LINUX COMMANDS

1. `pwd` - Print Working Directory

- Displays the current directory.

2. `ls` - List Directory Contents

- Displays files and directories in the current directory.

3. `cd` - Change Directory

- Used to navigate between directories.

4. `mkdir` - Make Directory

- Creates a new directory.

5. `rmdir` - Remove Directory

- Removes an empty directory.

6. `touch` - Create a new file

- Creates an empty file or updates the timestamp of an existing file.

7. `rm` - Remove Files or Directories

- Deletes files or directories.

8. `cp` - Copy Files and Directories

- Copies files or directories.

9. `mv` - Move Files or Directories

- Moves files or directories, or renames them.

10. `cat` - Concatenate and Display Files

- Displays the content of a file.

11. `more` - View File Content

- Views the content of a file one page at a time.

12. `less` - View File Content (Backward Navigation Supported)

- Displays file content with the ability to scroll backward.

13. `head` - Output the First Part of Files

- Displays the first 10 lines of a file.

14. `tail` - Output the Last Part of Files

- Displays the last 10 lines of a file.

15. `grep` - Search Text Using Patterns

- Searches for a specific pattern in files.

16. `find` - Search for Files

- Finds files and directories.

17. `locate` - Locate Files by Name

- Finds files using a pre-built database.

18. `which` - Locate a Command

- Shows the path of the executable for a command.

19. `man` - Display Manual Pages

- Displays the manual (help) for a command.

20. `chmod` - Change File Modes or Access Control Lists

- Changes file or directory permissions.

21. `chown` - Change File Owner and Group

- Changes the ownership of a file or directory.

22. `chgrp` - Change Group Ownership

- Changes the group of a file or directory.

23. `ps` - Report Process Status

- Displays information about active processes.

24. `top` - Display Linux Tasks

- Displays real-time system tasks and processes.

25. `kill` - Terminate a Process

- Sends signals to processes (e.g., to terminate a process).

26. `killall` - Terminate All Processes by Name

- Kills all processes by the given name.

27. `free` - Display Memory Usage

- Shows the amount of free and used memory in the system.

28. `df` - Report File System Disk Space Usage

- Displays the available disk space for file systems.

29. `du` - Estimate File Space Usage

- Shows the disk space used by files and directories.

30. `mount` - Mount a File System

- Mounts a file system to a specified directory.

31. `umount` - Unmount a File System

- Unmounts a mounted file system.

32. `ifconfig` - Configure Network Interfaces

- Displays or configures network interfaces.

33. `ip` - Show/Manipulate Routing, Devices, and Tunnels

- A more modern alternative to `ifconfig`.

34. `ping` - Send ICMP Echo Request

- Checks network connectivity to a host.

35. `wget` - Non-interactive Network Downloader

- Downloads files from the web.

36. `curl` - Transfer Data from or to a Server

- Transfers data using URL syntax.

37. `scp` - Secure Copy (Remote File Copy)

- Copies files securely between hosts over SSH.

38. `rsync` - Remote Synchronization

- Synchronizes files and directories between two locations.

39. `tar` - Archive Files

- Creates or extracts tar archive files.

40. `gzip` - Compress Files

- Compresses files using the gzip algorithm.

41. `bzip2` - Compress Files

- Compresses files using the bzip2 algorithm.

42. `unzip` - Extract Files from a ZIP Archive

- Extracts files from ZIP archives.

43. `zip` - Package and Compress Files

- Creates ZIP archive files.

44. `alias` - Create Aliases for Commands

- Defines shortcuts for commands.

45. `unzip` - Uncompress ZIP Files

- Extracts files from `.zip` archives.

46. `diff` - Compare Files Line by Line

- Compares the contents of two files.

47. `cmp` - Compare Two Files Byte by Byte

- Compares files byte by byte.

48. `comm` - Compare Two Sorted Files Line by Line

- Compares two sorted files line by line.

49. `sort` - Sort Lines of Text Files

- Sorts the contents of a file.

50. `uniq` - Report or Omit Repeated Lines

- Removes duplicate lines from a sorted file.

51. `wc` - Word, Line, Character, and Byte Count

- Counts words, lines, characters, and bytes in a file.

52. `tee` - Read from Standard Input and Write to Standard Output and Files

- Reads from standard input and writes to standard output and files simultaneously.

53. `xargs` - Build and Execute Command Lines from Standard Input

- Constructs argument lists and runs commands.

54. `cron` - Daemon to Execute Scheduled Commands

- Runs scheduled tasks.

55. `crontab` - Edit User's Crontab

- Manages cron jobs.

56. `at` - Schedule a Command to Run Once

- Schedules a one-time command.

57. `uptime` - Show How Long the System Has Been Running

- Displays the system uptime.

58. `hostname` - Show or Set the System's Hostname

- Displays or sets the system's hostname.

59. `whoami` - Print Effective User ID

- Displays the current logged-in username.

60. `users` - Display Logged-in Users

- Displays currently logged-in users.

61. `last` - Show Last Logins of Users

- Displays the history of login attempts.

62. `history` - Show Command History

- Shows the history of executed commands.

