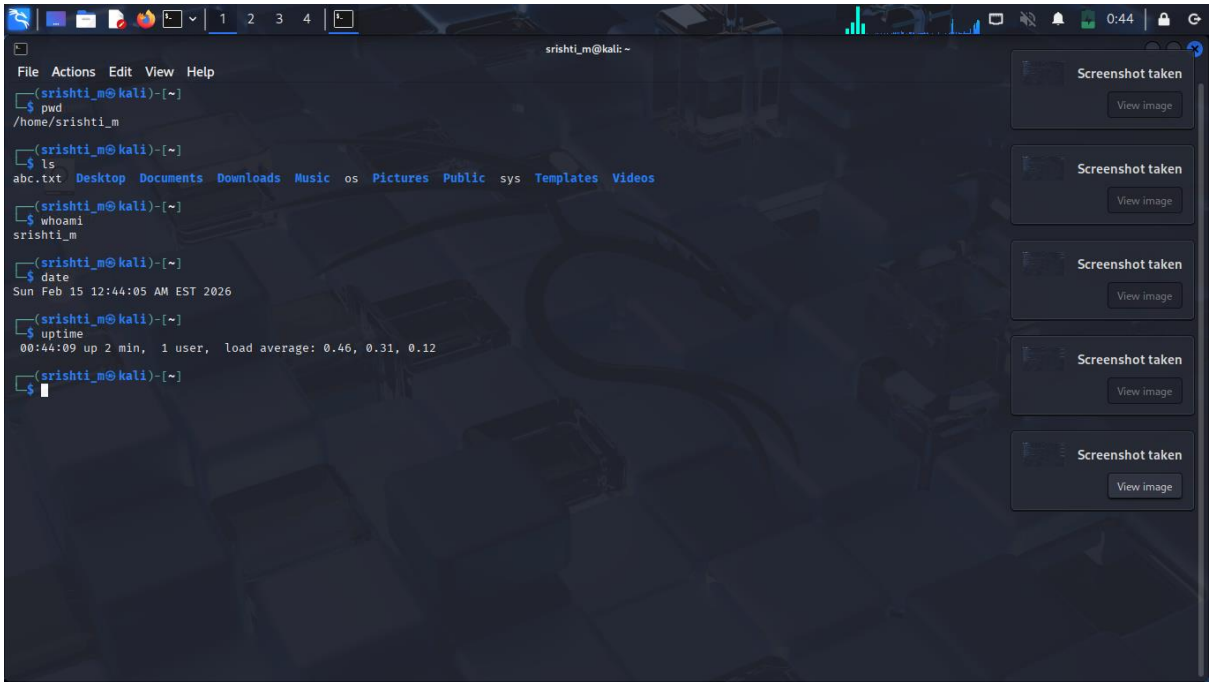
Experiment :- 1

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

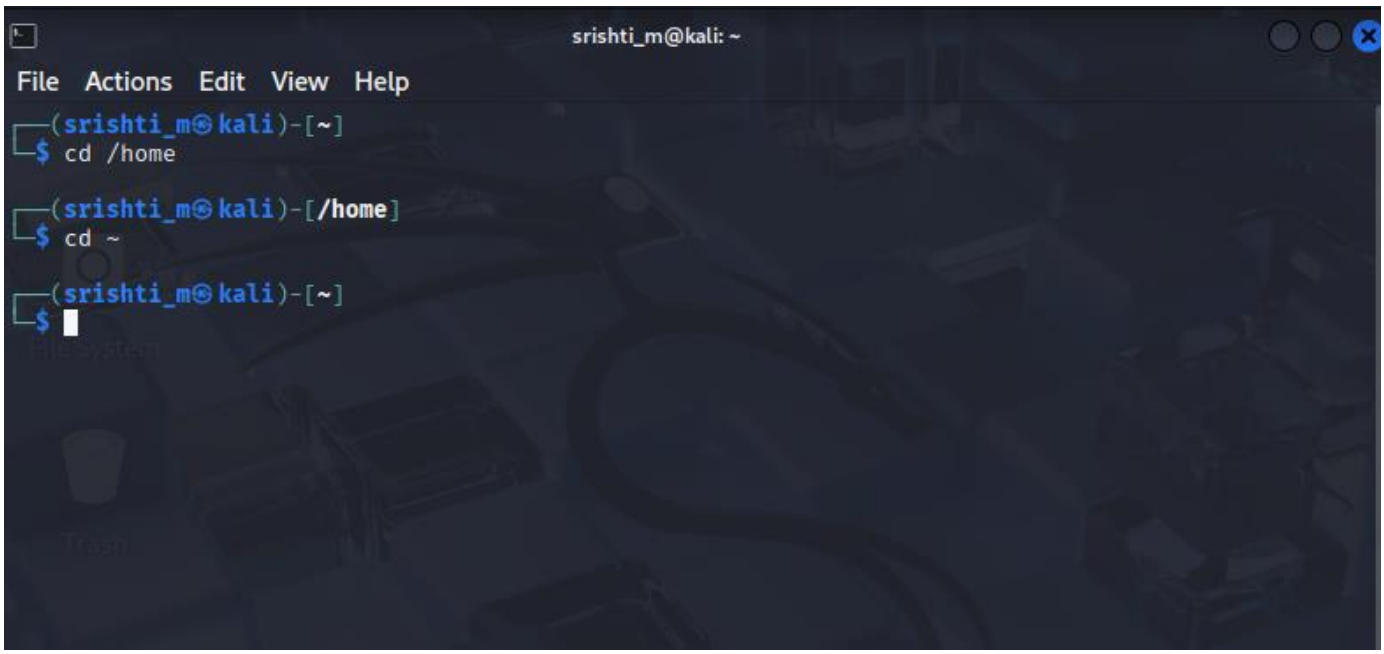
1. Log in to the Linux virtual machine.

