

Assignment Title: "Introduction to Linux Command Line and Basic Network Diagnostics"

Objective: Familiarize yourself with Linux command-line environment, commonly used tools for managing files and directories, and introduce basic network diagnostics.

Tasks:

File System Navigation:

- Navigate to your home directory.
- Find out your current location in the filesystem.
- Navigate to the root directory.

Directory and File Management:

- Create a new directory named "my_directory" in your home directory.
- Within "my_directory", create a new text file named "my_file.txt".
- Add some text to "my_file.txt" using a command-line text editor (such as nano, vim, or emacs).
- Display the contents of "my_file.txt" in the terminal.
- Rename "my_file.txt" to "renamed_file.txt".
- Move "renamed_file.txt" to a new directory "my_sub_directory" within "my_directory".
- Delete "renamed_file.txt" and then "my_sub_directory".

Permissions Manipulation:

- Create a file named "private.txt" in "my_directory".
- Change the file permissions so that only you can read and write "private.txt", and no one else can view or edit it.

Basic Network Diagnostics:

- Create a new file named "network_info.txt" in "my_directory".
- Write your machine's IP address to "network_info.txt".
- Use the ping command to test the network connectivity to a website of your choice (e.g., www.google.com) and write the output to "network_info.txt".
- Use the netstat command to display network statistics and append the output to "network_info.txt".

Deliverables:

A list of all commands you used for each task.

Screenshots or text copies of your terminal that show the output of each command.

The contents of "private.txt" and "network_info.txt".

Pre-requisites: Access to a Linux environment, either a physical machine, a virtual machine, or an online Linux terminal.

This assignment should give you an introductory experience in navigating a Linux file system, managing files and directories, working with file permissions, and performing basic network diagnostics.