

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 .***
 - xxxi. ***drwxr-xr-x 1 user 197121 0 Nov 7 10:15 ..***
 - xxxi. ***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 .stmcufinder/***
xliii. ***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.regtrans-ms***
lxi. ***-rw-r--r-- 1 user 197121 1048576 Jan 24 17:06 NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.1.regtrans-ms***
lxii. ***-rw-r--r-- 1 user 197121 1048576 Jan 24 17:06 NTUSER.DAT{52188355-bb94-11f0-ae02-d977119a7264}.TxR.2.regtrans-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 0000000000000000000001.regtrans-ms***
lxvi. ***-rw-r--r-- 1 user 197121 524288 Nov 7 10:15 NTUSER.DAT{52188356-bb94-11f0-ae02-d977119a7264}.TMContainer***

0000000000000000000002.regtrans-ms

lxvii. **Irwxrwxrwx 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/**

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

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

lxxx. **Irwxrwxrwx 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 grancode'/**

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/**

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

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

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.

ci.

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

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

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***
cxi. ***-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

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 ~***

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. chmod u+x combined

--Grant execute permission to owner. x

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***