

Basic Linux Commands

Usefullink-

<https://itworkshopktu2024.blogspot.com/2024/11/familiarization-of-basic-linux-commands.html>

1. Do the following in the order given
 - a) Create a directory EV2. (***mkdir ev4***)
 - b) Navigate to that directory (***cd ev4***)
 - c) Create a directory with your roll number
 - d) Navigate to that
 - e) Type the following commands and write the resultant directory path(use ***pwd*** if required) . Also pen down your understanding of the result
 - i. ***cd -user@LAPTOP-0QMMV1S2 MINGW64 ~***

ii. ***cd -user@LAPTOP-0QMMV1S2 MINGW64
~/linux-assignment1/ev4/ev45 (main)***

iii. ***cd . user@LAPTOP-0QMMV1S2 MINGW64
~/linux-assignment1/ev4/ev45 (main)***

iv. ***cd .. user@LAPTOP-0QMMV1S2 MINGW64 ~/linux-assignment1/ev4
(main)***

v. ***cd ~ user@LAPTOP-0QMMV1S2 MINGW64 ~***

vi. ***cd / user@LAPTOP-0QMMV1S2 MINGW64 /***

vii. ***ls -l total 6088***

viii. ***-rw-r--r-- 1 user 197121 18765 Dec 4 2024 LICENSE.txt***

ix. ***-rw-r--r-- 1 user 197121 274201 Dec 4 2024 ReleaseNotes.html***

x. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 bin/***

xi. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 cmd/***

xii. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 dev/***

xiii. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 etc/***

xiv. ***-rwxr-xr-x 1 user 197121 139112 Dec 4 2024 git-bash.exe****

xv. ***-rwxr-xr-x 1 user 197121 138600 Dec 4 2024 git-cmd.exe****

xvi. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 mingw64/***

xvii. ***dr-xr-xr-x 10 user 197121 0 Feb 9 14:42 proc/***

xviii. ***drwxr-xr-x 1 user 197121 0 Feb 9 14:42 tmp/***

xix. ***-rw-r--r-- 1 user 197121 1319354 Feb 4 2025 unins000.dat***

xx. ***-rwxr-xr-x 1 user 197121 3384040 Feb 4 2025 unins000.exe****

xxi. ***-rw-r--r-- 1 user 197121 24191 Feb 4 2025 unins000.msg***

xxii. ***drwxr-xr-x 1 user 197121 0 Feb 4 2025 usr/***

xxiii.

