**File System Navigation :**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **cd** | Changes the current working directory. | cd Documents |
| **ls** | Lists files and directories in the current directory. | ls |
| **pwd** | Prints the current working directory. | pwd |
| **mkdir** | Creates a new directory. | mkdir new\_folder |
| **rmdir** | Removes an empty directory. | rmdir empty\_folder |
| **mv** | Moves files or directories. | mv file1.txt Documents/ |

**File Manipulation**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **touch** | Creates an empty file or updates the access and modification times. | touch new\_file.txt |
| **cp** | Copies files or directories. | cp file1.txt file2.txt |
| **mv** | Moves files or directories. | mv file1.txt Documents |
| **rm** | Remove files or directories. | rm old\_file.txt |
| **cat** | Concatenates files and displays their contents. | cat file1.txt file2.txt |
| **head** | Displays the first few lines of a file. | head file.txt |
| **tail** | Displays the last few lines of a file. | tail file.txt |

**Process Management**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **ps** | Displays information about active processes, including their status and IDs. | ps aux |
| **top** | Displays a dynamic real-time view of system processes and their resource usage. | top |
| **kill** | Terminates processes using their process IDs (PIDs). | kill <pid> |
| **pkill** | Sends signals to processes based on name or other attributes. | pkill -9 firefox |
| **killall** | Terminates processes by name. | killall -9 firefox |
| **renice** | Changes the priority of running processes. | renice -n 10 <pid> |
| **nice** | Runs a command with modified scheduling priority. | nice -n 10 command |
| **pstree** | Displays running processes as a tree. | pstree |
| **pgrep** | Searches for processes by name or other attributes. | pgrep firefox |
| **jobs** | Lists active jobs and their status in the current shell session. | jobs |

**Text Processing**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **grep** | Searches for patterns in text files. | grep "error" logfile.txt |

**Network Communication**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **ping** | Tests connectivity with another host using ICMP echo requests. | ping google.com |
| **host** | Performs DNS lookups, displaying domain name to IP address resolution. | host google.com |
| **hostname** | Displays or sets the system’s hostname. | hostname |

**System Administration**

| **Command** | **Description** | **Example** |
| --- | --- | --- |
| **df** | Displays disk space usage. | df -h |
| **du** | Displays disk usage of files and directories. | du -sh /path/to/directory |