ALBUKHARY INTERNATIONAL UNIVERSITY

SCHOOL OF COMPUTING & INFORMATICS

Course Title   :   **OPERATING SYSTEMS**
Course Code   :   **CCC 2123**

LAB EXERCISE
(WEEK 6)

Instructions:

Using the Command Line Interface (CLI) for Linux that we have learned and used so far, please execute the following tasks:

Task 1: Navigation

- Open the terminal.
- Identify and display the current location within the system.
- List the contents of the current directory.
- Navigate to the home directory.
- Create a new directory and enter it.

Answer:

\# Open the terminal

\# Identify and display the current location within the system
pwd

```
# List the contents of the current directory
ls

# Navigate to the home directory
cd ~

# Create a new directory
mkdir New_Directory

# Enter the new directory
cd New_Directory
```

Task 2: File Operations

- Inside the newly created directory, create a text file.
- View the contents of the text file.
- Add new content to the file.
- Duplicate the file with a different name.
- Verify the creation of the duplicate file.

Answers:

```
┌──(haryani㉿kali)-[~]
└─$ mkdir New_Directory

┌──(haryani㉿kali)-[~]
└─$ cd New_Directory

┌──(haryani㉿kali)-[~/New_Directory]
└─$ touch new_file.txt

┌──(haryani㉿kali)-[~/New_Directory]
└─$ cat new_file.txt

┌──(haryani㉿kali)-[~/New_Directory]
└─$ echo "This is new content" >> newfile.txt

┌──(haryani㉿kali)-[~/New_Directory]
└─$ cp new_file.txt duplicate_file.txt

┌──(haryani㉿kali)-[~/New_Directory]
└─$ ls -l
total 4
-rw-r--r-- 1 haryani haryani  0 Dec 14 21:33 duplicate_file.txt
-rw-r--r-- 1 haryani haryani  0 Dec 14 21:32 new_file.txt
-rw-r--r-- 1 haryani haryani 20 Dec 14 21:33 newfile.txt
```

#Create a new directory:

mkdir new_directory

#Change into the newly created directory:

cd new_directory

#Create a text file:

touch new_file.txt

#View the contents of the text file:

cat new_file.txt

#Add new content to the file:

echo "Your new content here" >> new_file.txt

#Duplicate the file with a different name:

cp new_file.txt duplicate_file.txt

#Verify the creation of the duplicate file:

ls -l

cat new_file.txt

#Add new content to the file:

echo "Your new content here" >> new_file.txt

Task 3: Directory Operations

- Create two subdirectories within the current directory.
- Move the text file to one of the subdirectories.
- Rename the second subdirectory.
- Remove one of the subdirectories and its contents.

Answers:

#Create two subdirectories within the current directory:

mkdir subdirectory1 subdirectory2

#Move the text file to one of the subdirectories:

mv new_file.txt subdirectory1/

#Rename the second subdirectory:

mv subdirectory2 new_name_subdirectory

#Remove one of the subdirectories and its contents:

rm -r new_name_subdirectory

Task 4: Permissions

- Check and note the permissions of a specific file.
- Modify the permissions to make the file accessible only to the owner.

Answer:

#Check and note the permissions of a specific file:

ls -l specific_file.txt

#This command will display detailed information about the file, including its permissions.

#Modify the permissions to make the file accessible only to the owner:

chmod 600 specific_file.txt

#In this command, chmod is the command to change file permissions, and 600 specifies that only the owner has read and write permissions. No permissions are granted to the group or others.

Task 5: System Information

- Use a command to display basic system information.
- Find and report the system's memory status.
- Retrieve information about the CPU.

Answers:

#Display basic system information:

uname -a

#This command will provide information about the system, including the kernel version, machine architecture, and other details.

#Find and report the system's memory status:

free -h

#This command will display information about the system's memory usage, including total, used, and free memory.

#Retrieve information about the CPU:

lscpu

#This command will provide detailed information about the CPU, including its architecture, cores, threads, and more.