****This study guide is based on the video lesson available on TrainerTests.com****

Working with Files

Understanding the Basics

- **Case Sensitivity:** Unlike Windows, Linux is case-sensitive. This means that filenames like `Document.txt` and `document.txt` are considered distinct files.
- **File Permissions:** Each file in Linux has associated permissions that determine who can access it and how (read, write, execute). Understanding permissions is crucial for secure file management, but it's a more advanced topic beyond the scope of this chapter.

Essential File Manipulation Commands

- **cat:**

The `cat` command displays the contents of a text file on the terminal. It's a simple yet versatile tool for viewing file contents.

```
Syntax: cat filename.txt
```

Example:

```
cat example.txt
```

This will print the contents of the file `example.txt` onto the terminal.

- **touch:**

The `touch` command is used to create new empty files. It can also be used to update a file's last access and modification timestamps.

```
Syntax: touch filename.txt
```

Example:

```
touch document.txt
```

This will create a new empty file named `document.txt`.

- **cp:**

The `cp` command allows you to copy files from one location to another. It's essential for creating duplicates of files without modifying the originals.

```
Syntax: cp source_file destination_file
```

Example:

```
cp report.txt backup_folder/report_copy.txt
```

This will copy the file `report.txt` to the folder `backup_folder` with a new name `report_copy.txt`.

- **mv:**

The `mv` command serves two purposes: moving and renaming files. To move a file, specify both the source and destination locations. To rename a file, keep the source and destination locations the same (essentially moving the file within the same directory).

```
Syntax: mv source_file destination_file
```

Example (Moving):

```
mv presentation.pptx meeting_materials/presentation.pptx
```

This will move the file `presentation.pptx` to the folder `meeting_materials`.

Example (Renaming):

```
mv presentation.pptx presentation_updated.pptx
```

This will rename the file `presentation.pptx` to `presentation_updated.pptx` within the current directory.

Deleting Files with Caution (rm)

The `rm` command permanently deletes files from your system. Use it with caution as there's no built-in "undo" function for deleted files.

```
Syntax: rm filename.txt
```

Example:

```
rm notes.txt
```

This will permanently delete the file `notes.txt`.

Important Note: It's highly recommended to be certain you no longer need a file before using `rm`. Consider using the `mv` command to move unwanted files to a temporary folder for later review before permanent deletion.