

Exercise 1: Differences in File Systems

Windows and Linux have different file systems that handle file organization and storage. Here are some prime differences:

Windows File System (NTFS):

- Supports file permissions and access control lists.
- Uses drive letters (C:, D:, etc.) to identify storage devices.
- Supports file names with spaces and special characters.
- Allows multiple data streams per file.
- Supports symbolic links and junction points.

Linux File System (ext4):

- Utilizes a hierarchical directory structure.
- Has a single root directory ("/").
- Case-sensitive file and directory names.
- Uses mount points to attach storage devices to the file system.
- Supports symbolic links and hard links.
- Employs inodes to store metadata and data pointers.

Exercise 2: Create, Rename, and Edit Files

In Linux terminal:

1. Create the file and add your name and registration number:

```
cat > file1.txt
```

```
Your Name
```

```
Your Registration Number
```

```
Ctrl + D (Press Ctrl and D keys together to save and exit)
```

2. Rename the file:

```
mv file1.txt yourRegistrationNo.txt
```

Exercise 3: Create a Copy and Delete

In Linux terminal:

1. Create a copy of the file:

```
cp yourRegistrationNo.txt copy_of_yourRegistrationNo.txt
```

2. Delete the original file:

```
rm yourRegistrationNo.txt
```

Exercise 4: Create a Directory and Move Files

In Linux terminal:

1. Create a directory with your name:

```
mkdir YourName
```

2. Move the files into the directory:

```
mv copy_of_yourRegistrationNo.txt YourName/
```

Exercise 5: Create Multiple Directories

In Linux terminal:

You can create multiple directories using a single command with the `mkdir` command followed by the directory names:

```
mkdir Friend1 Friend2 Friend3
```