

Linux Programming:

Assignment: 03

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

Ans :

man command: This command displays the complete manual of a Linux command, including its description, syntax, options, and examples.

Example:

man ls

This opens the full manual page for the ls command.

whatis command: This command gives a short, one-line description of a command.

Example:

whatis ls

Output:

ls(1) – list directory contents

Difference: The man command provides detailed information about a command, whereas whatis gives only a brief summary.

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

Ans :

ls -l | tee output.txt

This command displays the output of ls -l on the screen and simultaneously saves it in output.txt.

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

Ans:

The tee command is useful for logging outputs into a file while still displaying them on the terminal.

Example:

ping -c 4 google.com | tee pinglog.txt

This logs the ping results into pinglog.txt and also shows the results on the terminal in real-time.

4. Steps to install Ubuntu 25.04 LTS on Oracle VirtualBox:

Ans :

- i. Download the Ubuntu 25.04 LTS ISO from the official website.
- ii. Install and open Oracle VirtualBox.
- iii. Create a new virtual machine → choose Linux / Ubuntu (64-bit).
- iv. Allocate memory (recommended \geq 4GB).
- v. Create a virtual hard disk (minimum 20GB).

- vi.Mount the ISO file in the VM settings → Optical Drive.
- vii.Start the VM and follow the Ubuntu installation wizard (select language, keyboard layout, partitions, username).
- viii. Complete the installation and reboot into Ubuntu.

5.How to troubleshoot a Kernel Panic Error during Ubuntu installation?

Ans :

- 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. Command to display and change system hostname:

Ans :

Display hostname:

hostname

Change hostname using sysctl:

sudo sysctl kernel.hostname=newhostname

7. Show the calendar for August 1984:

Ans:

cal81984

8. Display system uptime and logged-in users together:

Ans:

w

This command shows the system uptime, load averages, and details of logged-in users.

9.List all .c files in /home/user using find:

Ans:

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

10.Change file permissions to allow only the owner to read and write:

Ans : chmod 600 filename

This gives read and write permissions to the owner only, removing all permissions for others.