

Notes 5

Commands

LS

Definition

- The `ls` command is use when you want to **see what's inside a folder**.
- It shows all the files and folders that are in your current location.
- You can think of it like **opening a folder on your computer** to look inside but using the terminal instead of clicking.

Usage/Formula

- `ls[options][directory_to_list]`

Example

- Typing `ls` and pressing enter - shows everything in the current folder.
- Typing `ls -a` shows all files, even the hidden ones (tLike the ones that start with a dot like `.blank.txt`)
- Typing `ls -l` - shows a detailed view, including file sizes, permission, and dates.

`ls` mean **List**

pwd

Definition

- The `pwd` command means **print working directory** - it tell you **exactly where you are** inside computer's files system.
- It's like checking you **GPS location** when you're exploring folders in the terminal

Usage/Formula

- `pwd`

Examples

-Typing `pwd` it might show something like `/home/eli/Documents`, meaning that's the folder you're currently in

- If you move to another folder with `cd`, type `pwd` again to see where you are again.

*`pwd` tell me where the **current address** in the computer.

cd

Definition

- The `cd` command means **change directory**
- It's what you use to **move between folders** in the terminal.
- You can use it to open a folder, go back to the previous one, or return to your home screen area.

Usage/Formula

- `cd [directory_name]`

Example

`cd documents` - Moves you into the "Documents" folder `cd ..` - moves you **one step back** `cd ~` - Takes you to your **home folder** (where the main files are) `cd /` - Takes you to the **root folder** (the very top of your system)

`cd` means **change directory** - it's how you move around the computer using the terminal.

Questions

What is a variable?

A **variable** is like a **container that stores information** or data in memory so you can use it later. You can think of it as a **label or name** that points to a value.

Example:

- `name=John` here, `name` is the variable, and `"John"` is the value it holds.

How Do I Use a Variable?

You use a variable by **creating(assigning)** it a value and then **calling (using)** it later in a command or script

Example :

```
bash
greeting="Hello"
echo $greeting
```

What is an Environment Variable?

An **environment variable** is a **special type of variable** that is used by the operating system or programs to store system-wide settings. They tell your system or applications **important information**, like your username, home folder, or default shell.

Example `echo $Home` - shows your home directory path `echo $User` - shows your username

What is a User-Defined Variable?

A **user-defined variable** is a variable that you create yourself while working in a shell or script. It stores information temporarily while your session or script is running.

Example

```
color="blue"  
echo $color
```

- I made this variable myself - Not built into the system.

What is the Root Directory?

The **root directory** is the top level of the Linux or Unix file system. It's like the **main folder** that contains all other folders and files on the computer. It is represented by a single forward slash /.

Example:

- All system folder start from root, such as /home, /etc, /bin, /usr, etc

Root directory is the parent of every other folder in the system.

What Does "Parent Directory" Mean?

The **parent directory** is the folder that contains another folder.

- It's like the "folder above" your current location. In Linux, the parent directory is represented by ..

Example:

- If you are in /home/adrian/Documents, the parent directory is /home/adrian. To go to it, you type: `cd ..`

What does "Current Working Directly" Mean?

Your **current working directory** is the **folder you are currently in** while using the terminal. Its where the system looks for file or saves things when you don't special a path.

Example:

- Use the `pwd` command to see it
- If it shows /home/eli/Documents - Means that you're currently working inside "Documents" folder

Note: `pwd` current location in the computer file system

What is an Absolute Path?

An absolute path is the complete address of a file or folder starting from the root directory(/)

Example:

- `/home/eli/Documents/notes.txt` - this is an absolute path because it starts from `/`
 - *Absolute path start with `/` and show the full route from the top of the system.
-

What is a Relative Path?

A **relative path** tells the computer how to find a file **based on your current location**. It **does not start with** `/`, and it's shorter because it assumes you're already in a certain folder

Note for Self:

- Relative path are directions from **where you are right now** not from the root.

What is the Difference Between “Your Home Directory” and “The Home Directory”?

- **Your Home Directory:** This is **your personal space** on the system where your files and folders are stored.
 - **Example:** `/home/eli` This is where you land when you log in.
- **The Home Directory:** This refers to the main "Home" area that contains all users's home folders.
 - Examples: `/home` - inside it might be `/home/eli`, `/home/sally` etc

Note to Remember:

- **Your home directory** - Personal folder
- **The Home directory** - the main folder that holds everyone's personal folders.