

# Bash & Git

Mr. Poole

How do you manipulate files  
on your computer?

# Folders and Mouse!



# Directories

Every file on your computer has a “location”.  
The folder that it is in is called a “directory”.


Everything starts from your hard drive!



In this case, my hard drive is  
**C:**

# Folders

For this folder on my Desktop, it's directory is:

 C:\Users\jpoole\Desktop\Test Folder

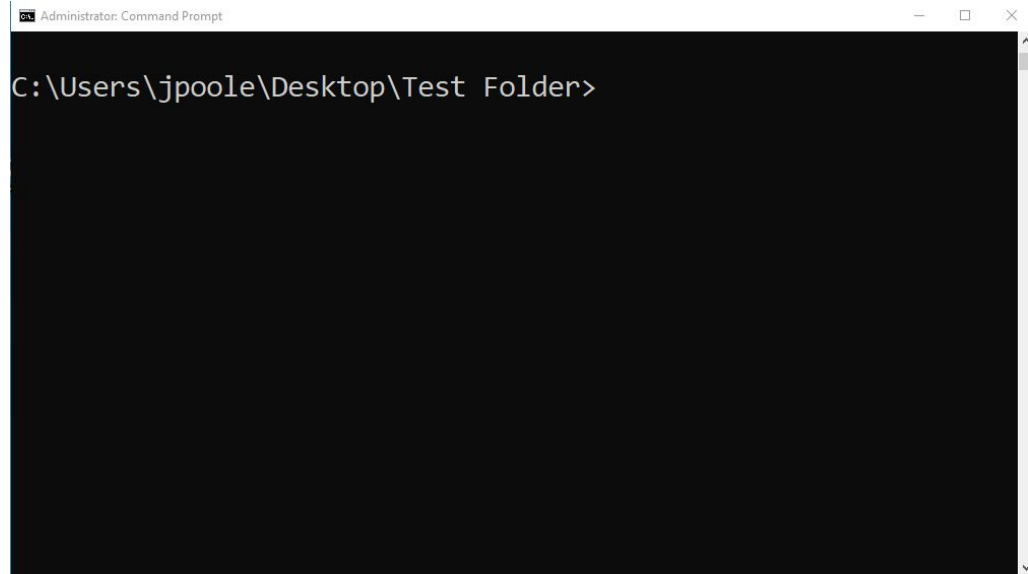
Test Folder

# The Shell

Instead of using a **folder** and a **mouse**,  
we're going to use a **shell** and **commands**.

For **Windows**, this is **Command Prompt**.

For **Mac**, this is **Terminal**.

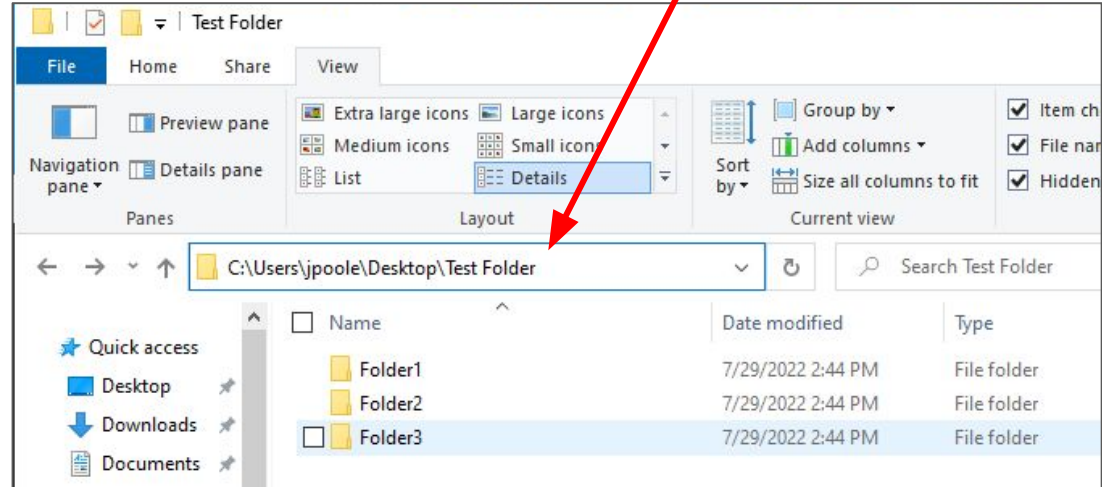


# Differences

As you can see, they are both pointing to the same place.

