Here's a **detailed tutorial on basic terminal commands** that work on **Linux, macOS, and Git Bash (Windows)**. These commands are essential for navigating and managing files from the terminal, especially for coding and version control (e.g., Git, VS Code, etc.).

✅ 1. Navigation Commands

pwd – Print Working Directory

Shows the current location in the filesystem.

```
pwd
```

📌 Output example:

```
/Users/yourname/projects
```

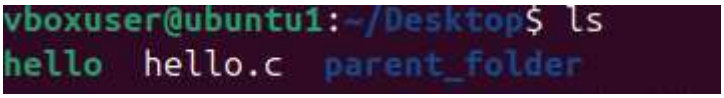
---

ls – List Directory Contents

Lists files and folders in the current directory.

```
ls
```

- `ls -l` → Detailed list (permissions, size, date)
- `ls -a` → Shows hidden files (those starting with `.`)
- `ls -la` → Combined



`cd` – Change Directory

Moves into a directory.

```
cd folder_name
```

Examples:

```
cd Documents        # Go to Documents
cd ..               # Go up one level
cd /                # Go to root
cd ~                # Go to home directory
```

✅ 2. File and Directory Management

`mkdir` – Make Directory

Creates a new folder.

```
mkdir new_folder
```

`touch` – Create File

Creates an empty file.

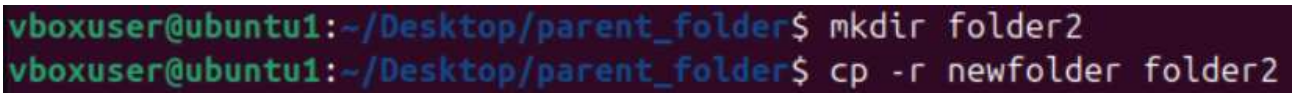
```
touch file.txt
```

cp – Copy Files or Directories

```
cp source.txt destination.txt
```

- Copy folder:

```
cp -r folder1 folder2
```



mv – Move or Rename Files

```
mv oldname.txt newname.txt
```

```
mv file.txt ~/Documents/     # Move file
```

rm – Remove Files

```
rm file.txt          # Delete file
rm -r folder_name    # Delete folder (recursively)
```

⚠️ **Be careful!** There is no undo.

✅ 3. File Viewing & Editing

`cat` – View File Contents

Displays content in terminal.