63. `alias` - Create Aliases for Commands

- Creates custom aliases for commands.

64. `exit` - Exit from the Shell

- Exits the shell.

65. `shutdown` - Shutdown or Restart the System

- Shuts down or reboots the system.

66. `reboot` - Reboot the System

- Reboots the system.

67. `dmesg` - Print Kernel Ring Buffer

- Displays the kernel's message buffer.

68. `journalctl` - Query the Systemd Journal

- Views logs from the systemd journal.

69. `systemctl` - Control Systemd System and Service Manager

- Controls system services and the system itself.

70. `service` - Control Service Daemons

- Starts, stops, and manages services.

71. `ps aux` - View All Processes

- Displays a detailed list of running processes.

72. `fg` - Bring Job to Foreground

- Brings a background process to the foreground.

73. `bg` - Resume Job in Background

- Resumes a paused job in the background.

74. `jobs` - List Active Jobs

- Displays the active jobs.

75. `nohup` - Run Command Without Hangup

- Runs a command without it being terminated.

76. `strace` - Trace System Calls and Signals

- Traces system calls of a command.

77. `lsof` - List Open Files

- Lists information about files opened by processes.

78. `df -h` - Display Disk Space in Human Readable Format

- Displays disk space with human-readable units.

79. `find . -name "filename"` - Find Files by Name

- Finds files matching the specified name.

80. `tar -cvf` - Create a Tar Archive

- Archives files into a `.tar` file.

81. `tar -xvf` - Extract a Tar Archive

- Extracts files from a `.tar` file.

82. `echo` - Display a Line of Text

- Prints text to the terminal.

83. `tee` - Duplicate Output to File and Terminal

- Writes to both the terminal and a file.

84. `cut` - Remove Sections from Each Line of Files

- Removes specific sections of text from files.

85. `paste` - Merge Lines of Files

- Merges lines from multiple files.

86. `nl` - Number the Lines of Files

- Adds line numbers to the output.

87. `timeout` - Run Command with Timeout

- Executes a command with a specified time limit.

88. `apt-get` - Package Management for Debian/Ubuntu

- Installs and manages packages.

89. `yum` - Package Management for RHEL/CentOS

- Installs and manages packages.

90. `dnf` - Package Management for Fedora

- Installs and manages packages (Fedora).

91. `dpkg` - Debian Package Manager

- Manages `.deb` packages.

92. `rpm` - Red Hat Package Manager

- Installs and manages `.rpm` packages.

93. `systemd-analyze` - Analyze the Boot Process

- Displays boot performance information.

94. `lscpu` - Display CPU Architecture Information

- Displays CPU details.

95. `lsblk` - List Information About Block Devices

- Lists information about available block devices.

96. `mount -o loop` - Mount a File as a Disk

- Mounts an ISO or image file as a disk.

97. `nc` - Netcat (Network Utility)

- A network tool used for reading and writing data across network connections.

98. `who` - Who is Logged In

- Displays the list of users currently logged into the system.

99. `lastlog` - Display Most Recent Login of All Users

- Shows the most recent login of each user.

100. `ip link show` - Show Network Interface Status

- Displays the status of network interfaces.

Linux Interview Questions:

1. What is Linux?

- A brief description of Linux, its components, and its benefits.

2. What is a kernel?

- Discuss the role of the kernel in an operating system.

3. What is the difference between Linux and UNIX?

- Discuss key differences, such as architecture, cost, and licensing.

4. Explain the file system hierarchy in Linux.

- Describe key directories (`/bin`, `/etc`, `/home`, `/root`, etc.).

5. What is the difference between `chmod` and `chown`?

- Explain how `chmod` changes permissions and `chown` changes file ownership.

6. How do you find out which processes are running on the system?

- Use `ps`, `top`, or `htop` to display running processes.

7. How would you check disk usage?

- Use `df`, `du` to check disk usage.

8. How do you schedule a task in Linux?

- Discuss `cron` jobs and `at` command.

9. How do you check network configuration in Linux?

- Use `ifconfig`, `ip a`, `netstat`.

10. How do you find a file in Linux?

- Use `find`, `locate`, `which`.

11. Explain the difference between soft and hard links.

- Discuss how symbolic and hard links differ in terms of references.

12. What is the purpose of the `grep` command?

- Explain the functionality of `grep` for pattern matching.

13. What is `systemd`?

- Describe `systemd` as a system and service manager for Linux.

14. Explain the difference between `apt` and `yum`.

- Discuss package managers in Debian/Ubuntu (APT) vs RHEL/CentOS (YUM).

15. How would you find out about a command's options?

- Use `man` or `--help` with commands.

16. Explain the use of the `chmod` command.

- Discuss how to modify file permissions with `chmod`.

17. What is the difference between `sudo` and `su`?

- `sudo` runs commands with root privileges; `su` switches users.

18. What is the purpose of the `ps` command?

- Discuss how to use `ps` to display process information.

19. What is `vi` and how do you use it?

- Basic commands in the `vi` editor (e.g., insert, save, exit).

20. What are the different types of users in Linux?

- Discuss root, regular users, and system users.