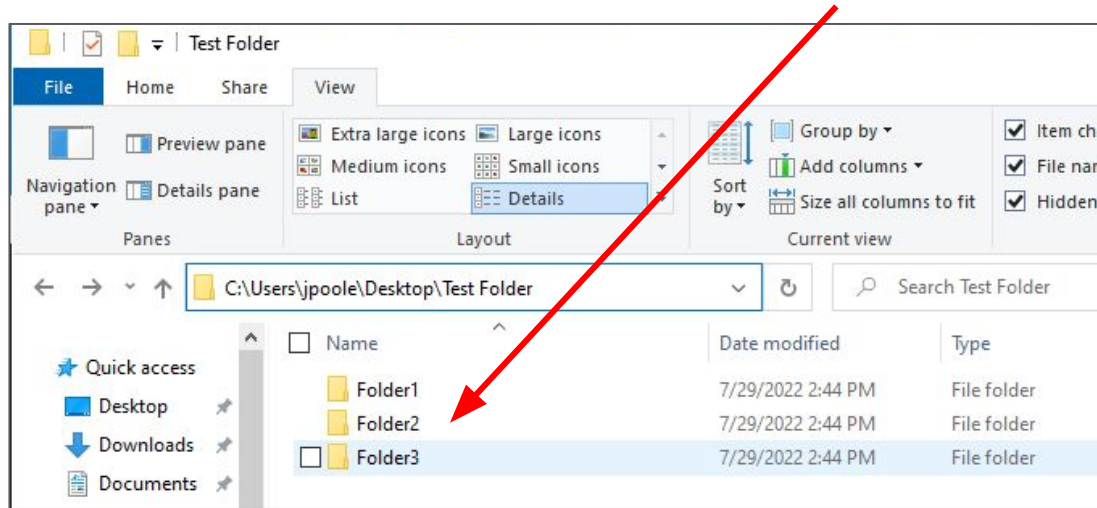
Administrator: Command Prompt

```
C:\Users\jpoole\Desktop\Test Folder>
```



# Looking at what's inside - Folder

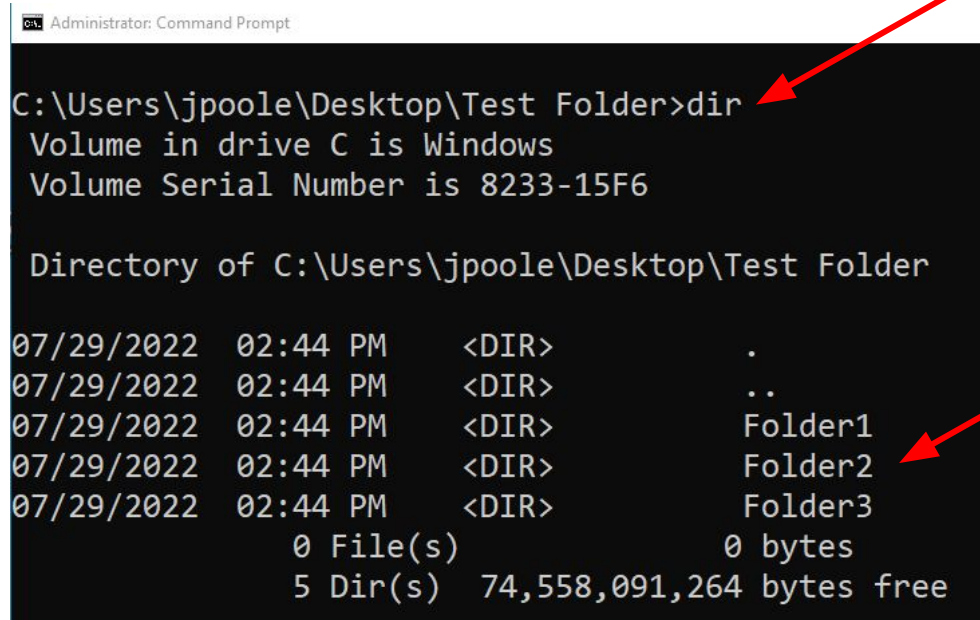
Here, I can see 3 folders inside the “Test Folder”