2. Open the Terminal.

3. Execute basic system commands.

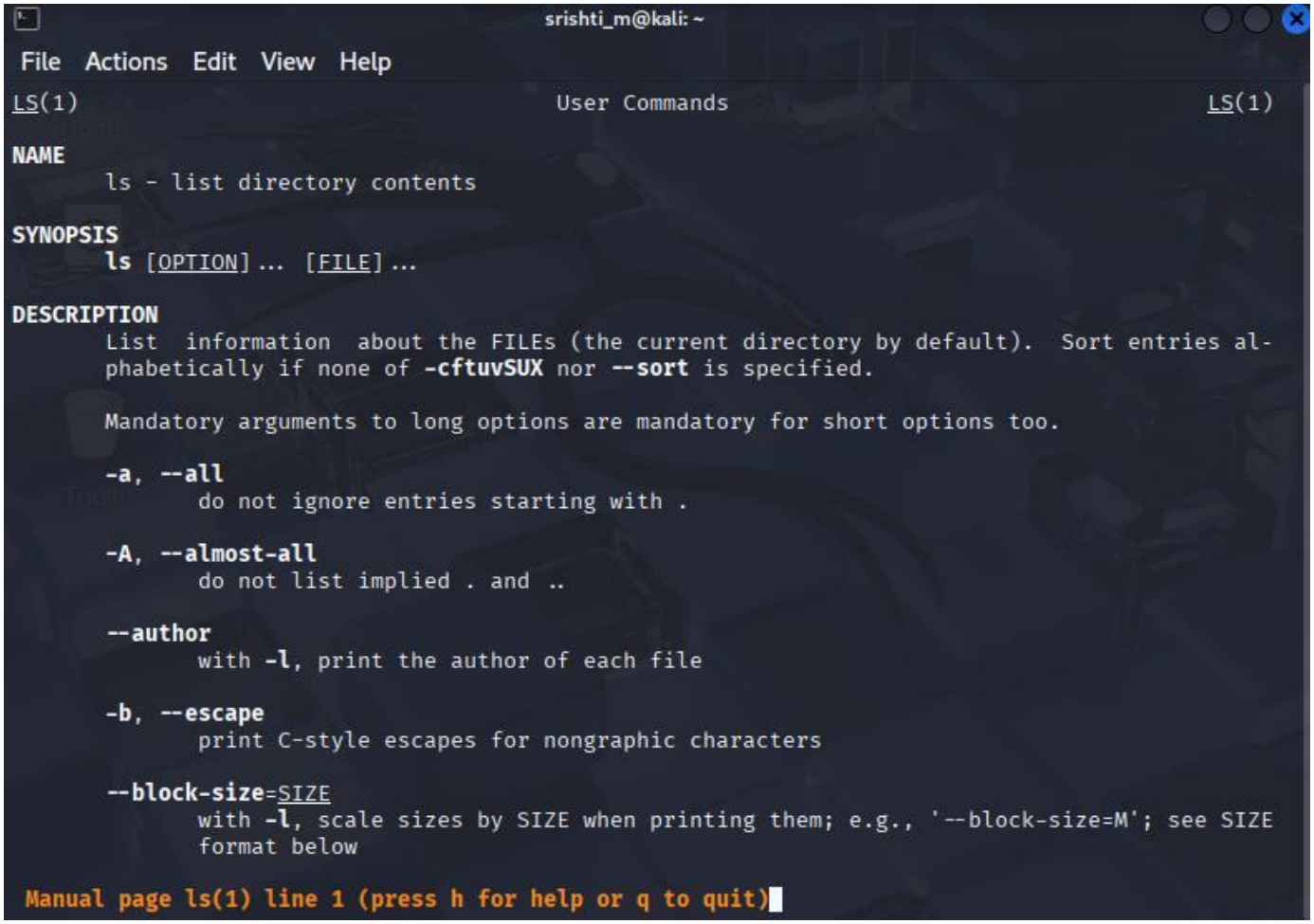


4. Navigate directories using.

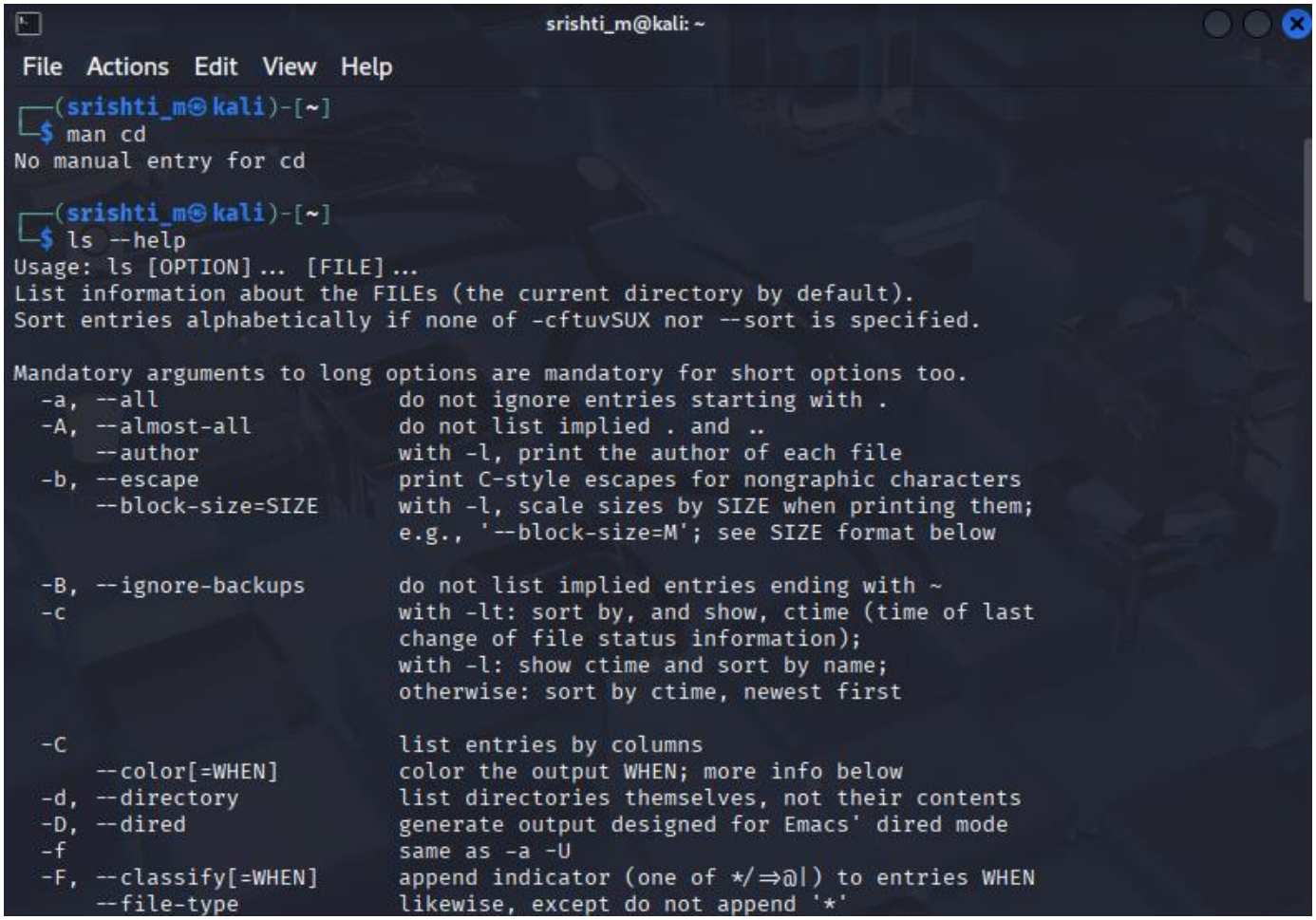


5. Use manual pages to understand commands.

6. Exit the manual using the q key



7. Use help options

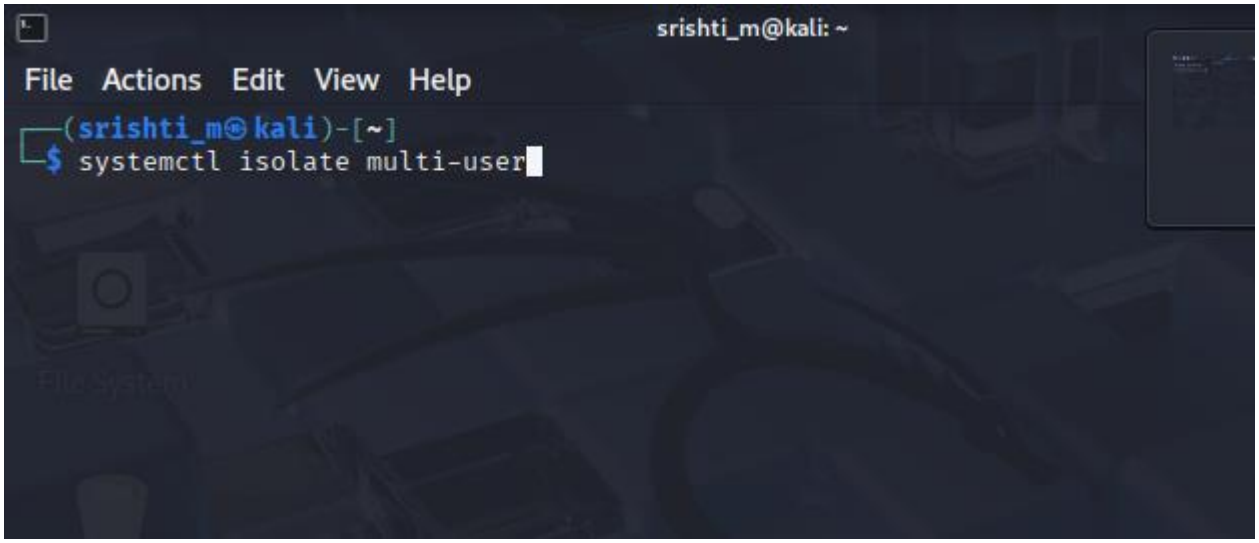


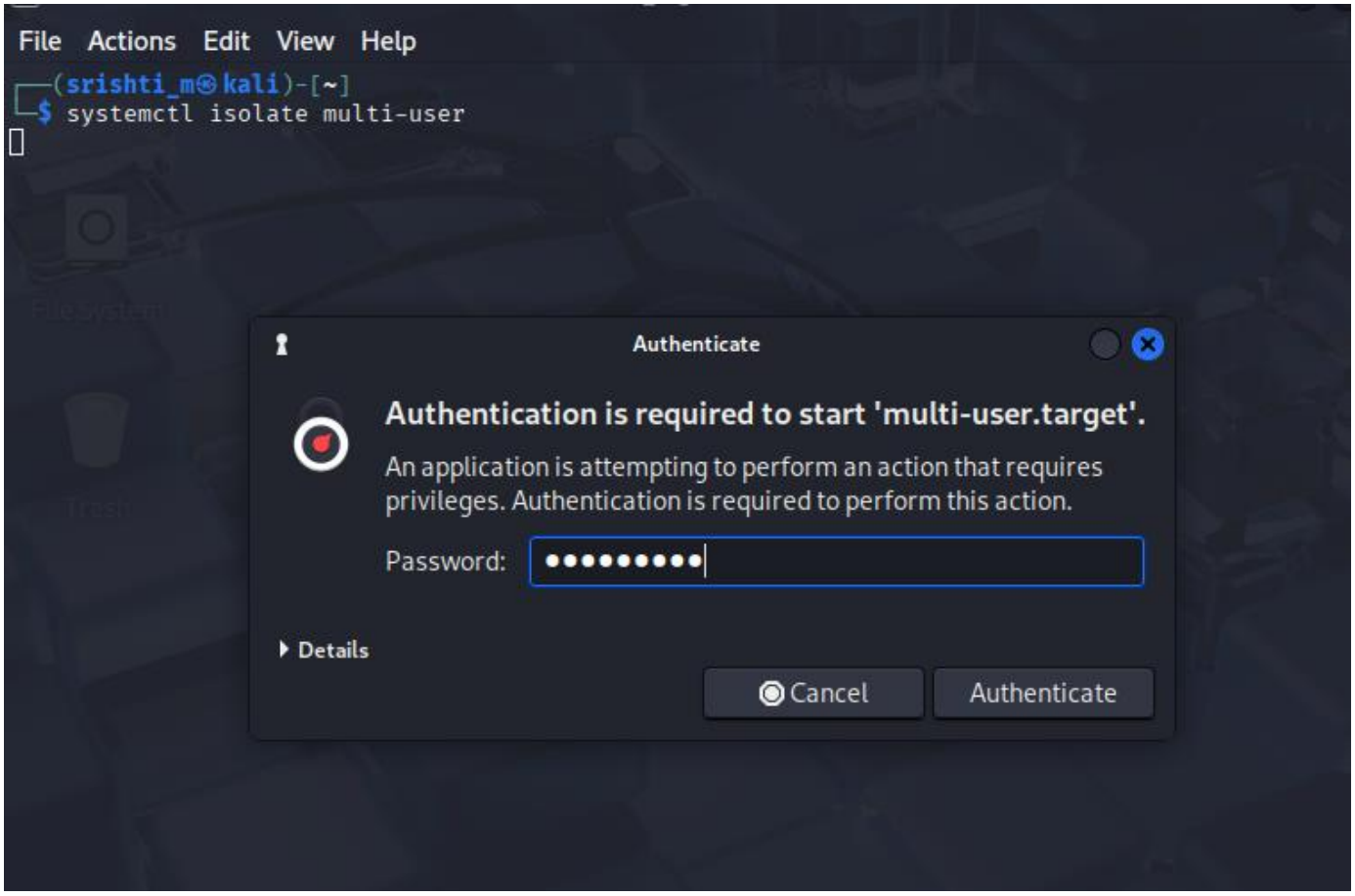
