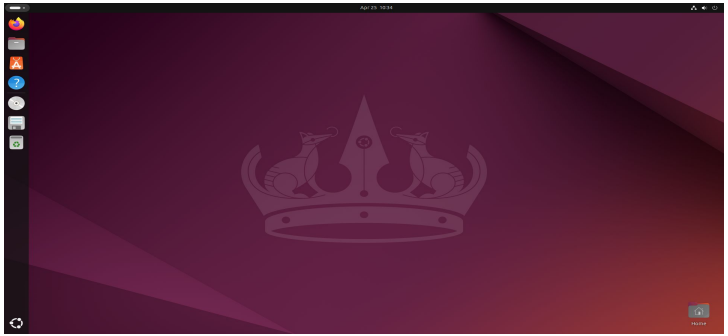
Pre-workshop Linux Intro

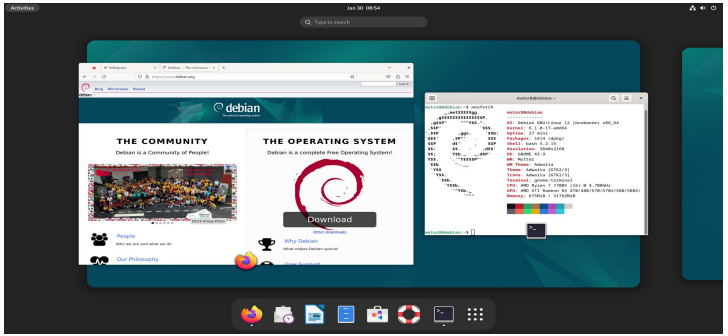
June 2nd 2025

What is linux?

Linux is an operating system like Microsoft Windows or Mac OS BUT it’s free and open-source!

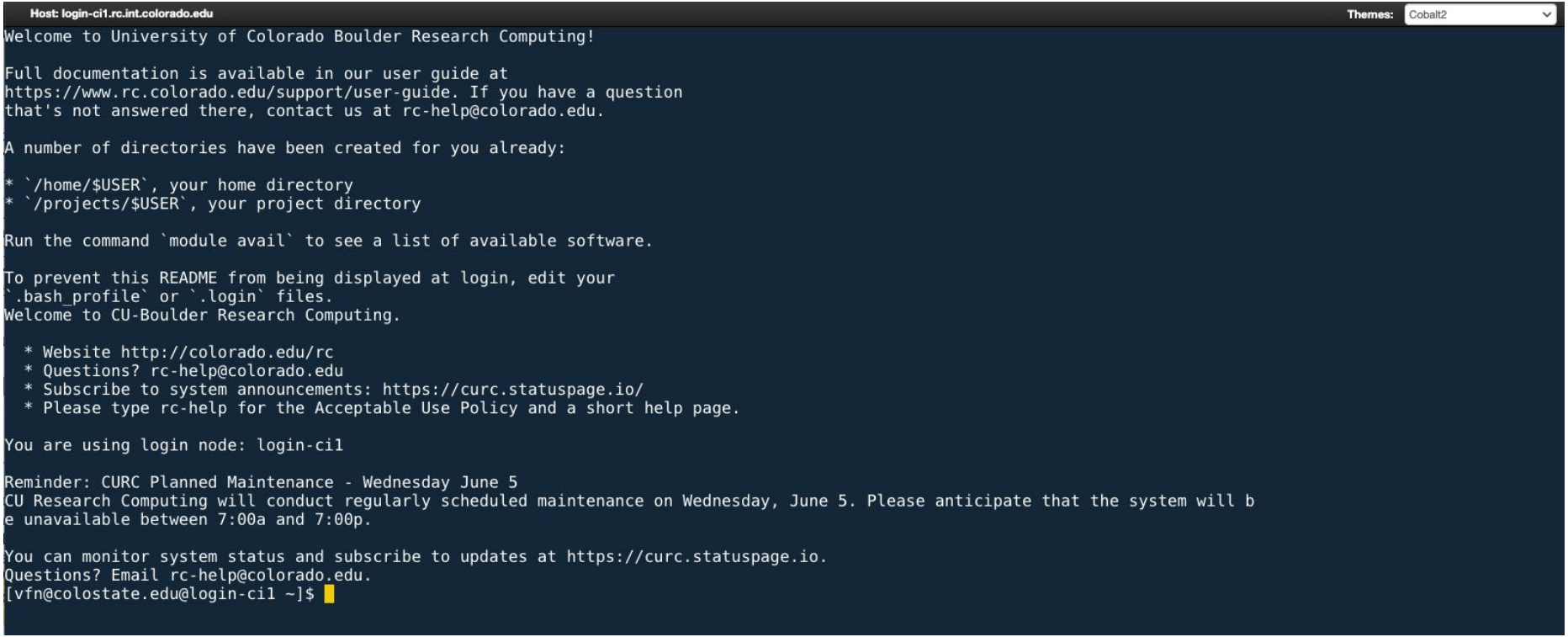
Ubuntu and Debian are popular versions of Linux