# Looking at what's inside - Bash

Here to do the same, we use the “**dir**” or **directory** command.



```
Administrator: Command Prompt

C:\Users\jpoole\Desktop\Test Folder>dir
Volume in drive C is Windows
Volume Serial Number is 8233-15F6

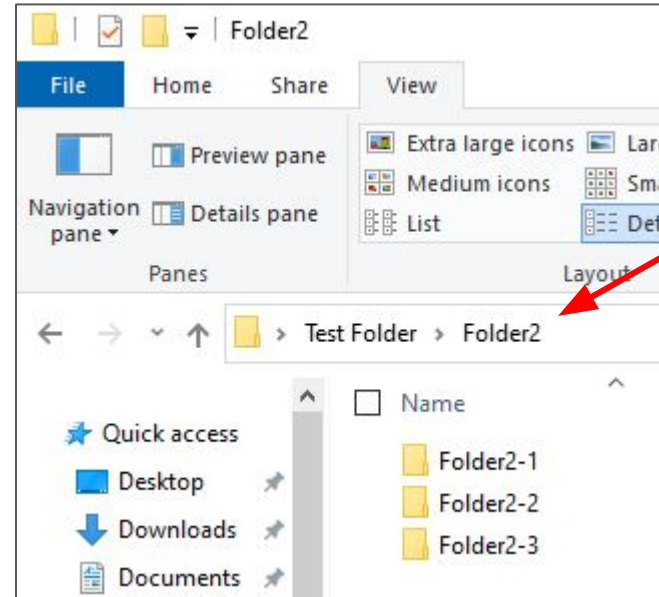
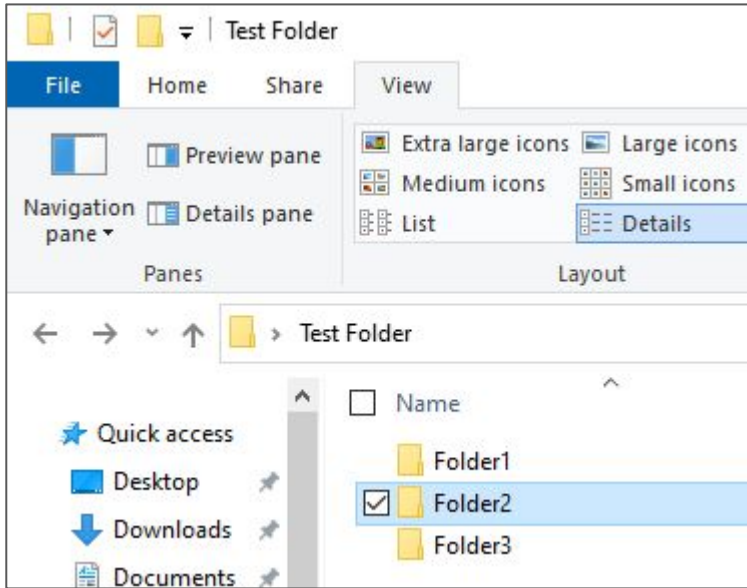
Directory of C:\Users\jpoole\Desktop\Test Folder

07/29/2022  02:44 PM    <DIR>          .
07/29/2022  02:44 PM    <DIR>          ..
07/29/2022  02:44 PM    <DIR>          Folder1
07/29/2022  02:44 PM    <DIR>          Folder2
07/29/2022  02:44 PM    <DIR>          Folder3
               0 File(s)                0 bytes
               5 Dir(s)  74,558,091,264 bytes free
```

This is “**ls**” in Linux/Mac for **list**.

# Changing Directories - Folder

We want to open “Folder2” here, we’d do that by clicking twice to open it!

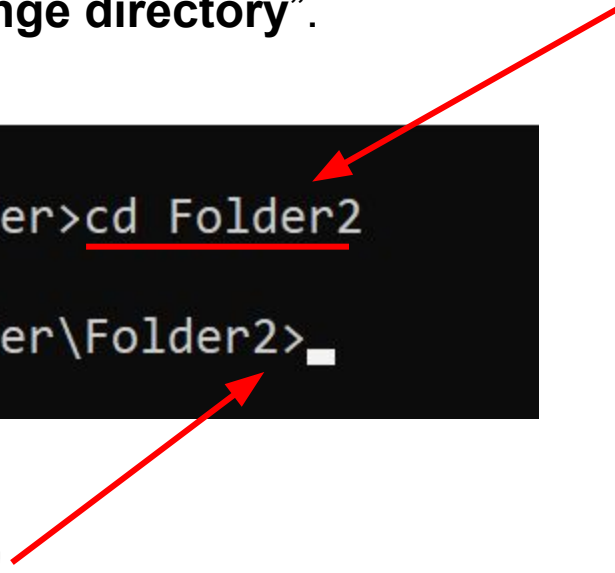


# Changing Directories - Bash

To open a folder in bash, we use the “**cd *foldername***” command,  
aka “**change directory**”.

