3. Student Activity

Student Activity: Practicing Basic Linux Commands

Objective: This activity is designed to help beginners practice and understand basic Linux commands by applying them in a real Linux environment. By the end of this activity, students should be comfortable navigating the Linux file system and performing basic file operations.

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1. Navigating the File System

Example 1: Using `pwd`

1. **Objective:** Determine your current directory.
   - **Command:** `pwd`
   - **Expected Output:** Displays the path of the current directory, e.g., `/home/student`.
2. **Example 2: Listing Files with `ls`**
3. **Objective:** List all files and directories in the current directory.
   - **Command:** `ls`
   - **Expected Output:** Displays a list of files and directories, e.g., `Documents Downloads Pictures`.
4. **Example 3: Changing Directories with `cd`**
5. **Objective:** Navigate to the `Documents` directory.
   - **Command:** `cd Documents`
   - **Expected Output:** Changes the current directory to `Documents`.

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2. Managing Files and Directories

Example 1: Creating a File with `touch`

1. **Objective:** Create an empty file named `example.txt`.
   - **Command:** `touch example.txt`
   - **Expected Output:** A new file named `example.txt` is created in the current directory.

2. **Example 2: Creating a Directory with `mkdir`**
3. **Objective:** Create a new directory named `project`.
    - **Command:** `mkdir project`
    - **Expected Output:** A new directory named `project` is created in the current directory.
4. **Example 3: Copying Files with `cp`**
5. **Objective:** Copy `example.txt` into the `project` directory.
    - **Command:** `cp example.txt project/`
    - **Expected Output:** `example.txt` is copied into the `project` directory.

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3. Moving and Renaming Files

Example 1: Moving Files with `mv`

1. **Objective:** Move `example.txt` from the current directory to the `project` directory.
    - **Command:** `mv example.txt project/`
    - **Expected Output:** `example.txt` is moved to the `project` directory.
2. **Example 2: Renaming Files with `mv`**
3. **Objective:** Rename `example.txt` to `sample.txt` within the `project` directory.
    - **Command:** `mv project/example.txt project/sample.txt`
    - **Expected Output:** `example.txt` is renamed to `sample.txt` in the `project` directory.
4. **Example 3: Removing Files with `rm`**
5. **Objective:** Delete `sample.txt` from the `project` directory.
    - **Command:** `rm project/sample.txt`
    - **Expected Output:** `sample.txt` is deleted from the `project` directory.

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4. Viewing and Editing Files

Example 1: Viewing File Contents with `cat`

1. **Objective:** Display the contents of `sample.txt`.
    - **Command:** `cat project/sample.txt`
    - **Expected Output:** Displays the contents of `sample.txt`.
2. **Example 2: Editing Files with `nano`**

3. **Objective:** Open `sample.txt` in the `nano` text editor.
    - **Command:** `nano project/sample.txt`
    - **Expected Output:** Opens `sample.txt` in `nano` for editing.
4. **Example 3: Saving and Exiting `nano`**
5. **Objective:** Save changes and exit `nano`.
    - **Steps:** Press `Ctrl + O` to save, then `Enter`, and `Ctrl + X` to exit.
    - **Expected Output:** Changes are saved, and you exit the `nano` editor.

Conclusion

By completing these exercises, students will gain hands-on experience with basic Linux commands, enhancing their understanding of the Linux file system and command-line operations. Encourage students to explore further by creating more files and directories, experimenting with different commands, and asking questions if they encounter any issues. Happy practicing!