**LINUX PROGRAMMING : ASSIGNMENT 3**

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

Answer:

|  |  |
| --- | --- |
| **man command** | **whatis command** |
| * Display detailed manual pages | * Display a brief summary or discription |
| * Provides comprehensive information, including syntax, description, options, and examples. | * Provides a short, one-line description. |
| * Use when you need detailed information about a command or function. | * Use when you need a quick overview or summary. |
| * Example:   Displays the detailed manual  for the ls command. | * Example:   Displays a brief summary of  the ls command, such as "list  directory contents." |

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

Answer:

ls -l | tee file.txt

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

Answer:

Example:-

bash

ls -l | tee -a log.txt

The tee command is useful for logging because it allows:

Save output to the log file

Display output in the terminal

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

Answer:

Installing Ubuntu on VirtualBox

* Prepare Environment:

- 2 GB RAM, 20 GB free disk space

- Download VirtualBox and Ubuntu ISO

* Create VM:

- Open VirtualBox, click "New"

- Name VM, select Linux and Ubuntu

- Allocate 2 GB RAM

* Configure Hard Disk:

- Create virtual hard disk

- Choose file type and storage type

- Set size to 20 GB

* Mount ISO:

- Select optical drive icon

- Choose Ubuntu ISO file

* Install Ubuntu:

- Start VM, select "Install Ubuntu"

- Follow on-screen instructions

* Complete Installation:

- Restart VM, remove ISO file

* Optional: Install Guest Additions:

- Devices > Insert Guest Additions CD image

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

Answer:

Troubleshooting Kernel Panic Error

* Check Installation Media: Ensure the Ubuntu ISO file is correct and not corrupted. Recreate the bootable USB if needed.
* Adjust Boot Options: Try safe graphics mode and disable secure boot.
* Check Hardware: Run a memory test and check for hardware issues.
* Review Logs: Look for error messages in installation logs.
* Try Alternatives: Use a different installation method or kernel version.
* Research: Check Ubuntu forums and documentation for known issues.

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

Answer:

hostname

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

Answer:

cal 8 1984

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

Answer:

bash

w

or

bash

uptime && who

**9. Use the find command to list all “.c” files in /home/user.**

Answer:

bash

find . -type f -name "\*.c"

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

Answer:

chmod 600 filename