Assignment - Solution

**Questions**

1. File Operations:

● i. Create a new directory called "AssignmentFolder."

● ii. Inside that directory, create a file named "TextFile.txt."

● iii. Append the line "Hello, Linux!" to "TextFile.txt."

**Ans:**

**$ sudo mkdir AssignmentFolder**

**$ sudo touch AssignmentFolder/TextFile.txt**

**$ echo "Hello, Linux!" | sudo tee -a AssignmentFolder/TextFile.txt**

2. Navigation and Permissions:

● Navigate to the home directory.

● Create a new subdirectory named "NewDirectory" inside

"AssignmentFolder."

● Change the permissions of "TextFile.txt" to read-only for the owner

**Ans:**

**$ cd ~**

**$ sudo mkdir AssignmentFolder/NewDirectory**

**$ sudo chmod 400 AssignmentFolder/TextFile.txt**

3. Search and Display:

● Search for all files with the ".txt" extension within the

"AssignmentFolder" and its subdirectories.

● Display the contents of "TextFile.txt" without opening the file.

**Ans:**

**$ sudo find AssignmentFolder -type f -name "\*.txt"**

**$ sudo cat AssignmentFolder/TextFile.txt**

4. User and Group Management:

● Create a new user named "AssignmentUser."

● Add "AssignmentUser" to the group that owns "TextFile.txt."

● Change the owner of "TextFile.txt" to "AssignmentUser."

**Ans:**

**$ sudo adduser AssignmentUser**

**$ sudo usermod -aG "$(stat -c '%G' AssignmentFolder/TextFile.txt)" AssignmentUser**

**$ sudo chown AssignmentUser AssignmentFolder/TextFile.txt**

5. Process Management:

● Check the currently running processes.

● Find and kill the process associated with the text editor (e.g., nano or vim).

**Ans:**

**$ sudo ps aux | grep -i "nano\|vim"**

**$ sudo kill <process\_id>**

6. Archiving and Compression:

● Create a tar archive of the "AssignmentFolder."

● Compress the archive using gzip.

● Extract the contents of the compressed archive.

**Ans:**

**$ sudo tar -cvf AssignmentFolder.tar AssignmentFolder**

**$ sudo gzip AssignmentFolder.tar**

**$ sudo tar -xzvf AssignmentFolder.tar.gz**

7. Networking:

● Display the IP address of the system.

● Use "ping" to check the connectivity to a well-known website (e.g., www.google.com).

**$ip -a**

**$ping www.google.com**

8. Environment Variables:

● Set a new environment variable named "MY\_VARIABLE" with the value

"LinuxAssignment."

● Display the value of "MY\_VARIABLE."

**$MY\_VARIABLE=”LinuxAssignment”**

**$export MY\_VARIABLE**

**$echo $MY\_VARIABLE**

9. Shell Scripting:

● Write a simple shell script that prints "Hello, World!" when executed.

**Ans:**

**$echo “echo ‘hello World’” > helloWorld.sh**

**$chmod +x helloWorld.sh**

10.System Information:

● Display the current system date and time.

● Show the available disk space on the system.

**Ans:**

**$ date**

**$ df -h**