

Linux Programming: Assignment-3

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SECTION-3A

ROLL NO.-59

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1.Distinguish between man and whatis commands? Justify with proper example. (CO1)

Man provides a complete manual page for a command. It includes detailed explanation, options, and examples. Whatis, on the other hand, provides only a one-line summary of the command.

Example:

man ls → will open a full manual which will explain in detail what ls is.

whatis ls → will print something like: ls (1) - list directory contents.

2.Use the tee command to save the output of ls -l into a file while also displaying it. (CO4)

ls -l | tee output.txt

3.Explain with an example how the tee command can be used in logging. (CO4)

The tee command is helpful when you want to see the output on the screen and save it to a log file at the same time.

Example:

ping google.com | tee pinglog.txt

This displays the ping output on the terminal and also stores it in *pinglog.txt* for later review. This is commonly used for debugging or collecting logs.

4.List the steps involved in installing Ubuntu 25.04 LTS on Oracle VirtualBox. (CO2)

Get the Ubuntu 25.04 ISO from the official Ubuntu site.

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Launch VirtualBox and hit the New button to set up a new virtual machine.

Put in a name and select Linux → Ubuntu (64-bit).

Set aside memory (4GB at least is recommended).

Make a virtual hard disk (20GB or more).

Go to the VM settings → Storage → and insert the Ubuntu ISO into the Optical Drive.

Power the VM on; Ubuntu setup will be there.

Choose Install Ubuntu, select keyboard layout, and choose installation type.

Set up a username and password.

Finish the installation and power off the VM.

5. During Ubuntu OS installation, you face a Kernel Panic Error. How would you troubleshoot it? (CO3)

If a kernel panic pops up while you are installing, testing these options can help:

First of all, make sure that the ISO file is not corrupted, and if it is, download it again.

Give more RAM to your virtual machine, or add more cores to the CPU.

In the VM configuration, turn on PAE/NX, VT-x/AMD-V or hardware virtualization.

Switch the VirtualBox graphics controller to VMSVGA.

In the VM settings, turn off any USB or network devices that you are not using.

Would the installation start if you try Safe Graphics Mode?

6. Write the command to display the system's hostname? How to change hostname using sysctl command? (CO1)

Display hostname:

hostname

Change hostname using sysctl:

sudo sysctl kernel.hostname=newname

7. Which command is used to show the calendar of the year 1984 with August month? (CO1)

Command to show calendar of year 1984 with August month (CO1)

cal 8 1984

8. Write a command to display system uptime and logged-in users together. (CO3)

Command to display system uptime and logged-in users together (CO3)

w

(or)

uptime && who

9. Use the find command to list all “.c” files in /home/user. (CO1)

all .c files in /home/user (CO1)

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

10. How do you change file permissions to allow only the owner to read and write? (CO1)

Change file permissions to allow only the owner to read and write (CO1)

chmod 600 filename