xxiv. ***user@LAPTOP-0QMMV1S2 MINGW64 /***

xxv. ***cd user@LAPTOP-0QMMV1S2 MINGW64 ~***

xxvi. ***pwd /c/Users/user***

xxvii. ***cd media***

xxviii. ***cd /media***

xxix. ***ls -l***

xxx. ***ls -al total 35888***

xxxi. ***drwxr-xr-x 1 user 197121 0 Feb 8 17:21 ./***

xxxii. ***drwxr-xr-x 1 user 197121 0 Nov 7 10:15 ../***

xxxiii. ***drwxr-xr-x 1 user 197121 0 Sep 9 15:54 .Xilinx/***

xxxiv. *drwxr-xr-x 1 user 197121 0 Jun 29 2023 .arduinoIDE/*
xxxv. *-rw-r--r-- 1 user 197121 100 Feb 8 15:43 .bash_history*
xxxvi. *-rw-r--r-- 1 user 197121 61 Feb 8 16:05 .gitconfig*
xxxvii. *drwxr-xr-x 1 user 197121 0 Jan 1 2023 .idlerc/*
xxxviii. *drwxr-xr-x 1 user 197121 0 Feb 5 2023 .matplotlib/*
xxxix. *drwxr-xr-x 1 user 197121 0 Jun 8 2023 .stm32cubeide/*
xl. *drwxr-xr-x 1 user 197121 0 Jun 8 2023 .stm32cubemx/*
xli. *drwxr-xr-x 1 user 197121 0 Jun 29 2023 .stmcube/*
xlii. *drwxr-xr-x 1 user 197121 0 Jun 8 2023 .stmcfunder/*
xlili. *drwxr-xr-x 1 user 197121 0 Jan 6 2024 .vscode/*
xliv. *drwxr-xr-x 1 user 197121 0 Oct 24 05:59 1/*
xlv. *drwxr-xr-x 1 user 197121 0 Oct 24 11:21 '1 to 4 mux'/*
xlvi. *drwxr-xr-x 1 user 197121 0 Oct 23 19:33 ALU_1/*
xlvii. *drwxr-xr-x 1 user 197121 0 Nov 7 10:17 AppData/*
xlviii. *lrwxrwxrwx 1 user 197121 29 Nov 7 10:15 'Application Data' ->*
/c/Users/user/AppData/Roaming/
xlix. *drwxr-xr-x 1 user 197121 0 Nov 7 10:25 Contacts/*
l. *lrwxrwxrwx 1 user 197121 57 Nov 7 10:15 Cookies ->*
/c/Users/user/AppData/Local/Microsoft/Windows/INetCookies/
li. *drwxr-xr-x 1 user 197121 0 Sep 29 20:30 Documents/*
lii. *drwxr-xr-x 1 user 197121 0 Feb 5 22:15 Downloads/*
liii. *drwxr-xr-x 1 user 197121 0 Nov 7 10:25 Favorites/*
liv. *drwxr-xr-x 1 user 197121 0 Nov 7 10:25 Links/*
lv. *lrwxrwxrwx 1 user 197121 27 Nov 7 10:15 'Local Settings' ->*
/c/Users/user/AppData/Local/
lvi. *drwxr-xr-x 1 user 197121 0 Jun 23 2025 Microsoft/*
lvii. *drwxr-xr-x 1 user 197121 0 Nov 7 10:25 Music/*
lviii. *lrwxrwxrwx 1 user 197121 23 Nov 7 10:15 'My Documents' ->*
/c/Users/user/Documents/
lix. *-rw-r--r-- 1 user 197121 23855104 Jan 24 17:06 NTUSER.DAT*
lx. *-rw-r--r-- 1 user 197121 1048576 Jan 24 17:07*
NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.0.regtran
s-ms
lxi. *-rw-r--r-- 1 user 197121 1048576 Jan 24 17:06*
NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.1.regtran
s-ms
lxii. *-rw-r--r-- 1 user 197121 1048576 Jan 24 17:06*
NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.2.regtran
s-ms
lxiii. *-rw-r--r-- 1 user 197121 65536 Jan 24 17:07*
NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.blf
lxiv. *-rw-r--r-- 1 user 197121 65536 Nov 7 10:15*
NTUSER.DAT{52188356-bb94-11f0-ae02-d977119a7264}.TM.blf
lxv. *-rw-r--r-- 1 user 197121 524288 Nov 7 10:15*
NTUSER.DAT{52188356-bb94-11f0-ae02-d977119a7264}.TMContainer
00000000000000000001.regtrans-ms
lxvi. *-rw-r--r-- 1 user 197121 524288 Nov 7 10:15*
NTUSER.DAT{52188356-bb94-11f0-ae02-d977119a7264}.TMContainer

00000000000000000002.regtrans-ms

lxvii. *lrwxrwxrwx* 1 user 197121 65 Nov 7 10:15 NetHood ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/Network
Shortcuts'/

lxviii. *drwxr-xr-x* 1 user 197121 0 Feb 9 14:35 OneDrive/

lix. *lrwxrwxrwx* 1 user 197121 65 Nov 7 10:15 PrintHood ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/Printer
Shortcuts'/

lxx. *lrwxrwxrwx* 1 user 197121 54 Nov 7 10:15 Recent ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/Recent/

