Linux Command Line Workshop

Welcome to the Linux Command Line Workshop! In this workshop, you will learn and practice essential Linux commands and concepts. Follow the tasks below to enhance your command line skills.

Command Descriptions:

1. `**mkdir**`: Create a new directory.
2. `**ls**`: List files and directories.
3. `**touch**`: Create an empty file.
4. `**echo**`: Display a message or value.
5. `**cat**`: Concatenate and display file content.
6. `**chmod**`: Change file permissions.
7. `**sudo**`: Execute a command as superuser.
8. `**grep**`: Search for patterns in text.
9. `**rm**`: Remove files or directories.
10. `**cp**`: Copy files or directories.
11. `**mv**`: Move or rename files/directories.
12. `**man**`: Display manual pages.
13. `**cd**`: Change the current directory.

Tasks:

1. Create a directory called "my_folder."
2. List the contents of the current directory.
3. Create a file named "my_file.txt."
4. Write "Hello, World!" to a new file named "new_file.txt."
5. View the contents of "new_file.txt."

6. Change the permissions of "new_file.txt" to allow write access only.
7. Attempt to read the content of "new_file.txt."
8. Attempt to write "This is a new line." to "new_file.txt" without using `sudo` and observe the error.
9. Attempt to write "This is a new line written with sudo." to "new_file.txt" using `sudo`.
10. Change the permissions of "new_file.txt" to restrict read access.
11. Attempt to read the content of "new_file.txt."
12. Attempt to write "This is another line, but without sudo." to "new_file.txt" without using `sudo` and observe the error.
13. Attempt to write "This is another line written with sudo." to "new_file.txt" using `sudo`.
14. Display the manual page for the "ls" command.
15. Change the current directory to "my_folder."
16. Write 'clear' in the terminal and press Enter.
17. Find your Bash command history.

Bash File Task:

Create a Bash file called "backup.sh" that performs the following tasks:

1. Creates a new directory named "backup_folder."
2. Changes the name of "backup_folder" to "my_backup_folder."
3. Copies all `.txt` files from the current directory into "my_backup_folder."
4. Lists the contents of "my_backup_folder."
5. Displays a message "Backup completed."

Test Bash File (`test_script.sh`):

```
#!/bin/bash

# Check if "my_backup_folder" exists
if [ -d "my_backup_folder" ]; then
    # Check if "new_file.txt" exists in "my_backup_folder"
    if [ -f "my_backup_folder/new_file.txt" ]; then
        # Compare the contents of "new_file.txt" with the original content
        if cmp -s "my_backup_folder/new_file.txt" "new_file.txt"; then
            echo "Well done! 'my_backup_folder' exists, 'new_file.txt' was
copied, and its contents match the original."
        else
            echo "Oops, something went wrong. 'new_file.txt' contents in
'my_backup_folder' do not match the original."
        fi
    else
        echo "Oops, something went wrong. 'new_file.txt' was not found in
'my_backup_folder'."
    fi
else
    echo "Oops, something went wrong. 'my_backup_folder' was not found."
fi
```

After completing your "backup.sh" script, create a separate file named "test_backup.sh" and copy the content of the "Test Bash File" into it. Run your "backup.sh" script first, then run the "test_backup.sh" script to check if your backup task was completed successfully.

Final task of the day:

For the next task, we need to download some files from Google Drive. To do this, we'll first need to install a Python package called gdown, which is a tool for downloading from Google Drive. Before that, please follow these steps to prepare your environment:

1. Update your package management tool - apt:

```
sudo apt update
```

2. Install Python3 and pip - a Python package management tool:

```
sudo apt install python3-pip
```

3. Download gdown - a tool for downloading from Google Drive:

```
sudo pip install gdown
```

Once you have completed these setup steps, you'll be ready to proceed with the task.

Use the following link to access a text file in Google Drive that contains a bash command. Run the command provided in the file.

Google Drive Link:

https://drive.google.com/file/d/1cjrkF49UWOenDN9Hp0EsF7udR-uUpFi0/view?usp=sharing

After running the provided bash command, be aware that there is now a hidden file in your file system. Your objective is to locate and identify this hidden file within your file system.