Week 1 Self-Test: Linux Foundations – Ethical Hacking Journey (Day 1–5)

By Samuel Mburu | October 27, 2025

This 50-question self-assessment covers all core topics from your first week of learning ethical hacking through Linux — including navigation, permissions, file handling, processes, and system understanding. It's designed to test both recall and reasoning, simulating real command-line problem-solving scenarios.

1. What command is used to change directories in Linux?

2. Explain the difference between absolute and relative paths.

3. Which command lists all files, including hidden ones, in a directory?

4. How do you display the current working directory?

5. What does the command `ls -l` show that `ls` does not?

6. Describe the purpose of the `pwd` command.

7. How would you create a new directory named `projects`?

8. Which command removes an empty directory?

9. What's the difference between `rm file.txt` and `rm -r folder`?

10. Explain the function of the `cat` command.

11. How can you view the first 10 lines of a file?

12. What command is used to filter output based on a keyword?

13. Explain the use of the pipe (`|`) operator in Linux.

14. How would you combine two files named `a.txt` and `b.txt` into one called `combined.txt`?

15. What does `chmod 755 script.sh` do?

16. Explain what the three sets of permissions (rwx) represent in Linux.

17. How can you check who owns a specific file?

18. What's the difference between `chown` and `chgrp`?

19. What happens if you execute a command without permission?

20. Explain what `sudo` does and why it's important.

21. How do you view all running processes on the system?

22. What's the difference between `ps` and `top`?

23. How do you kill a process by its PID?

24. What command is used to check system uptime?

25. What's the function of the `/etc/passwd` file?

26. Explain the purpose of the `/var/log` directory.

27. What does the command `df -h` show you?

28. How can you check available memory in your system?

29. What is the meaning of the command `grep -r 'error' /var/log`?

30. How do you redirect output from a command into a file?

31. What's the difference between `>` and `>>` in redirection?

32. Explain how environment variables work in Linux.

33. What command lists environment variables?

34. How can you create a temporary alias in your terminal session?

35. Where can you permanently store aliases to persist across sessions?

36. What command displays the manual page of another command?

37. Explain the role of the `.bashrc` file.

38. How would you find the full path of a command like `python3`?

39. What is the purpose of the `which` command?

40. How can you chain commands to execute one only if the previous succeeds?

41. What's the use of the `&&` and `||` operators in Bash?

42. How would you count the number of lines in a file using a command?

43. Explain the difference between `echo` and `printf`.

44. How do you compress and extract a `.tar.gz` archive?

45. What's the command to check disk usage of the current directory?

46. How would you search for a file named `config.txt` in your system?

47. Explain how symbolic links differ from hard links.

48. What's the difference between the root user and a regular user?

49. How can you view your command history?

50. What's the importance of learning Linux for cybersecurity?