lxxi. *drwxr-xr-x* 1 user 197121 0 Jun 8 2023 STM32Cube/

lxxii. *drwxr-xr-x* 1 user 197121 0 Jun 8 2023 STM32CubeIDE/

lxxiii. *drwxr-xr-x* 1 user 197121 0 Jun 13 2023 STMicroelectronics/

lxxiv. *drwxr-xr-x* 1 user 197121 0 Nov 7 10:25 'Saved Games'/

lxxv. *drwxr-xr-x* 1 user 197121 0 Nov 7 10:25 Searches/

lxxvi. *lrwxrwxrwx* 1 user 197121 54 Nov 7 10:15 SendTo ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/SendTo/

lxxvii. *-rw-r--r--* 1 user 197121 5188 Jun 21 2025
Site_Utilization_Final.xlsx

lxxviii. *-rw-r--r--* 1 user 197121 5620 Jun 28 2025 Sites_within_5km.xlsx

lxxix. *lrwxrwxrwx* 1 user 197121 58 Nov 7 10:15 'Start Menu' ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/Start Menu'/

lxxx. *lrwxrwxrwx* 1 user 197121 57 Nov 7 10:15 Templates ->
'/c/Users/user/AppData/Roaming/Microsoft/Windows/Templates/

lxxxi. *drwxr-xr-x* 1 user 197121 0 Nov 7 10:25 Videos/

lxxxii. *-rw-r--r--* 1 user 197121 55 May 30 2023 abcd.py

lxxxiii. *drwxr-xr-x* 1 user 197121 0 Oct 23 19:33 and_or/

lxxxiv. *drwxr-xr-x* 1 user 197121 0 Oct 24 08:35 binary/

lxxxv. *drwxr-xr-x* 1 user 197121 0 Oct 24 08:35 'binary to gracode'/

lxxxvi. *drwxr-xr-x* 1 user 197121 0 Oct 29 09:45 digital_dice/

lxxxvii. *drwxr-xr-x* 1 user 197121 0 Oct 29 09:20 digitsl_dice/

lxxxviii. *drwxr-xr-x* 1 user 197121 0 Apr 27 2025 ev/

lxxxix. *drwxr-xr-x* 1 user 197121 0 Oct 24 06:52 ff/

xc. *drwxr-xr-x* 1 user 197121 0 Oct 23 19:54 full_adder/

xc. *drwxr-xr-x* 1 user 197121 0 Oct 23 19:33 half_adder/

xcii. *drwxr-xr-x* 1 user 197121 0 Oct 27 23:32 labexam/

xciii. *drwxr-xr-x* 1 user 197121 0 Feb 9 14:34 linux-assignment1/

xciv. *-rw-r--r--* 1 user 197121 2097152 Nov 7 10:15 ntuser.dat.LOG1

xcv. *-rw-r--r--* 1 user 197121 6066176 Nov 7 10:15 ntuser.dat.LOG2

xcvi. *-rw-r--r--* 1 user 197121 20 Nov 7 10:25 ntuser.ini

xcvii. *drwxr-xr-x* 1 user 197121 0 Oct 9 23:01 project_1/

xcviii. *drwxr-xr-x* 1 user 197121 0 Oct 10 12:35 project_2/

xcix. *drwxr-xr-x* 1 user 197121 0 Oct 30 12:07 'project_2 alu'/

c. *drwxr-xr-x* 1 user 197121 0 Feb 8 15:22 student-info-project/

ci.

cii.

ciii. *cd ~/ev4/<ur roll number>*

civ. *mkdir emptydummy user@LAPTOP-0QMMV1S2 MINGW64 /*

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cv. mkdir dummy user@LAPTOP-0QMMV1S2 MINGW64 ~
cvi. cd dummy user@LAPTOP-0QMMV1S2 MINGW64 ~/dummy
cvii. touch file1 user@LAPTOP-0QMMV1S2 MINGW64 ~/dummy
cviii. touch file2 user@LAPTOP-0QMMV1S2 MINGW64 ~/dummy
cix. ls -l total 0
cx. -rw-r--r-- 1 user 197121 0 Feb 9 14:53 file1
cx. -rw-r--r-- 1 user 197121 0 Feb 9 14:54 file2
cxii. rm -i file2 rm: remove regular empty file 'file2'?
cxiii. ls -l total 0
cxiv. -rw-r--r-- 1 user 197121 0 Feb 9 14:53 file1
cxv. -rw-r--r-- 1 user 197121 0 Feb 9 14:54 file2
cxvi.
cxvii.
cxviii. cd .. user@LAPTOP-0QMMV1S2 MINGW64 ~
rm emptydummy $ rm emptydummy
rm: cannot remove 'emptydummy': Is a directory