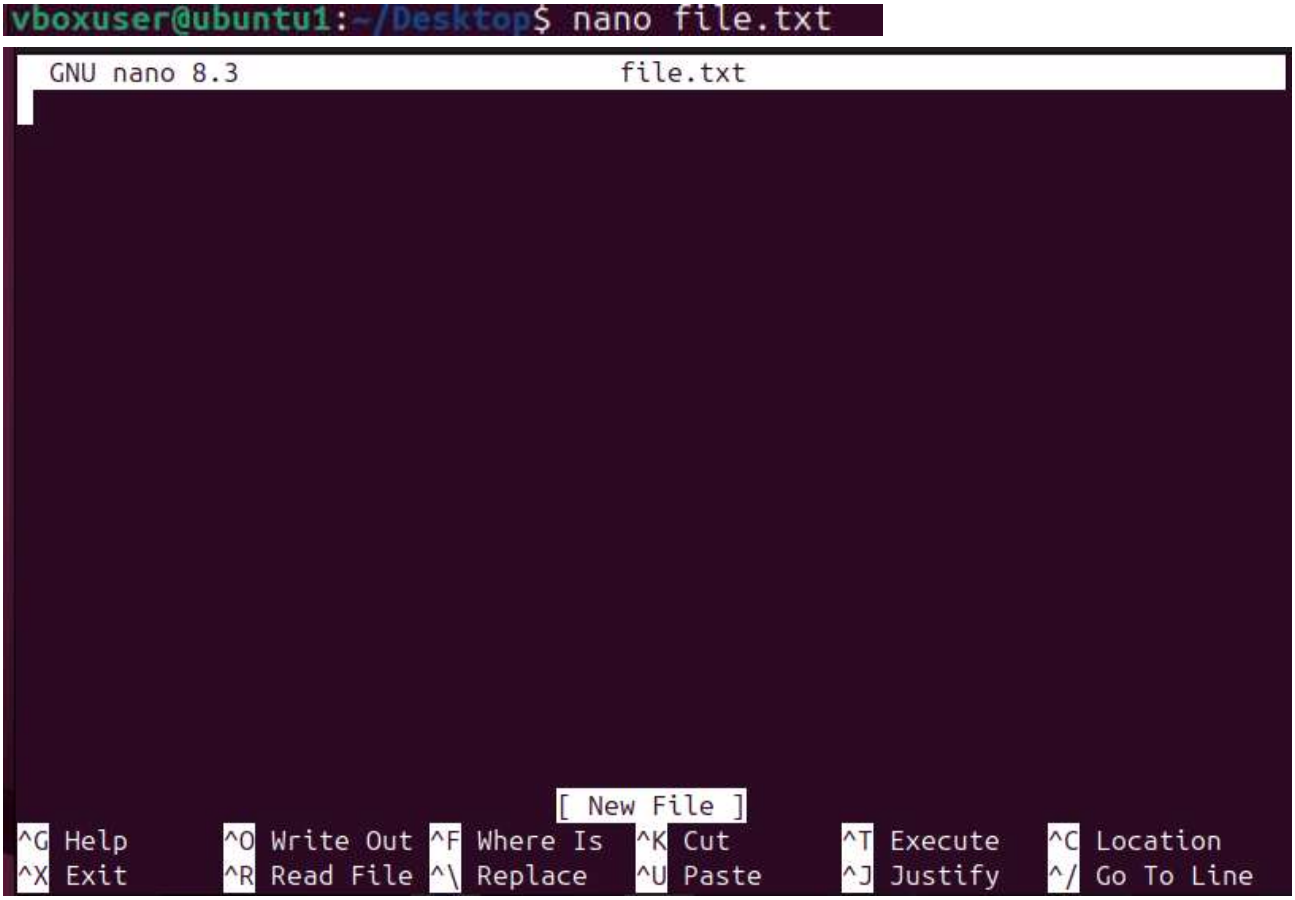
```
cat file.txt
```

`nano` – Edit Files in Terminal

A basic terminal-based text editor.

```
nano file.txt
```

- Use arrows to move
- `CTRL + O` to save
- `CTRL + X` to exit



`clear` – Clears the Terminal

```
clear
```

Shortcut: `CTRL + L`

✅ 4. System Commands

`echo` – Print Text

Useful for debugging or scripting.

```
echo "Hello, World!"
```

```
vboxuser@ubuntu1:~/Desktop/parent_folder$ echo "hello world"
hello world
```

`whoami` – Show Current User

```
whoami
```

```
vboxuser@ubuntu1:~/Desktop/parent_folder$ whoami
vboxuser
```

`man` – Manual for Any Command

```
man ls
```

Use `q` to quit the manual.

✅ 5. Searching and Finding

`find` – Locate Files

```
find . -name "*.txt"
```

🔍 Finds all `.txt` files in current folder and subfolders.

`grep` – Search Inside Files

```
grep "hello" file.txt
```

🔍 Searches for the word `hello` inside `file.txt`.

✅ 6. Helpful Shortcuts

Shortcut	Action
`Tab`	Auto-complete files/folders
`↑ / ↓`	Browse command history
`CTRL + C`	Stop a running command
`CTRL + L`	Clear screen

✅ 7. Bonus: Chaining Commands

- **Run multiple commands**:

```
mkdir test && cd test && touch hello.txt
```

- **Run only if previous command succeeds**: `&&`
- **Run regardless of success**: `;`

// What is differece b\w chmod and chown? =>chmod

changes permissions of a file or directory.
decides whether a user can read, write, or execute a file.
affects access rights.

=>chown

changes the ownership of a file or directory. decides which user or group owns the file.
chown affects file ownership.