**Linux Programming: Assignment-6**

**1. Which command is used to list the contents of a directory? Justify with proper example**

Answer:

ls

Example:-

ls

file1.txt file2.txt directory1 directory2

for detailed list

ls -a and ls -l

**2. Write the command to create a new directory named 123test\_dir.**

Answer:

mkdir 123test\_dir

**3. What is the purpose of the sed command? Justify with proper example.**

Answer:

sed command

Example:-

echo "Hello World" | sed 's/World/Universe/'

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

Answer:

whatis

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

Answer:

touch notes.txt

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

Answer:

|  |  |
| --- | --- |
| **grep** | **awk** |
| * Search for patterns in text. | * Pattern scanning and processing, allowing data manipulation. |
| * Prints entire matching lines. | * Can print specific columns or manipulate data. |
| Simple pattern matching. | * Supports programming constructs like variables, loops, and conditionals. |
| * Example:-   grep "error" log.txt | * Example:-   awk '/error/ {print $1}' log.txt |

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

Answer:

chmod u+rwx script.sh

**8. How is chown different from chgrp? Give one example for each.**

Answer:

|  |  |
| --- | --- |
| **chown** | **chgrp** |
| * Changes the ownership (user and/or group) of a file/directory. | * Changes only the group ownership of a file/directory. |
| * chown user: group filename (can change both user and group) | * chgrp group: name filename (only changes group) |
| * chown user1 script.sh (changes the owner to user1) | * chgrp dev script.sh (changes the group to dev) |
| * Example:-   chown user1 script.sh | * Example:-   chgrp dev script.sh |

**9. A user complains that they cannot execute a file even though it exists in their directory. How would you troubleshoot this using ls -l, chmod, and whoami?**

Answer:

* ls -l -file's permissions and ownership.
* whoami -current user.
* If thre is no execute permission then using chomd

**10. Design a command pipeline to: find all .log files modified in the last 2 days in /var/log, display them on screen, and save the results into a file recent\_logs.txt using tee command.**

Answer:

find /var/log -type f -name "\*.log" -mtime -2 | tee recent\_logs.txt