**4ITRC2 Operating System Lab**

Kanchan Padme

24I4192

**Lab Assignment 2**

**Aim:** To study and understand Ubuntu Commands

**To perform:** Execute different Commands

**To Submit:** Part1 Outputs of the following commands

1. pwd 2. cd 3. ls 4. mkdir

5. rm 6. touch 7. hostname 8. cat

9. chmod 10. echo 11. grep 12. fgrep

13. mv 14. cp 15. more 16. less

17. wc 18. awk 19. sed 20. Tail

Part 2 Answers to the following Questions: (you need to supply commands)

1. How to navigate to a Specific Directory?

2. How to see detailed information about files and directories using ls?

3. How to create multiple directories in Linux using `mkdir` command?

4. How to remove multiple files at once with rm?

5. Can rm be used to delete directories?

6. How Do You Copy Files and Directories in Linux?

7. How to Rename a file in Linux Using mv Command

8. How to Move Multiple files in Linux Using mv Command

9. How to Create Multiple Empty Files by Using Touch Command in Linux

10. How to View the Content of Multiple Files in Linux

11. How to Create a file and add content in Linux Using `cat` Command

12. How to Append the Contents of One File to the End of Another File using cat

command

13. How to use cat command if the file has a lot of content and can’t fit in the

terminal.

14. How to Merge Contents of Multiple Files Using `cat` Command

15. How to use cat Command to Append to an Existing File

16. What is “chmod 777 “, “chmod 755” and “chmod +x “or “chmod a+x”?

17. How to find the number of lines that matches the given string/pattern

18. How to display the files that contains the given string/pattern.

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19. How to show the line number of file with the line matched.

20. How to match the lines that start with a string using grep

21. Can the ‘sort’ command be used to sort files in descending order by default?

22. How can I sort a file based on a specific column using the ‘sort’ command?

**Part 1: Outputs of the following commands**

1. pwd - Displays the present working directory.
2. cd - Changes the directory.
3. ls - Lists files and directories.
4. mkdir - Creates a new directory.
5. rm - Removes files or directories.
6. touch - Creates an empty file.
7. hostname - Displays the system's hostname.
8. cat - Displays file content.
9. chmod - Modifies file permissions.
10. echo - Displays messages or variables.
11. grep - Searches for a pattern in a file.
12. fgrep - Searches for a fixed string in files.
13. mv - Moves or renames a file.
14. cp - Copies files and directories.
15. more - Views file content page by page.
16. less - Views file content with navigation.
17. wc - Counts words, lines, and characters in a file.
18. awk - Processes and extracts text from files.
19. sed - Stream editor for modifying files.
20. tail - Displays the last lines of a file.

**Part 2: Answers to Questions**

1. **Navigate to a Specific Directory:**

cd /path/to/directory

1. **Detailed information about files and directories using ls:**

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ls -l

1. **Create multiple directories using mkdir:**

mkdir dir1 dir2 dir3

1. **Remove multiple files at once with rm:**

rm file1 file2 file3

1. **Can rm delete directories?**

rm -r directory\_name

1. **Copy Files and Directories:**

cp file1 /destination/path/

cp -r directory\_name /destination/path/

1. **Rename a file using mv:**

mv old\_filename new\_filename

1. **Move multiple files using mv:**

mv file1 file2 /destination/path/

1. **Create multiple empty files using touch:**

touch file1 file2 file3

1. **View the content of multiple files:**

cat file1 file2

1. **Create a file and add content using cat:**

cat > filename

(Type content and press Ctrl+D to save)

1. **Append the contents of one file to another:**

cat file1 >> file2

1. **View large files page by page:**

cat filename | less

1. **Merge contents of multiple files:**

cat file1 file2 > merged\_file

1. **Append to an existing file:**

echo "New content" >> filename

1. **Understanding chmod permissions:**
   * chmod 777 filename - Full permissions for everyone.

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* + chmod 755 filename - Owner has full rights, others can read/execute.
  + chmod +x filename - Makes file executable.

1. **Find the number of matching lines using grep:**

grep -c 'pattern' filename

1. **Display files containing a string:**

grep -l 'pattern' \*.txt

1. **Show line numbers with matches:**

grep -n 'pattern' filename

1. **Match lines starting with a string using grep:**

grep '^pattern' filename

1. **Does sort sort in descending order by default?**

No, but you can use:

sort -r filename

1. **Sort a file based on a specific column:**

sort -k2 filename