But also runs most remote servers (like Alpine)

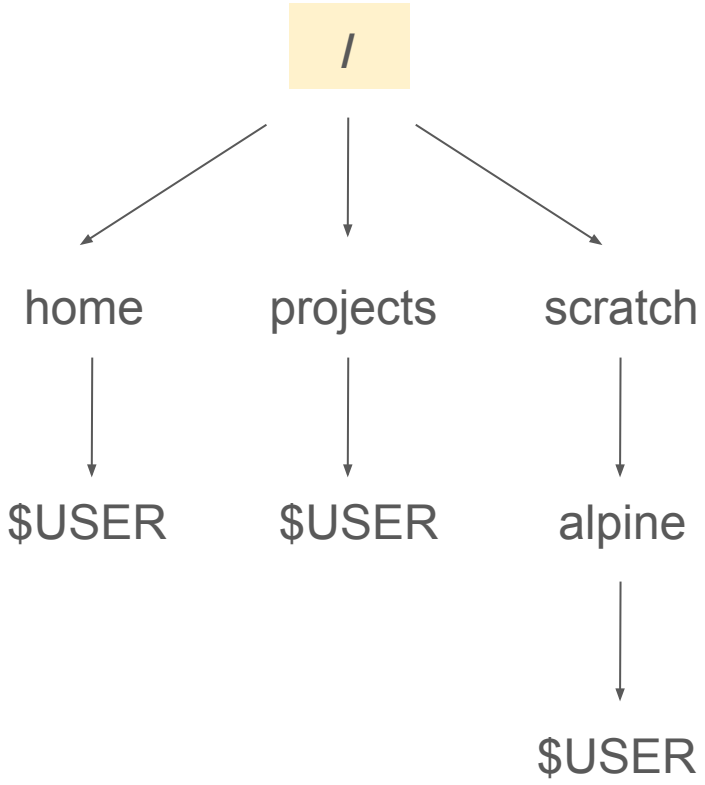
Alpine Command Line



Basic Linux Commands We'll Learn Today

1. Navigating around
2. Making new directories
3. Removing files and folders

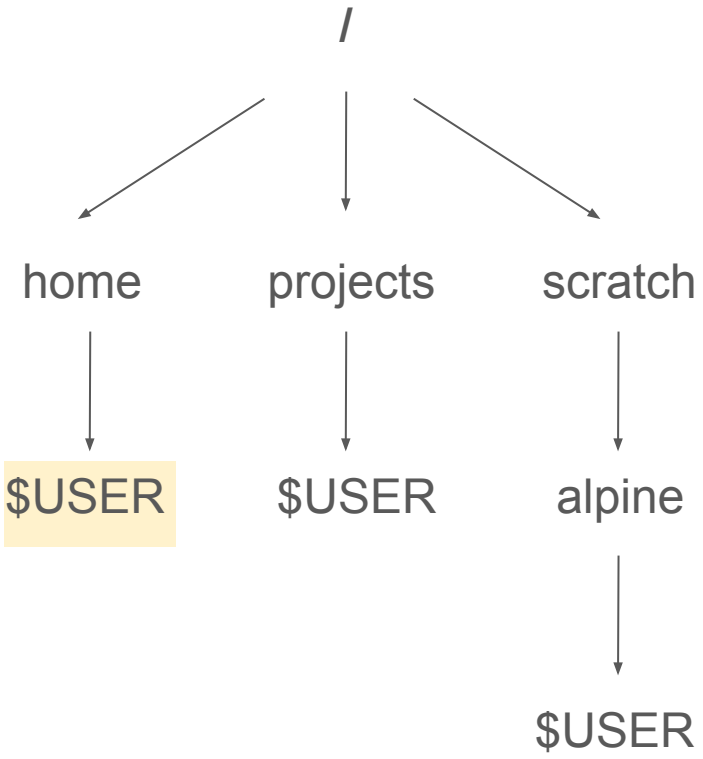
But first! The Alpine File System



