LINUX PROGRAMMI

Assignment -3

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1. Distinguish between man and whatis commands? Justify with proper example

1. man command

Meaning: Short for manual.

Purpose: Displays the full manual page of a command, showing detailed information such as description, options, usage, examples, and author.

Output: Very detailed, multiple sections (NAME, SYNOPSIS, DESCRIPTION, OPTIONS, etc.).

Example:

man ls

This opens the full manual for the ls command, where you can scroll and read about all options like -l, -a, -h, etc.

2. whatis command

Meaning: Gives a one-line summary of a command.

Purpose: Useful when you only want to know what a command does, without opening the full manual.

Output: Just the brief description from the "NAME" section of the manual.

Example:

whatis ls

Output:

ls (1)   - list directory contents

2 .Use the tee command to save the output of ls -l into a file while also displaying it.

ls -l | tee output.txt

3.Explain with an example how the tee command can be used in logging.

How tee Helps in Logging

Normally, if you redirect output with > logfile, you don't see anything on the screen.

But with tee, you can see and save at the same time.-

Example: Logging a Script Output

Suppose you run a backup script:./backup.sh | tee backup.log

What happens:

The output of backup.sh will be shown on the terminal (so you can monitor it live).

At the same time, the entire output will be saved into backup.log for future reference.

Sample Run

$ ./backup.sh | tee backup.log

Starting backup...

Copying files...

Backup completed successfully.

On screen → You see messages in real time.

In backup.log → The same lines are recorded

Appending to Logs

If you want to keep logs from multiple runs without overwriting:./backup.sh | tee -a backup.log

☑ Justification: This is very useful in system administration, debugging, or long-running processes, where you want to watch progress live and also keep a record for later analysis.

4.List the steps involved in installing Ubuntu 25.04 LTS on Oracle VirtualBox.

Download the Ubuntu 25.04 LTS ISO fromthe official website.

ii. Install and open Oracle VirtualBox.

iii. Create a new virtual machine → chooseLinux / Ubuntu (64-bit).

iv.Allocate memory (recommended ≥ 4GB).

v.Create a virtual hard disk (minimum20MB)

vi.Mount the ISO file in the VM settings →Optical Drive.

vii.Start the VM and follow the Ubuntuinstallation wizard (select language,keyboard layout, partitions, username).

viii. Complete the installation and rebootinto Ubuntu

5.During Ubuntu OS installation, you face a Kernel Panic Error. How would you troubleshoot it?

i.Verify the ISO file integrity using checksums.

ii.Ensure virtualization (VT-x/AMD-V) is enabled in BIOS.

iii.Allocate more RAM and CPU cores to the virtual machine.

iv.Use the "safe graphics" or compatibility mode during installation.

v.Update VirtualBox to the latest version.

6.Write the command to display the system's hostname? How to change hostname using sysctl command?

Display hostname:hostname

Change hostname using sysctl: sudo sysctl kernel.hostname=newhostname

7.Which command is used to show the calendar of the year 1984 with August month?

cal81984

8.Write a command to display system uptime and logged-in users together

w-This command shows the system uptime,load averages, and details of logged-inusers

9.Use the find command to list all ".c" files in /home/user.

find/home/user -name "*.c"

10.How do you change file permissions to allow only the owner to read and write?

chmod 600 filename