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cxix. rmdir emptydummy -- only empty dirs removed with rmdir
user@LAPTOP-0QMMV1S2 MINGW64 ~
cxx. rmdir dummy -- will give an error since not empty $
rmdir dummy
cxxi. rmdir: failed to remove 'dummy': Directory not empty
cxxii. rm -r dummy user@LAPTOP-0QMMV1S2 MINGW64 ~

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2. **cat >file1.txt** -- You can use cat to create a file and input text directly from the terminal. Type the content '**My first line**', and press CTRL+D to save and exit
user@LAPTOP-0QMMV1S2 MINGW64 ~
3. **\$ cat >file1.txt**
- 4.
- 5.
6. **my first line**
- 7.
8. **user@LAPTOP-0QMMV1S2 MINGW64 ~**
- 9.
- 10.
11. **cat >file2.txt** -- Type the content '**Hello Second line**', and press CTRL+D to save and exit
- 12.
13. **cat > file3.txt** -- Write '**Hello line**' as input and save the file
user@LAPTOP-0QMMV1S2 MINGW64 ~
14. **\$ cat >file3.txt**
15. **hello line**
16. **cat file1.txt file2.txt > file_combined.txt** -- > overwrites, >> appends
user@LAPTOP-0QMMV1S2 MINGW64 ~
17. **cat file_combined.txt** --Need not type the entire filename...Write file_c and press Tab to see how it autocompletes
18. **cat file3.txt >> file_combined.txt**

19. ***cat file_combined.txt***
20. ***grep -i hello file****
21. ***cp file1.txt ~/ev4***
22. ***mv file_combined.txt combined*** -- check new file using ***ls -l***

Change permissions → chmod

You can do this in two ways.

Method A: Symbolic mode (easy to read)

Examples

1. Give execute permission to owner: ex: ***chmod u+x file.sh***
2. Remove write permission from group: ex: ***chmod g-w file.txt***
3. Add read permission to everyone: ex: ***chmod a+r file.txt***
4. Set exact permissions: ex: ***chmod u=rwx,g=rx,o=r myfile***

Method B: Numeric (octal) mode (most used)

Permission values for rwx = 421

Examples

1. Owner: rwx, Group: r-x, Others: r-- => ***chmod 754 file.txt***
2. Read/write for owner only: => ***chmod 600 file.txt***

Permissions meaning differ with ref to files and directories-

	Permission	File	Directory
	r	read file	list files (ls)
	w	modify file	create/delete files
23. <i>chmod u+x combined</i>	x	run file	enter directory (cd)

--Grant execute permission to owner.
Check the new permission using ***ls -l***

combined

24. ***chmod g-r combined*** -- Remove read permission from group
25. ***chmod 777 combined*** -- giving rwx= 111=7, full permission to all user, group and others

26. ***sudo useradd alice*** -- new user created using sudo super user
27. ***sudo passwd alice*** -- set new password using passwd
28. ***sudo userdel alice***

If in a network server, write command can work like a "chat" with someone logged into the same system(server)

The write command sends a real-time message to another user.

Both the sender and receiver must be logged into the same system.

The message is displayed directly on the receiver's terminal

Syntax : ***write username [tty]***

username: The name of the user you want to send the message to.

tty (optional): Specifies the exact terminal session of the user (useful if the user has multiple sessions open).

Ex: ***write alice***

There is also an option for the user to enable/block messaging using ***mesg y*** or ***mesg n***