Root directory

- Top of your file system
- ⚠️ Danger zone ⚠️

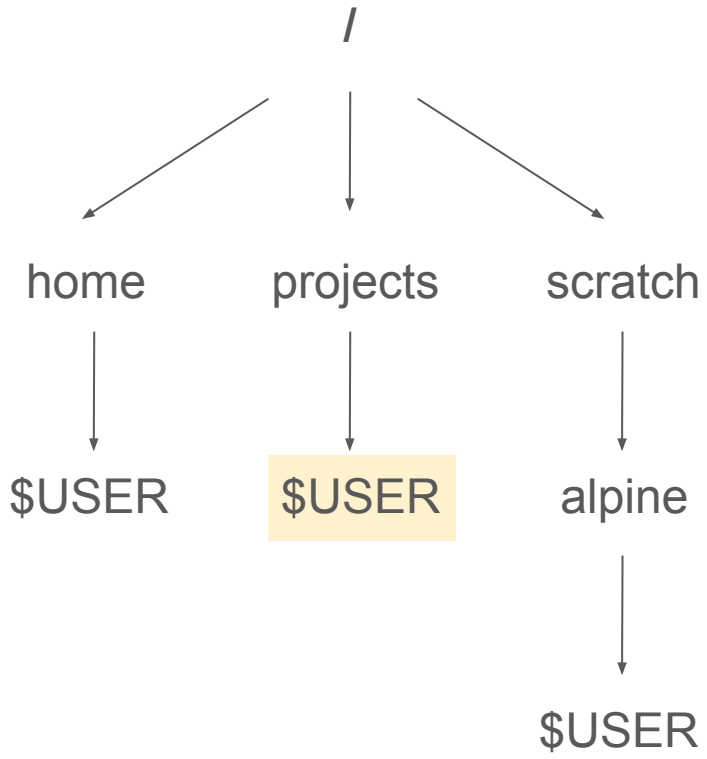
But first! The Alpine File System



Home directory

- home/username@colostate.edu
- Always where you “land”
- Software and system files stored here (ex. bash profile)
- Can also use “~”
  Ex- ~/work