Administrator: Command Prompt

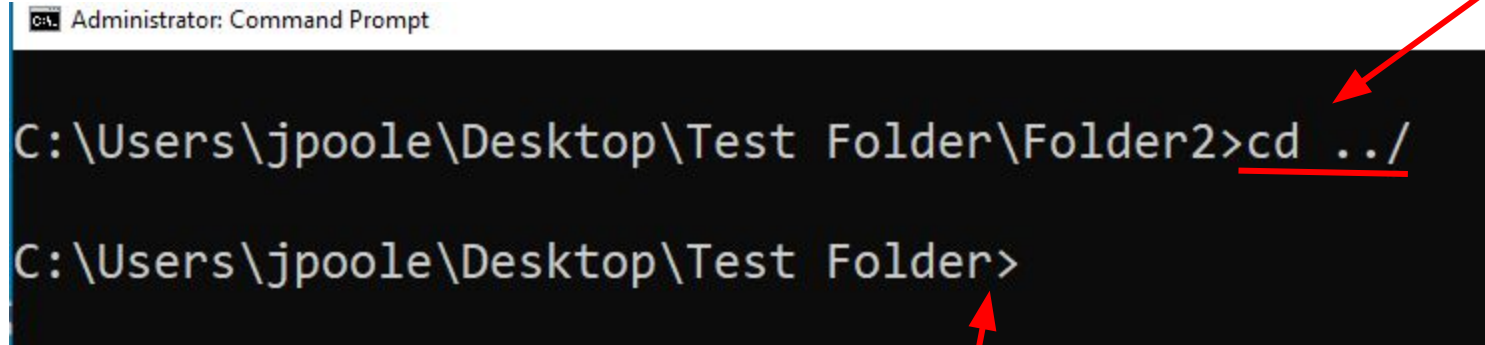
```
C:\Users\jpoole\Desktop\Test Folder>cd Folder2  
C:\Users\jpoole\Desktop\Test Folder\Folder2>_
```



You can see our directory location changed!

# Moving back directories - Bash

Use the “**cd ../**” command to go back a folder.



The screenshot shows a Windows Command Prompt window titled "Administrator: Command Prompt". The command prompt displays the current directory as `C:\Users\jpoo1e\Desktop\Test Folder\Folder2`. The user enters the command `cd ../`, which is underlined. The prompt then shows the new directory as `C:\Users\jpoo1e\Desktop\Test Folder`. Two red arrows point to the command and the new directory path.

```
Administrator: Command Prompt
C:\Users\jpoo1e\Desktop\Test Folder\Folder2>cd ../
C:\Users\jpoo1e\Desktop\Test Folder>
```

You can see our directory location changed!

# Other handy Linux Commands

**pwd** - Shows **p**resent **w**orking **d**irectory

**clear** - Clear the shell to look empty

**mkdir** - Makes a directory aka folder

**touch** \_\_\_\_\_ - Create a file with the name \_\_\_\_\_

**ls -a** - List all files including hidden files

**mv, cp, rm** \_\_\_\_ - Move, Copy, Remove file

**vim** \_\_\_\_\_ - Shell editor

If your shell gets stuck or breaks

**Hit Control + C**

Let's get on with Git

# What is Git?

Git allows for file tracking and collaboration on projects and “repositories”.

Git is like **Google Docs History** feature. It creates **version control**.



We'll be using it to copy and update a textbook repository.



# Git Clone Repository

Let's start by copying the textbook to your device!

Type: “**git clone** \_\_\_\_\_”

```
C:\Users\jpoole\Desktop>git clone https://github.com/JacobPooleCV/AP_Poole23.git
```

Textbook link can be found on my [website](#)

# Git Commands

All within your shell, you can use the following commands:



**git pull** - Pull all edits from GitHub (update)

**git add \*** - Add local changes to your **local** git version control

**git commit -m "message"** - Commits all added files to a revision log

Message should be replaced with a comment

**git push** - Push all of your committed changes to your remote repository

# Compiling and Running Java

Two commands:

- javac \*.java** - Compiles your file, \* can be replaced with the file name
- java \_\_\_\_\_** - Runs the file starting with \_\_\_\_\_ label. Not including extension

The more you use these commands,  
the easier they will become!