Linux command

1. **pwd**
   - **Purpose**: Displays the current directory's full path.
   - **Example**:
     ```
     pwd
     ```
     Output: `/home/user`

2. **ls**
   - **Purpose**: Lists files and directories in the current directory.
   - **Example**:
     ```
     ls
     ```
     Use `ls -a` to include hidden files or `ls -l` for detailed information.

3. **cd**
   - **Purpose**: Change the current working directory.
   - **Example**:
     ```
     cd /home/user/documents
     ```
     Moves into the specified directory.

4. **mkdir**
   - **Purpose**: Creates a new directory.
   - **Example**:
     ```
     mkdir my_folder
     ```
     Creates a directory named `my_folder`.

5. **rmdir**
   - **Purpose**: Deletes an empty directory.
   - **Example**:
     ```
     rmdir my_folder
     ```
     Removes the directory `my_folder`.

6. **rm**
   - **Purpose**: Deletes files or directories.
   - **Example**:
     ```
     rm file.txt
     ```
     Deletes `file.txt`. Use `rm -r folder_name` to remove directories recursively.

7. **touch**
   - **Purpose**: Creates an empty file or updates the timestamp of an existing file.
   - **Example**:
     ```
     touch newfile.txt
     ```
     Creates a blank file named `newfile.txt`.

8. **cp**
   - **Purpose**: Copies files or directories.
   - **Example**:
     ```
     cp source.txt destination.txt
     ```
     Copies `source.txt` to `destination.txt`.

9. **mv**
   - **Purpose**: Moves or renames files/directories.
   - **Example**:
     ```
     mv old_name.txt new_name.txt
     ```
     Renames the file `old_name.txt` to `new_name.txt`.

10. **cat**
    o **Purpose**: Displays the content of a file.
    o **Example**:
      ```
      cat file.txt
      ```
      Prints the content of `file.txt` to the terminal.
11. **nano**
    o **Purpose**: Opens a file in the Nano text editor.
    o **Example**:
      ```
      nano file.txt
      ```
      Opens `file.txt` for editing.
12. **echo**
    o **Purpose**: Prints text or variables to the terminal.
    o **Example**:
      ```
      echo "Hello, World!"
      ```
      Displays: `Hello, World!`.
13. **find**
    o **Purpose**: Searches for files or directories.
    o **Example**:
      ```
      find /home -name file.txt
      ```
      Searches for `file.txt` in `/home`.

14. **grep**
    o **Purpose**: Searches for text patterns in files.
    o **Example**:
      ```
      grep "text" file.txt
      ```
      Finds and displays lines containing "text" in `file.txt`.
15. **chmod**
    o **Purpose**: Changes file or directory permissions.
    o **Example**:
      ```
      chmod 755 script.sh
      ```
      Assigns read, write, and execute permissions to the owner.
16. **df**
    o **Purpose**: Displays disk space usage.
    o **Example**:
      ```
      df -h
      ```
      Shows disk space in a human-readable format.
17. **du**
    o **Purpose**: Displays the size of directories or files.
    o **Example**:
      ```
      du -sh /home/user
      ```
      Displays the size of the `/home/user` directory.
18. **ps**
    o **Purpose**: Lists running processes.
    o **Example**:
      ```
      ps -aux
      ```
      Shows detailed information about all running processes.

19. `top`
    - **Purpose**: Monitors real-time system resource usage.
    - **Example**:
      ```
      top
      ```
      Displays CPU and memory usage dynamically.
20. `kill`
    - **Purpose**: Terminates processes by ID.
    - **Example**:
      ```
      kill 1234
      ```
      Kills the process with ID 1234.
21. `tar`
    - **Purpose**: Archives files or extracts archives.
    - **Example**:
      ```
      tar -czvf archive.tar.gz file1 file2
      ```
      Creates a compressed archive of `file1` and `file2`.
22. `zip`
    - **Purpose**: Compresses files into a zip archive.
    - **Example**:
      ```
      zip archive.zip file.txt
      ```
      Creates a zip file `archive.zip` containing `file.txt`.
23. `unzip`
    - **Purpose**: Extracts files from a zip archive.
    - **Example**:
      ```
      unzip archive.zip
      ```
      Extracts the contents of `archive.zip`.
24. `wget`
    - **Purpose**: Downloads files from the internet.
    - **Example**:
      ```
      wget https://example.com/file.txt
      ```
      Downloads `file.txt` from the specified URL.
25. `curl`
    - **Purpose**: Transfers data from or to a server.
    - **Example**:
      ```
      curl https://example.com
      ```
      Fetches the contents of the URL.
26. `ifconfig`
    - **Purpose**: Displays or configures network interfaces.
    - **Example**:
      ```
      ifconfig
      ```
      Shows IP and network details.
27. `ping`
    - **Purpose**: Tests network connectivity to a host.
    - **Example**:
      ```
      ping google.com
      ```
      Sends ICMP requests to `google.com`.
28. `netstat`
    - **Purpose**: Displays network connections and statistics.

- **Example**:
  ```
  netstat -tuln
  ```
  Lists active listening ports.

29. **ssh**
- **Purpose**: Connects to a remote machine securely.
- **Example**:
  ```
  ssh user@192.168.1.1
  ```
  Logs into the remote host.

30. **man**
- **Purpose**: Displays the manual for a command.
- **Example**:
  ```
  man ls
  ```
  Shows the manual page for the ls command.

31. **alias**
- **Purpose**: Creates shortcuts for commands.
- **Example**:
  ```
  alias ll='ls -la'
  ```
  Sets ll as a shortcut for ls -la.

32. **history**
- **Purpose**: Displays previously executed commands.
- **Example**:
  ```
  history
  ```
  Shows a list of past commands.