LP - Assignment 6 (Linux Programming)

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1. Which command is used to list the contents of a directory?

Command: `ls`Example: `ls /home` lists all files and directories inside /home.

2. Write the command to create a new directory named 123test_dir.

Command: `mkdir 123test_dir`

3. What is the purpose of the sed command?

The sed (stream editor) command is used to modify or transform text in a file or input stream.Example: `sed 's/Linux/Ubuntu/g' file.txt` replaces all occurrences of 'Linux' with 'Ubuntu'.

4. Which command is used to display one-line descriptions of commands?

Command: `whatis`Example: `whatis grep` displays a short description of grep.

5. Write the command to create an empty file named notes.txt.

Command: `touch notes.txt`

6. Differentiate between grep and awk commands with an example.

grep is used for simple text searching based on patterns.awk is used for advanced text processing and data extraction.Example:grep "Linux" file.txt → finds lines containing Linuxawk '{print $1}' file.txt → prints the first column from each line

7. Write the command to give read, write, and execute permission to the owner of a file script.sh.

Command: `chmod u+rwx script.sh`

8. How is chown different from chgrp?

chown changes ownership of a file, chgrp changes its group ownership.Example:`chown user1 file.txt``chgrp staff file.txt`

9. A user cannot execute a file even though it exists. How would you troubleshoot this?

1. Check permissions: `ls -l filename`2. If execute permission is missing, use: `chmod +x filename`3. Ensure the user has rights: `whoami` to confirm identity.

10. Design a command pipeline to find all .log files modified in last 2 days in /var/log and save to recent_logs.txt using tee.

Command: `find /var/log -name '*.log' -mtime -2 | tee recent_logs.txt`Explanation: The `find` command locates log files, and `tee` displays and saves them simultaneously.