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**ALBUKHARY INTERNATIONAL UNIVERSITY**

**SCHOOL OF COMPUTING AND INFORMATICS**

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| **COURSE DETAILS** | |
| **SCHOOL** | SCHOOL OF COMPUTING AND INFORMATICS |
| **COURSE NAME** | OPERATING SYSTEMS |
| **COURSE CODE** |  |
| **LECTURER** |  |
| **LAB ACTIVITY** | LAB 5 |
| **DATE** |  |
| **STUDENT NAME** |  |
| **ID** |  |
| **GROUP** |  |

# Test Exercise: Basic Linux Command Line

## Instructions:

*Attempt all the tasks using a Linux terminal.  
Capture a screenshot of the terminal for each task.  
Submit your answers as a document with the commands, screenshots, and brief explanations where required.*

## Part 1: File and Directory Management

### 1. Navigation and Directory Creation

- Navigate to the home directory.  
- Create a directory structure: School/Assignments/Week1.  
- Show the output of the ls command in the School directory.

### 2. Moving and Renaming

- Create a directory called Projects in the home directory.  
- Move the Assignments folder into Projects.  
- Rename the folder Assignments to Tasks within Projects.

### 3. Deleting Directories

- Navigate to the Week1 folder inside Projects/Tasks.  
- Delete the Week1 folder using rm -r.  
- Show the terminal output before and after deletion.

## Part 2: File Management

### 4. File Creation and Editing

- Create an empty file named notes.txt inside the Tasks directory.  
- Use nano to add the following text to notes.txt:  
 Linux is powerful.  
 Learning commands is fun!  
- Save the file and show the contents using cat.

### 5. Copying and Renaming Files

- Copy notes.txt to the Projects directory.  
- Rename notes.txt in Projects to commands.txt.

### 6. File Permissions

- Change the permissions of commands.txt to allow execution by the owner, group, and others.  
- Show the updated permissions using ls -l.

## Part 3: Command Utilities

### 7. Counting Words

- Use the wc command to count the lines, words, and characters in commands.txt.  
- Write the result.

### 8. Searching in Files

- Use grep to search for the word Linux in commands.txt.  
- Provide the output.

### 9. File Viewing

- Display the first 2 lines and last 2 lines of commands.txt using appropriate commands.

## Part 4: System and User Information

### 10. System Monitoring

- Run the top command and describe three types of information it displays.  
- Exit the top command.

### 11. User and Directory

- Display the current logged-in user using whoami.  
- Show the absolute path of your current directory using pwd.

## Part 5: Reflection

### 12. Memory Recall

- Without referring to notes, list 10 Linux commands you remember from this exercise, along with their functions.