Initial Software Setup

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Pratt

Free and Open Source Software (FOSS)

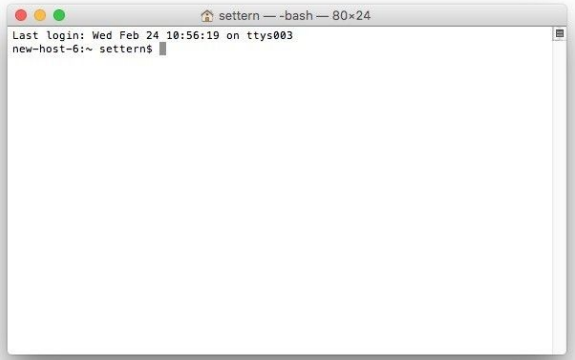
- All the required software for this course is free and open-source
- “Open source” is software that is released under a license in which the copyright holder grants users the rights to use, study, change, and distribute the software and its source code to anyone and for any purpose

Command Line Interface (CLI)

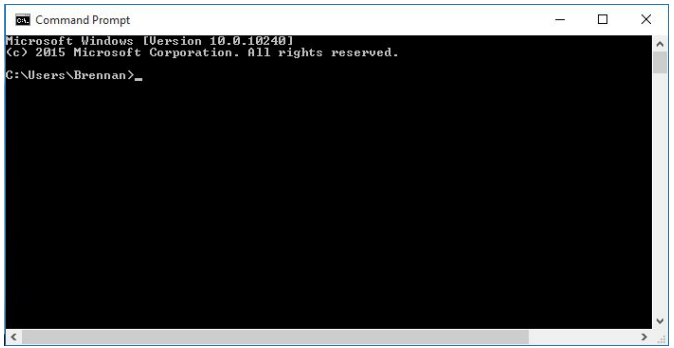
- The command line is a text interface for your computer
- Enables you to give your computer instructions via text commands, rather than point-and-click graphical user interfaces (GUIs)
- In order to install and run Python code, it will be helpful to first familiarize ourselves with the command line

Familiarize yourself with the command line

- Open the command line application on your computer
- On a Mac computer, this is called **Terminal**
- On a Windows computer, this is called **Command Prompt**



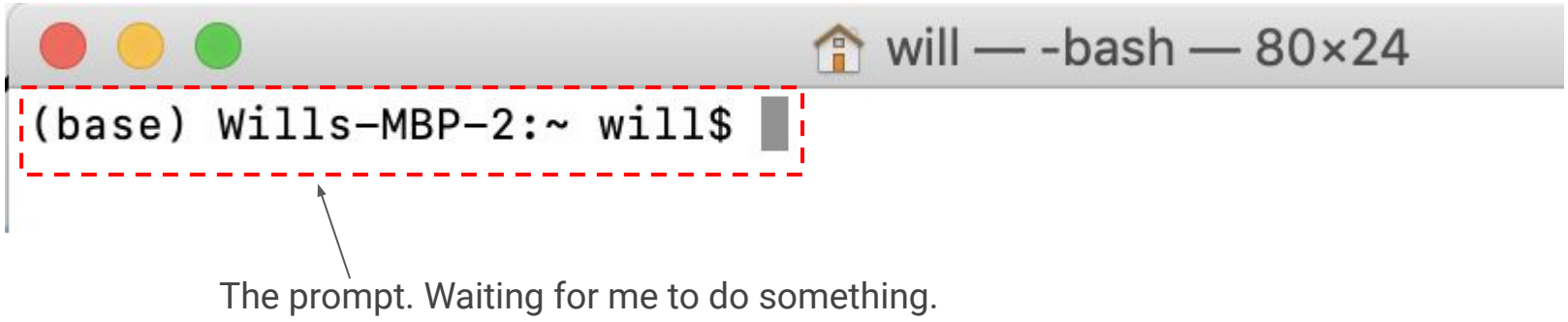
Mac Terminal



Windows Command Prompt

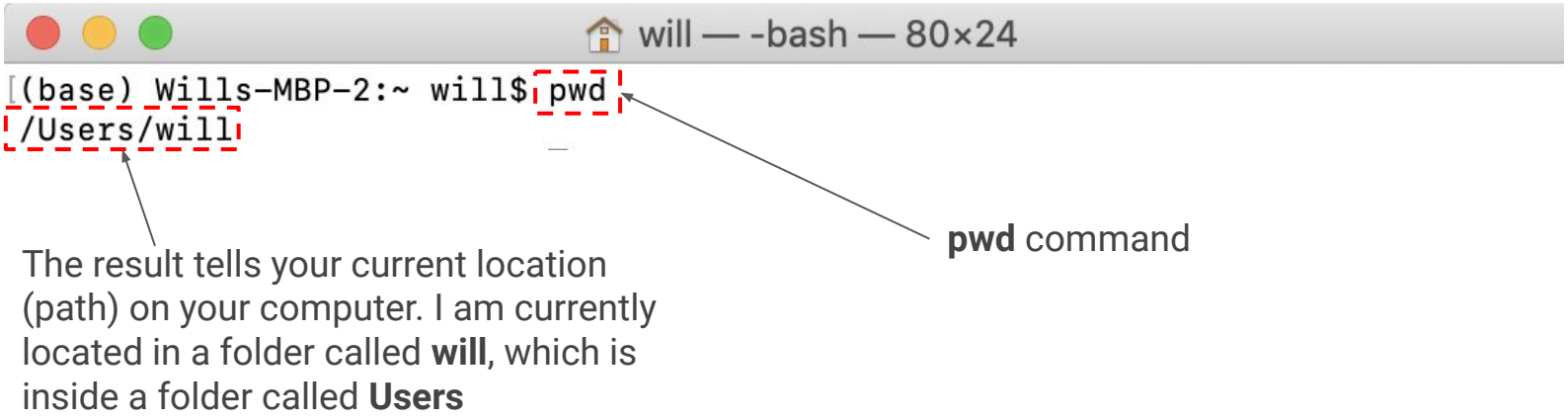
Familiarize yourself with the command line

