

50 Linux Interview Questions and Answers

1. What is Linux?

Answer: Linux is an open-source operating system based on Unix, used widely in servers, desktops, and embedded systems.

2. What is the Linux kernel?

Answer: The kernel is the core part of Linux that manages hardware, processes, memory, and system calls.

3. What is the role of the shell in Linux?

Answer: The shell is a command-line interface that allows users to interact with the operating system.

4. Name different types of shells.

Answer: Common shells include bash, sh, zsh, and csh.

5. What is the default shell in most Linux distributions?

Answer: Bash (Bourne Again SHell) is the default shell in most Linux distributions.

6. What is the root directory in Linux?

Answer: The root directory is the top-level directory denoted by '/'. All other directories branch from it.

7. Explain the Linux file system hierarchy.

Answer: It includes directories like /bin, /etc, /home, /var, /usr, each serving specific purposes.

8. What is the difference between absolute and relative paths?

Answer: Absolute paths start from root (/), while relative paths are based on the current directory.

9. What does '.' and '..' mean in Linux?

Answer: '.' refers to the current directory, '..' refers to the parent directory.

10. How do you find hidden files in Linux?

Answer: Use 'ls -a' to list all files including hidden ones.

11. What does the 'ls' command do?

Answer: It lists files and directories in the current directory.

12. How do you create a new directory?

Answer: Use 'mkdir directory_name'.

13. How do you copy, move, and delete files?

Answer: Use 'cp' to copy, 'mv' to move/rename, and 'rm' to delete files.

14. What is the use of 'cat', 'more', and 'less'?

Answer: They display file contents; 'less' allows backward navigation.

15. How do you check your current directory?

Answer: Use 'pwd' (print working directory).

16. What are the three types of permissions?

Answer: Read (r), Write (w), Execute (x).

17. How do you view file permissions?

Answer: Use 'ls -l'.

18. Difference between chmod, chown, and chgrp?

Answer: 'chmod' changes permissions, 'chown' changes owner, 'chgrp' changes group.

19. What does 'chmod 755' mean?

Answer: Owner: rwx, Group: r-x, Others: r-x.

20. What is sticky bit, setuid, and setgid?

Answer: Special permissions for security and shared access control.

21. How do you create a new user?

Answer: Use 'useradd username'.

22. How do you add a user to a group?

Answer: Use 'usermod -aG groupname username'.

23. What is /etc/passwd?

Answer: A file that stores user account information.

24. How do you switch users?

Answer: Use 'su username' or 'sudo -i'.

25. Difference between su and sudo?

Answer: 'su' switches user, 'sudo' runs commands as another user.

26. How do you list running processes?

Answer: Use 'ps' or 'top'.

27. Difference between ps and top?

Answer: 'ps' shows snapshot, 'top' shows live processes.

28. How do you kill a process?

Answer: Use 'kill PID' or 'killall processname'.

29. What is a zombie process?

Answer: A process that has completed but still has an entry in the process table.

30. How do you change process priority?

Answer: Use 'nice' and 'renice'.

31. Difference between apt and yum?

Answer: 'apt' is for Debian-based systems, 'yum' is for Red Hat-based systems.

32. How do you install a package?

Answer: Use 'apt install package' or 'yum install package'.

33. Purpose of dpkg and rpm?

Answer: Low-level package managers for Debian and Red Hat systems respectively.

34. How do you check installed packages?

Answer: Use 'dpkg -l' or 'rpm -qa'.

35. What is a repository?

Answer: A storage location for software packages.

36. What is input/output redirection?

Answer: Redirecting command output/input using >, <, >>.

37. How do you use pipes?

Answer: Use '|' to pass output of one command to another.

38. Difference between > and >>?

Answer: '>' overwrites, '>>' appends.

39. How do you combine commands using pipes?

Answer: Example: 'ls | grep filename'.

40. Difference between tee and cat?

Answer: 'tee' writes to file and displays output, 'cat' only displays.

41. How do you check disk usage?

Answer: Use 'df -h' and 'du -sh'.

42. How do you monitor memory and CPU?

Answer: Use 'top', 'htop', or 'free -m'.

43. What is the df and du command?

Answer: 'df' shows disk space, 'du' shows directory size.

44. Where are system logs stored?

Answer: In '/var/log'.

45. How do you view logs using grep?

Answer: Use 'grep keyword /var/log/logfile'.

46. What is a shell script?

Answer: A file containing a series of shell commands.

47. How do you make a script executable?

Answer: Use 'chmod +x script.sh'.

48. What is cron?

Answer: A tool to schedule tasks.

49. How do you schedule a job using crontab?

Answer: Use 'crontab -e' and add timing and command.

50. Difference between bash and sh?

Answer: 'bash' is an enhanced version of 'sh' with more features.