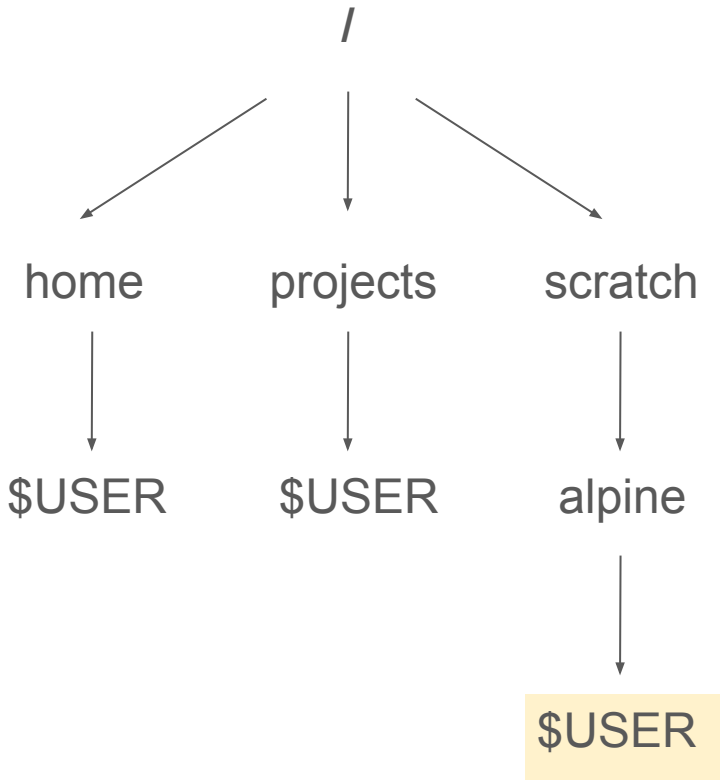
But first! The Alpine File System



Projects directory

- projects/username@colostate.edu
- Where you store files you want to keep
- 250 GB

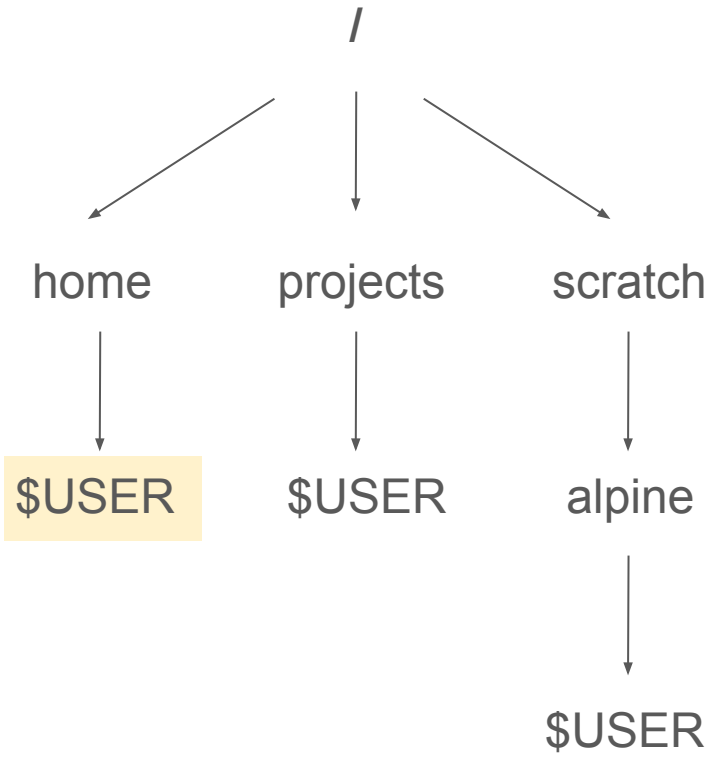
But first! The Alpine File System



Scratch directory

- scratch/alpine/username@colostate.edu
- Where you store files you're working on
- Files deleted after 90 days
- 1 TB