```
File  Actions  Edit  View  Help

┌──(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

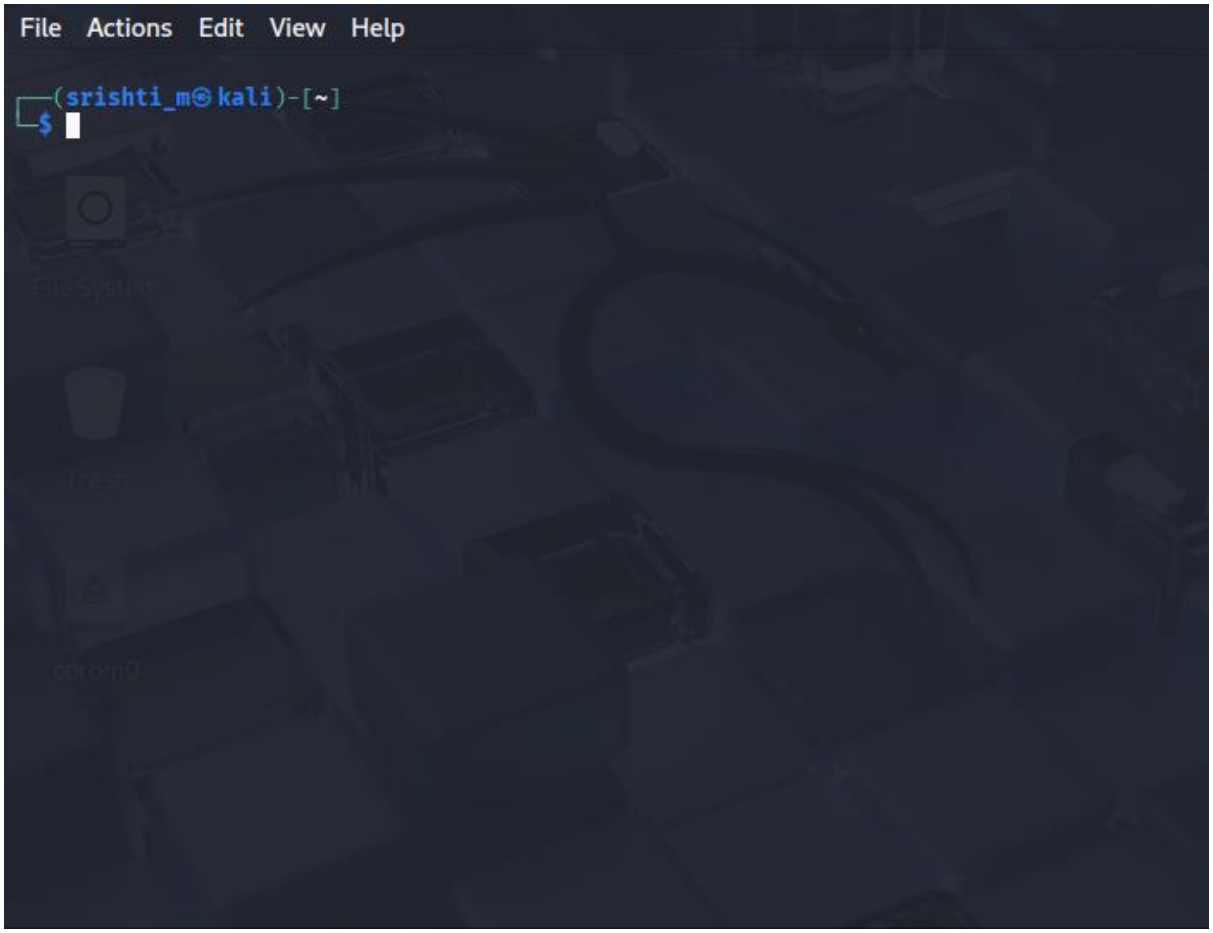

File Actions Edit View Help
(srishti_m㉿kali)-[~]
$ systemctl isolate multi-user
Authenticate
Authentication is required to start 'multi-user.target'.
An application is attempting to perform an action that requires privileges. Authentication is required to perform this action.
Password:
Details
Cancel
Authenticate

```
File  Actions  Edit  View  Help
 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
 restart UNIT ...                        Start or restart one or more units
 try-restart UNIT ...                    Restart one or more units if active
 reload-or-restart UNIT ...              Reload one or more units if possible,

┌──(srishti_m㉿kali)-[~]
└─$ runlevel
nknown

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

┌──(srishti_m㉿kali)-[~]
└─$ systemctl isolate graphical.target

┌──(srishti_m㉿kali)-[~]
└─$ systemctl isolate graphical.target

┌──(srishti_m㉿kali)-[~]
└─$
```

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 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
  restart UNIT ...                        Start or restart one or more units
  try-restart UNIT ...                    Restart one or more units if active
  reload-or-restart UNIT ...              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
```



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.