



# Linux Users Group @ UT DALLAS

Social Coding  
with git, github, and gitlab

# Website and IRC

<https://lug.utdallas.edu>

<https://lug.utdallas.edu/chat>

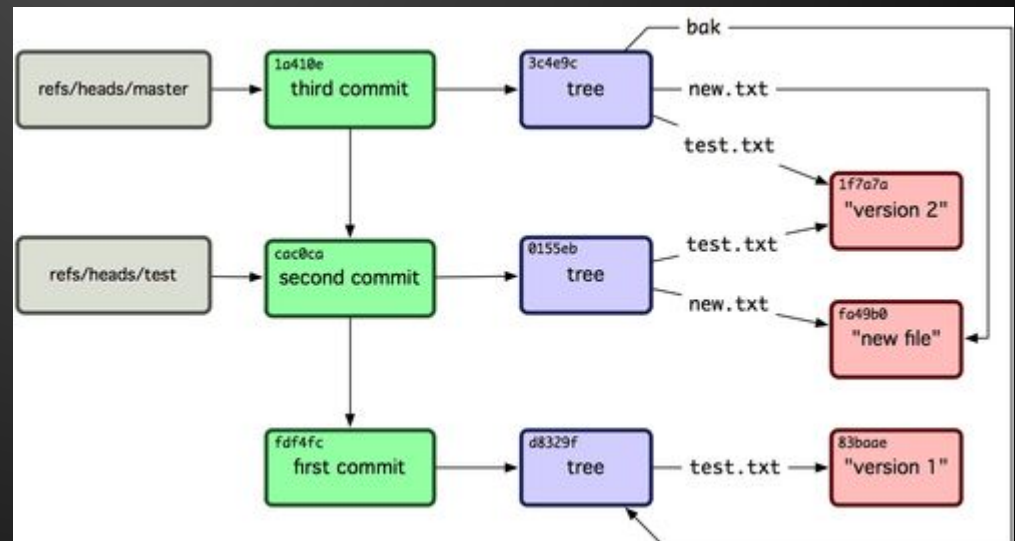
<ircs://irc.oftc.net:6697/#utdlug>

# The Git Book

<http://git-scm.com/book> - Pro Git written by Scott Chacon and published by Apress.

Read it. It goes into much more depth than this presentation like the reflog and what all those things in `.git/` are.

All images in this presentation are from Pro Git. (CC-By-SA)

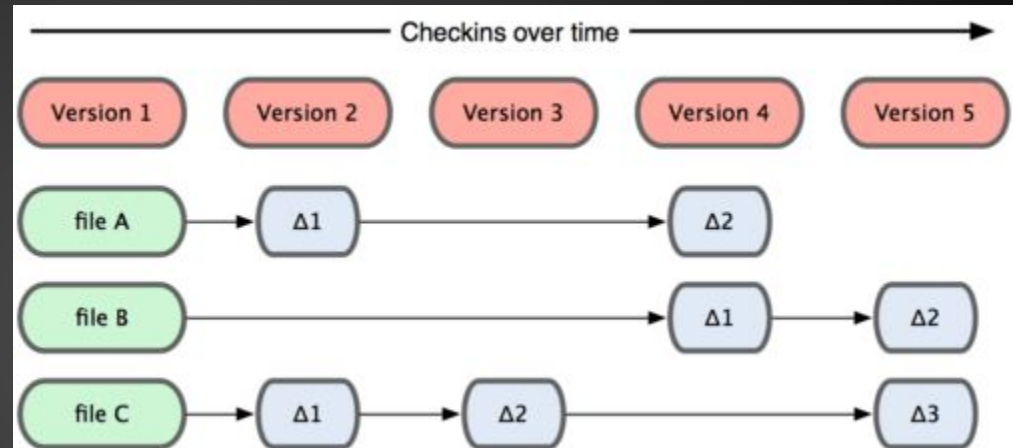
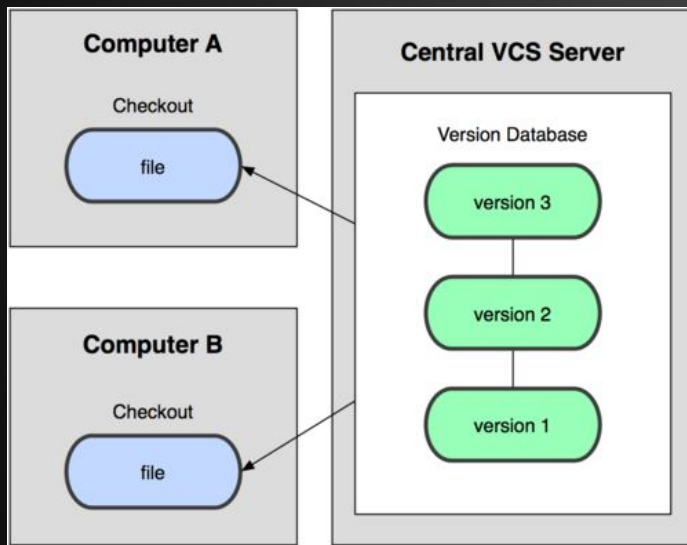


