

Notes 2: The Linux FS

Each of the commands used for navigating the file system

File System

Definition

The way files are stored and organized

Usage

/,

Examples

- Display with home
 - `/home`
- Display with labs
 - `/home/cis106/labs`
- Display with cheatsheet
 - `/home/cis106/cheatsheet`

Pathnames

Definition

In a file system, every file has a pathname which indicates the location of the file in the filesystem

Usage

/, `/home/user`

Examples

- Display with Absolute Path
 - `/home/john/Downloads/song.mps`
- Display with Relative Path
 - `Downloads/song.mp3`
- Display with Absolute Path
 - `Downloads/Movies/Avatar.mp4`

Absolute Path

Definition

The location of a file starting at the root of the file system

Usage

`home`

Examples

- Display of Absolute path
 - `home/john/Downloads/song.mp3`
 - Display of Absolute Path
 - `home/john/Games/DragonBall.txt`
 - Display of Absolute Path
 - `home/john/Music/Leanonme.mp4`
-

Relative Path

Definition

The location of a file starting from the current working directory that is located inside the current working directory

Usage

`Downloads/etc`

Examples

- Display of Relative Path
 - `Downloads/song.mp4`
 - Display of Relative Path
 - `Music/Leaonme.mp4`
 - Display of Relative Path
 - `Games/Dragonball.txt`
-

Difference between "Your Home Directory" and The "The Home Directory"

Definition

Your home directory is the top most directory in the file system hierarchy, while the home directory is specific to a user

Usage

`/home./home/maria53`

Examples

- Display of "Your Home directory"
 - `/home/trindell26`

- Display of "The Home Directory"
 - `/home`
-

Parent Directory

Definition

a directory containing one or more directories and files.

Usage

..

Examples

- Display of Parent Directory
 - `Downloads/New_Movies/action/horror/evil_dead`
 - Display of Parent Directory
 - `Downloads/Games/DLC_content/last_of_us`
 - Display of Parent Directory
 - `Downloads/Music/Jcole/Ablums/4_Your_Eyes_Only`
-

Child Directory

Definition

a better name for this is a subdirectory or subfolder. This is a directory inside another directory. See image for visual reference.

Usage

`Downloads/Games_Downloaded`

Examples

- Display of Child Directory
 - `Downloads/Games`
 - Display of Child Directory
 - `Downloads/Snap`
 - Display of Child Directory
 - `Downloads/Pictures`
-

Bash Special Characters

Definition

Special characters are function like commands that tell the shell to perform a specific action without having to type the complete command. These special characters make working on the command line more

efficiently. Here is short list to keep in mind.

Usage

`...,~,/,/,#,!,,!`

Examples

- Display of Special characters
 - `/home/maria53/Downlods`
- Display of Special characters
 - `rm -r website/`
- Display of Special characters
 - `cd../../`

Environment Variables

Definition

Environment variables store values of a user's environment and can be used in commands in the shell. These values can be unique to the user's environment which makes them ideal when writhing commands that you want to use regales of which user is using the computer.

Usage

`$USER,$HOME,$PWD,$OLDPWD`

Examples

- Display of Environment Variables
 - `echo "The Current User: $USER"`
- Display of Environment Variables
 - `echo "The Current User: $SHELL"`
- Display of Environment Variables
 - `echo "The Current User: $HOME"`

User Defined Variables

Definition

User variables are created by the user and exist inly in the script and subshell that runs the script

Usage

`name=wtw`

- Display of User Defined Variables
 - `Name=Pater`
- Display of User Defined Variables

- `Age=60`
 - Display of User Defined Variables
 - `Email= google@gmail.com`
-

Why do we need use \$ with variables in bash shell scripting?

Definition

This can prevent errors and unexpected behavior in your shell commands and scripts

Usage

`$USER,$HOME`

- Display of \$
 - `echo "The Current User: $USER"`
- Display of \$
 - `echo "The Current User: $SHELL"`
- Display of \$
 - `echo "The Current User: $HOME"`