- The first bit of text that shows up is called the ***prompt***
- The prompt is supplied automatically, you do not need to type it
- The exact details of the prompt will differ, not important right now



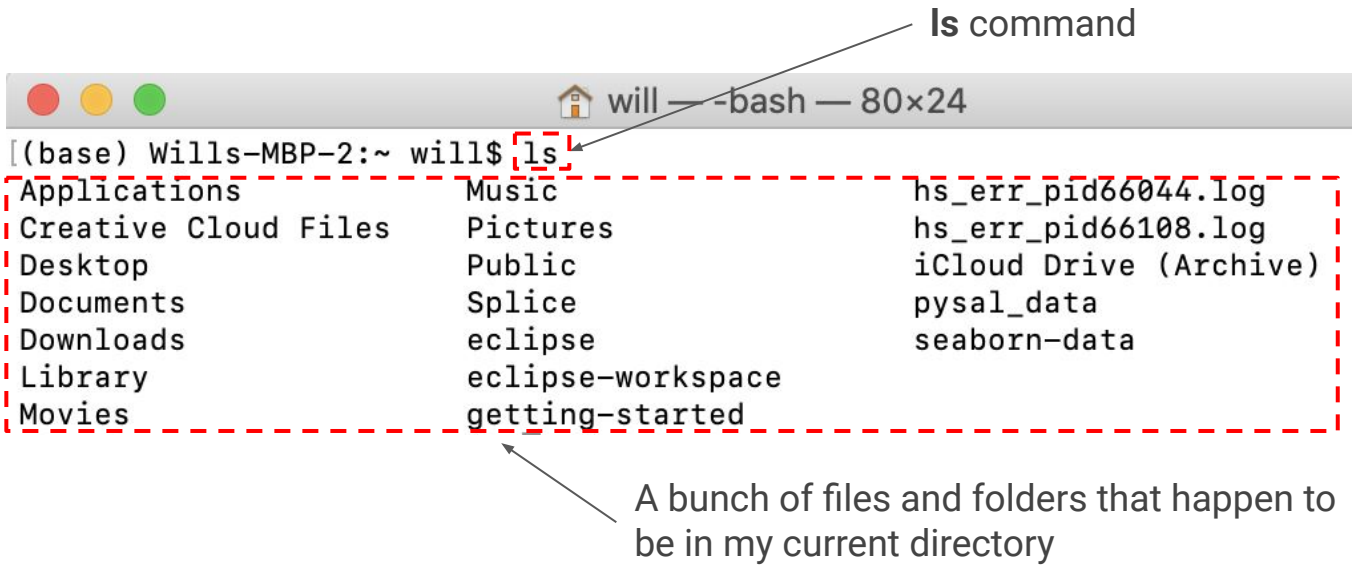
Familiarize yourself with the command line

- Type **pwd** and hit enter
- This prints the full path of the current location (i.e. “working directory”)



Familiarize yourself with the command line

- Type **ls** (that's "L" followed by "S", short for *list*) and hit enter
- This lists all the files and folders within your current directory (folder)



Familiarize yourself with the command line

- The **cd** command allows us to move to different folders on our computer
- **cd** stands for “change directory”
- Enter **cd Desktop** to change to your Desktop folder
- Use **pwd** command to confirm that you successfully moved to your Desktop
- Use **ls** command to list all of the items on your Desktop

Common navigation commands

Windows CMD	Task	Mac OS Terminal
`dir`	List files and folders	`ls`
`cd`	Full path of current folder/directory	`pwd`
`cd` <path to directory>	Change folder/directory	`cd` <path to directory>
`cd..`	One directory up in directory tree	`cd ..`
`cd`	Move to root directory	`cd /`
`mkdir newFolder`	Create new directory in current directory	`mkdir myFolder`
`echo some-text > fileName(.txt)`	Create new file	`cat > fileName(.txt)`
`rmdir myFolder`	Remove a directory*	`rmdir myFolder`
`ren oldFolderName newFolderName`	Rename a directory	`mv oldFolderName newFolderName`
`robocopy myFolder` <path to destination directory>	Copy a directory	`cp -r myFolder` <path to destination directory>
`move myFolder` <path to destination directory>	Move a directory	`mv myFolder` <path to destination directory>
`del myFile`	Remove a file*	`rm myFile`
`ren oldFileName newFileName`	Rename a file	`mv oldFileName newFileName`
`copy myFile` <path to destination directory>	Copy a file	`cp myFile` <path to destination directory>
`move myFile` <path to destination directory>	Move a file	`mv myFile` <path to destination directory>
`cls`	Clear the terminal screen	`clear`

Download Git

- Download Git (64-bit, use default options)
- Git is a distributed version control system
- Used to track changes in a set of files, usually used for coordinating work among programmers collaboratively developing source code during software development

Use Git to clone the course directory

- Open your command line
- Navigate to your Desktop directory with **cd**
- Enter the following: **git clone** **https://github.com/willgeary/info615.git**
- Now you have a copy of the course repository on your desktop

Download Conda

- Download and install miniconda (64-bit, use default options)
- Conda is a package manager and environment management system
- It contains Python itself in addition to many other useful things

Create an account on Github

- Create an account on Github if you don’t already have one
- Github is a popular site for hosting software projects
- Use your personal email address rather than university email
- Select the free account option