Linux File Handling Utilities

Welcome to our guide on Linux file handling utilities. In this presentation, we will explore various commands that allow you to manage files and directories efficiently. Let's dive in!

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ls

The ls command is used to list the contents of a directory. It provides valuable information about files and directories present in the specified location. Here are some common options:

1 **-a**

Show all files, including those with a . prefix

2 **-l**

Display detailed file information

3 **-t**

Sort files by creation time

4 **-u**

Sort files by access time or display when last accessed with -l

5 **-S**

Sort files by size

6 **-r**

Reverse the order of the listing

Understanding the Linux File System Hierarchy

In Linux, the file system is organized in a hierarchical structure. The root directory is represented by '/', and all other directories and files are located under it. Each directory serves a specific purpose and contains related files and subdirectories. Understanding the file system hierarchy is essential for effective file management and navigation in Linux.
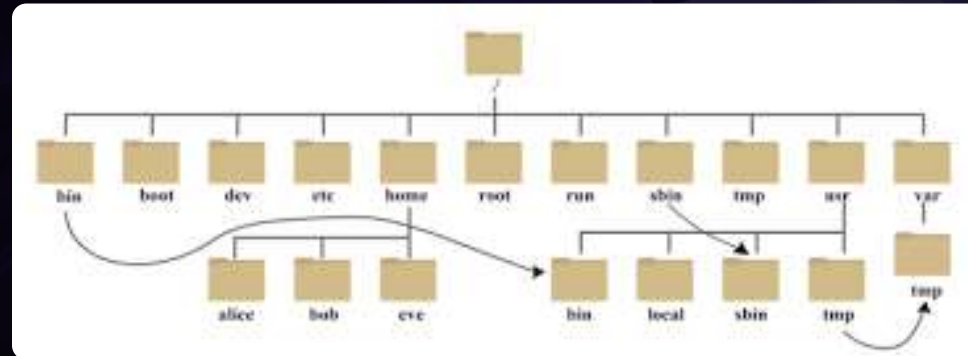
mkdir

The mkdir command allows you to create directories in Linux. Simply specify the desired name of the directory, and it will be created in the current location. Here's an example:

```
$ mkdir newdirectoryname
```

cd

The cd command is used to change the current directory in the Linux shell. By changing the directory, you can access files and directories located in different locations. Here are some useful implementations:
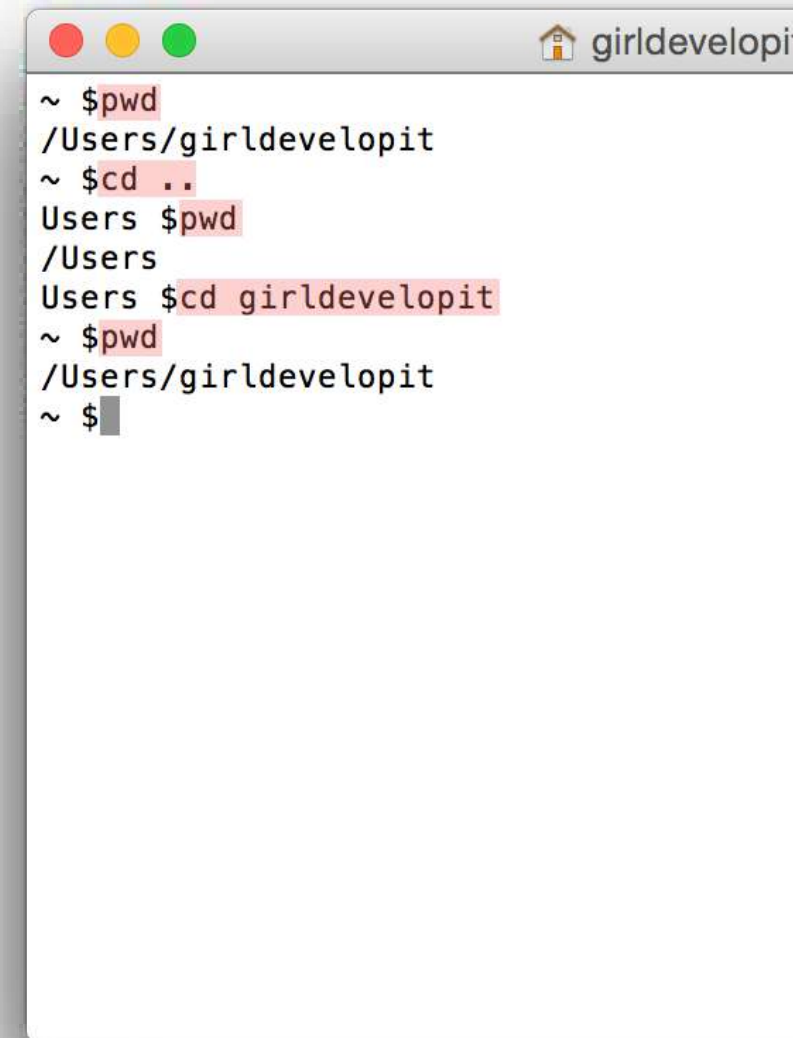
To change to the home directory:

$ cd ~

To change to the parent directory:

$ cd ..

To change to the previous directory:

$ cd -

```
~ $pwd
/Users/girldevelopit
~ $cd ..
Users $pwd
/Users
Users $cd girldevelopit
~ $pwd
/Users/girldevelopit
~ $
```

girldevelopi

pwd

The pwd command displays the current directory that you are in. It's a handy way to keep track of your location while working in the Linux shell. Here's an example:

```
$ pwd
```

cp

The cp command is used to copy files in Linux. It allows you to create a duplicate of a file in the specified location. Here are some commonly used options:

1 -r

Copy directories recursively

2 -p

Preserve permissions, ownership, and timestamps

3 -i

Prompt before overwriting

4 -v

Display filenames as they are being copied

mv

The mv command is used to move or rename files and directories in Linux. It allows you to change the location or name of a file. Here's the syntax:

```
$ mv file1 file2
```

If file2 already exists, it will be removed before file1 is moved. The move is only done if confirmed by the user. You can also move multiple files to a directory:

```
$ mv file ... directory
```

grep

The grep command is used to search for specific patterns or strings in files. It allows you to filter and find matching lines within text files. Here's an example:

$ grep "pattern" file.txt

You can also use regular expressions for more complex searches.

rm

The rm command is used to delete files from the filesystem in Linux. It acts as the equivalent of the "del" command in DOS. Here are some useful options:

1 **-d, --directory**

Delete directories, even if they are empty

2 **-f, --force**

Ignore nonexistent files and never prompt

3 **-i, --interactive**

Prompt before any removal

rmdir

The rmdir command is used to delete empty directories in Linux. If a directory contains files or subdirectories, you cannot use rmdir and should instead use rm -r to remove the directory and its contents recursively. Here's an example:

$ rmdir directoryname

If the directory is not empty, use the following command:

$ rm -r directoryname

touch

The touch command allows you to change the date on a file in Linux.
It can also be used to create a blank file. Here's an example:

To change the access date and time of a file to the current time:

`$ touch filename`

If the file doesn't exist, it will create a blank file with the specified name.