

Operating Systems Laboratory (CSE 4510)
WEEK 1
Basic Linux Shell Commands (Ubuntu Demo Guide)

1. Navigation Commands

Command	Purpose	Example / Result
<code>pwd</code>	Shows current directory path	Example: <code>pwd</code> Result: <code>/home/enamul</code>
<code>ls</code>	Lists files and directories	Example: <code>ls</code> Result: <code>Desktop Documents Downloads</code>
<code>ls -l</code>	Lists files with details	Example: <code>ls -l</code> Result: <code>-rw-r--r-- 1 enamul enamul 1248 Nov 11 notes.txt</code>
<code>cd Documents</code>	Change to Documents folder	Example: <code>cd Documents</code> Result: Moves into Documents
<code>cd ..</code>	Go back to previous directory	Example: <code>cd ..</code> Result: Moves up one level

2. File and Directory Management

Command	Purpose	Example / Result
<code>mkdir testlab</code>	Create a new folder named testlab	Example: <code>mkdir testlab</code> Result: Creates directory 'testlab'
<code>rmdir testlab</code>	Remove an empty directory	Example: <code>rmdir testlab</code> Result: Removes folder if empty
<code>touch note.txt</code>	Create an empty file	Example: <code>touch note.txt</code> Result: Creates a blank file
<code>cp note.txt copy.txt</code>	Copy file to a new file	Example: <code>cp note.txt copy.txt</code> Result: Creates 'copy.txt'
<code>mv note.txt note1.txt</code>	Rename or move file	Example: <code>mv note.txt note1.txt</code> Result: Renames file
<code>rm copy.txt</code>	Delete a file	Example: <code>rm copy.txt</code> Result: File removed
<code>rm -r testlab</code>	Delete a folder with all contents	Example: <code>rm -r testlab</code> Result: Deletes directory recursively

3. Viewing and Editing Files

Command	Purpose	Example / Result
cat file.txt	View content of file	Example: cat file.txt Result: Displays text inside file
nano file.txt	Edit file using nano editor	Example: nano file.txt Result: Opens nano text editor
echo 'Hello UIU Students!' > hello.txt	Create or overwrite file with text	Example: echo 'Hello UIU Students!' > hello.txt Result: Writes text to file

4. System Information Commands

Command	Purpose	Example / Result
whoami	Show current user	Example: whoami Result: enamul
date	Display date and time	Example: date Result: Mon Nov 11 22:15:00 +0600 2025
uname -a	Show system info	Example: uname -a Result: Linux ubuntu 6.1.0-15-generic ...
history	Show previous commands	Example: history Result: 1 pwd 2 ls 3 cd Documents ...
clear	Clear terminal	Example: clear Result: Screen cleared
exit	Close terminal session	Example: exit Result: Session terminated

5. GUI Integration (Optional)

Command	Purpose	Example / Result
xdg-open .	Open current folder in File Manager	Example: xdg-open . Result: Opens GUI file explorer
xdg-open file.txt	Open file with default GUI app	Example: xdg-open file.txt Result: Opens file in text viewer

PRACTICE 1: Let's create a text file, write and then open it.

Solve:

Command	Purpose	Example
touch	Creates an empty file	touch notes.txt
echo	Creates a file with text inside	echo "Hello Linux World" > hello.txt
cat	Lets you type text manually and save	cat > diary.txt (then type text, press Ctrl+D to save)
nano	Opens a text editor to write inside	nano myfile.txt

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