Absolute vs Relative File paths

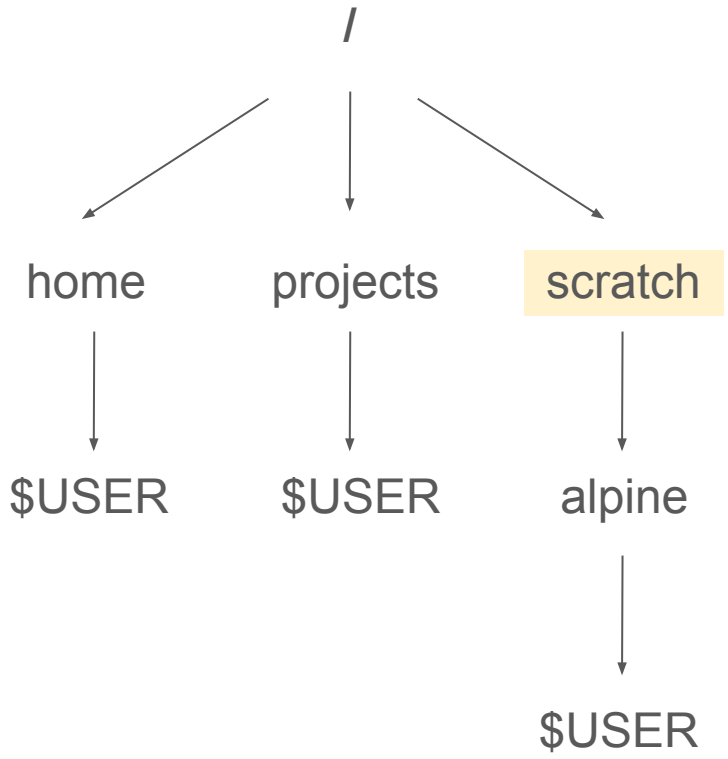


An absolute file path starts with the root directory. Ex:

/scratch/alpine/username@colostate.edu

Doesn’t matter where you are - works from anywhere in your file system

Absolute vs Relative File paths



A relative file path starts with where you are in your file system. Ex:

alpine/username@colostate.edu

Matters where you are - only works on folders “below” you

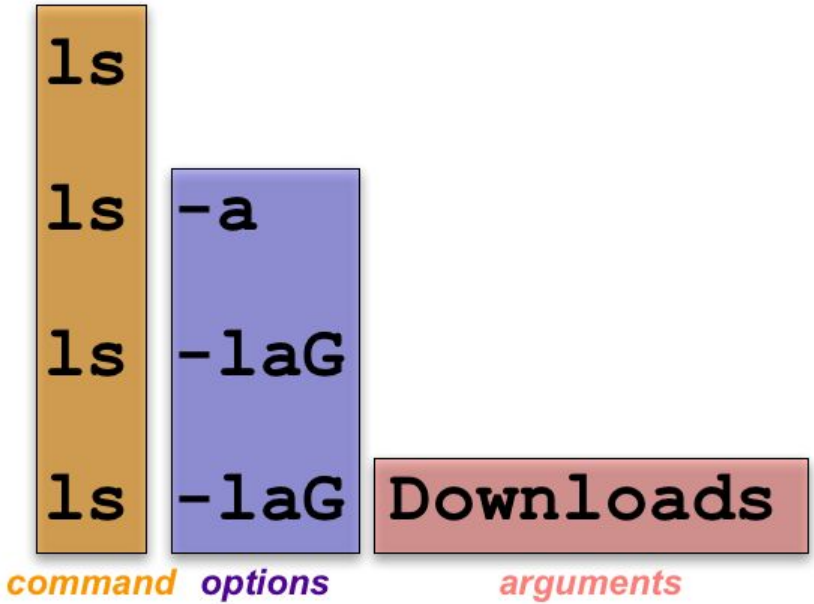
To move back up a folder use .. Ex.

cd ..

To move back up 2 folders use ../.. Ex.

cd ../..

Anatomy of a command



Important built-in commands

`pwd`	print working (i.e., current) directory
`ls`	list directory contents
`cd`	change directory
`mkdir`	make directory
`nano` *`filepath`*	open a text editor
`head` *`filepath`*	print the first ten lines of a file to the terminal
`tail` *`filepath`*	print the last ten lines of a file to the terminal
`less` *`filepath`*	interactively print contents of a file to the terminal
`mv` *`old-path new-path`*	move (or rename) a directory or a file
`cp` *`existing-path new-path`*	copy a directory or a file
`rm` *`filepath`*	remove a file - be careful, this is permanent!
`rm -r` *`directory-path`*	remove a directory - be careful, this is permanent!
`man` *`command`*	Shows manual for that command
`clear`	Clears your screen

Practice on your own!

1. Launch a terminal window
2. Use `pwd` to see what folder you're in
3. Navigate to you scratch directory using an absolute file path
4. Make a dummy folder called "test"
5. List out what's in your scratch directory to see if you successfully made a "test" folder
6. Enter into that folder
7. List what's in there (should be empty)
8. Navigate up a folder (hint: use "..")
9. Delete the folder you just created