**Word Count: 986**

Video, Basic Linux Commands

In this video, we will learn about some basic Linux commands for the Raspberry Pi.

The first thing we need to learn with Linux is how to navigate the file/folder structure in Linux. In windows, we do this by just clicking on pictures of folders and files. The file structure in Linux operates the same way. We have a top level folder we call the root folder, and then we have folders and files inside of folders, and then those folders can have more folders and files. It is a tree type structure that you are already familiar with. What is different is we navigate through the files in Linux from the command lines, and not by clicking on the pictures of windows and folders. Once you master the command line, you will prefer that to clicking on the pictures method of Windows.

The first command we can learn is “**pwd**”. By typing **pwd** in the command line, it will show you what folder you are presently in. The **pwd** command displays the name of the present working directory: on a Raspberry Pi, entering **pwd** will output something like /home/pi. That is useful as you are learning to navigate, as it will always show you where you are.

The next command is “**ls**”. ls simply lists the files and folders in the present folder like shown here.

The final command is **cd**, which stands for change directory. After the command, you give the “where”, which is the path to where you want to do the command. When you press enter, your current directory will be changed to this path.

To create a new directory in linux we can use the **mkdir** command. Lets create a directory named **newdir** with **mkdir** and use **ls** command to list the directories. You can see that the directory is created.

To remove an empty directory, you can use the **rmdir** command followed by the directory name. Remember that this will only delete an empty directory like shown here. But what if we want to delete a non empty directory as a whole or just a file. Then we have to use **rm** command followed by **-rf** and directory or file name. Here I will show you with an example. Please use the ls command to check the files in the directory regularly while trying out the rm and rmdir commands.

Now let's say you want to copy files or directories. Then you have to use the **cp** command followed by two paths. The first path is the source path, and the second is the destination path. We can use the **cp** command to copy both files and directories across. The move command called **mv** can also be used like the cp command to move a file or directory permanently.

Another great tool to analyze your current location is the files tree. Typing the **tree** command will show you the entire lower tree as shown here.

The **sudo reboot** command will restart the Pi immediately, and **sudo shutdown -h** now will shutdown the Pi immediately. You can replace “now” by a specified time like 12:05, to make the Pi do a scheduled shutdown.

Now let's move on to file manipulation commands. You can use the **cat** command to list the contents of a file or files. Cat followed by file name will print out all the contents of the file to the terminal. If you have multiple files of the same type and want to view all the contents of all the files on go, use **cat \*.txt** command. In this example, all the files have extension .txt.

But let’s say you want to create a new file or edit an existing file’s contents. In this case, you will use the **nano** command. To create a file, type nano followed by file name and extension. If you want to edit an existing file, you have to use the same command, followed by the name of the file with an extension. Once edited, Press **CTRL+O** to save any changes and press enter, and exit the nano text editor, by pressing **CTRL+X.**

Next is one of the most important commands in linux. It's called **sudo**, you have come across this in previous sections. The sudo command enables you to run a command as a superuser with full user access to all hardware and software resources. If any of the previous commands mentioned in this video throws a permission denied error, use sudo as a prefix command to them to get around the problem.

The command **df -h** is used to display the disk space and filesystem information of partitions in human-readable format.

A must-know linux command to get information about your network, like IP Address, Gateway etc, is the **ifconfig** command. Another command to test whether the host is alive is to send ping packets to its ip address by the ping command. After the **ping** keyword type the IP Address of the host device.

If you want to download a file from the internet with just a URL, you can use the **wget** command, followed by the URL to the file.

Just after the network configuration, you’ll have to update your system to get the latest version of each default packages installed. You have already come across these sets of commands. The **sudo apt-get update** and **sudo apt-get upgrade**. Whenever you start your Pi, its recommended to upgrade the packages to the latest version.

To install new packages, you must use the **sudo apt-get install** command, followed by the package name. Similarly, to remove a specific package, you have to use the **sudo apt-get remove** command, followed by the package name.

Summary

In this video, we have learned basic linux commands for the Raspberry Pi and its function

In the next video, we will learn some advanced Linux commands for the Raspberry Pi.