# Lab Assignment 2 – Ubuntu Commands

## Aim:

To study and understand Ubuntu Commands.

## To Perform:

Execute different commands and document their outputs.

## Outputs of the following commands:

1. pwd – Prints the current working directory.
2. cd – Changes the directory.
3. ls – Lists the contents of a directory.
4. mkdir – Creates a new directory.
5. rm – Deletes files or directories.
6. touch – Creates empty files.
7. hostname – Displays the system’s hostname.
8. cat – Displays file contents.
9. chmod – Changes file permissions.
10. echo – Prints text or variables to the terminal.
11. grep – Searches for a pattern in a file.
12. fgrep – Similar to grep, but optimized for fixed strings.
13. mv – Moves or renames files.
14. cp – Copies files or directories.
15. more – Displays file content page by page.
16. less – Similar to more, but allows backward navigation.
17. wc – Counts words, lines, characters in a file.
18. awk – A text-processing command.
19. sed – A stream editor for modifying text.
20. tail – Displays the last lines of a file.

Answers to the following questions:

1. **How to navigate to a specific directory?**
   * Use the cd command followed by the directory path. Example: cd /home/user/Documents
2. **How to see detailed information about files and directories using ls?**
   * Use ls -l to display file details including permissions, size, and modification date.
3. **How to create multiple directories in Linux using the mkdir command?**
   * Use mkdir -p dir1/dir2/dir3 to create nested directories.
4. **How to remove multiple files at once with rm?**
   * Use rm file1 file2 file3 or rm \*.txt to delete all .txt files.
5. **Can rm be used to delete directories?**
   * Yes, use rm -r directory\_name to remove a directory and its contents.
6. **How to copy files and directories in Linux?**
   * Use cp file1 destination/ for files and cp -r dir1 destination/ for directories.
7. **How to rename a file in Linux using the mv command?**
   * Use mv oldname.txt newname.txt to rename a file.
8. **How to move multiple files in Linux using the mv command?**
   * Use mv file1 file2 file3 destination/ to move multiple files.
9. **How to create multiple empty files using the touch command?**
   * Use touch file1 file2 file3 to create multiple files at once.
10. **How to view the content of multiple files in Linux?**
    * Use cat file1 file2 to display contents sequentially.
11. **How to create a file and add content using cat?**
    * Use cat > filename then type content, press Ctrl+D to save.
12. **How to append content of one file to another using cat?**
    * Use cat file1 >> file2 to append file1 contents to file2.
13. **How to use cat if the file has a lot of content?**
    * Use cat filename | more or less filename to scroll through content.
14. **How to merge multiple files using cat?**
    * Use cat file1 file2 > mergedfile.txt.
15. **How to append to an existing file using cat?**
    * Use cat >> filename, type content, then press Ctrl+D to save.
16. **What is chmod 777, chmod 755, and chmod +x?**
    * chmod 777 – Gives all users full permissions (read, write, execute).
    * chmod 755 – Allows owner full control and read/execute permissions for others.
    * chmod +x – Makes a file executable.
17. **How to count the number of lines matching a pattern in a file?**
    * Use grep -c "pattern" filename.
18. **How to display only files containing a specific string?**
    * Use grep "string" filename.
19. **How to match lines starting with a specific string using grep?**
    * Use grep "^string" filename.
20. **Can sort be used to sort files in descending order by default?**
    * No, use sort -r filename to sort in reverse order.
21. **How to sort a file based on a specific column using sort?**
    * Use sort -k column\_number filename.