# Revision Control

- Reasons for Revision Control
  - Want to keep a history of the project
  - Want to see who did what
- Types of Revision Control
  - Renaming the file (foo, foo.1, foo.2, etc.)
  - Wikipedia's history
  - Google Docs
  - SVN, CVS, git, mercurial

# Version Control Systems

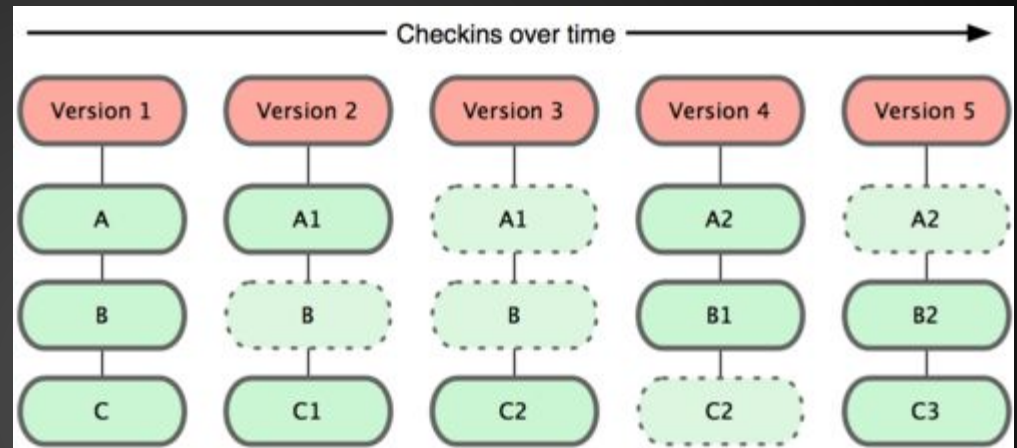
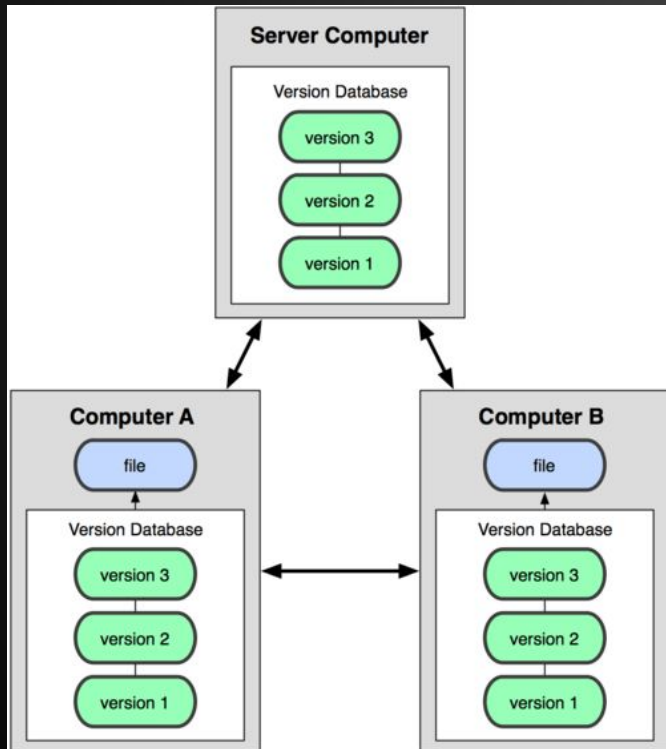
- Previous VCSes



Slow! Every command hits the remote server.

# Version Control Systems

- Git (and others)



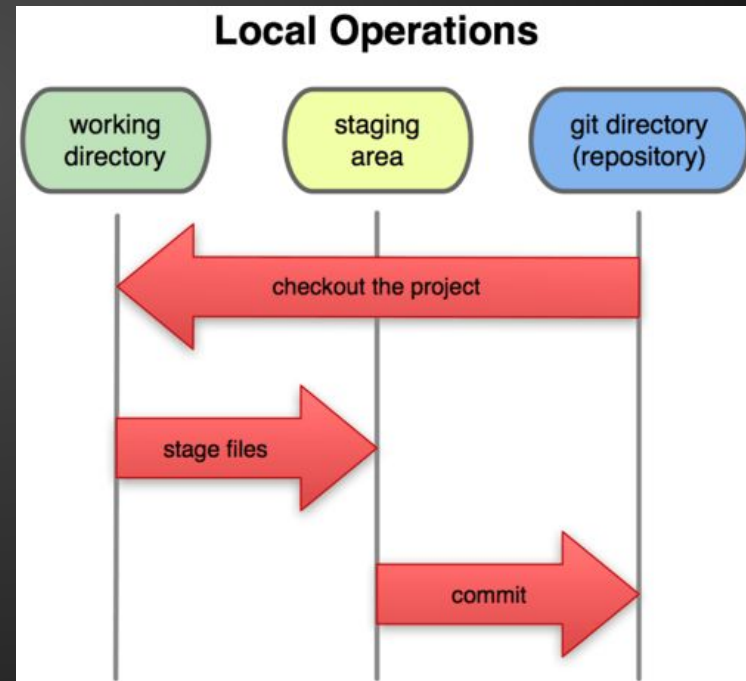
Fast!  
Everything\*  
is local

Isn't this  
inefficient?

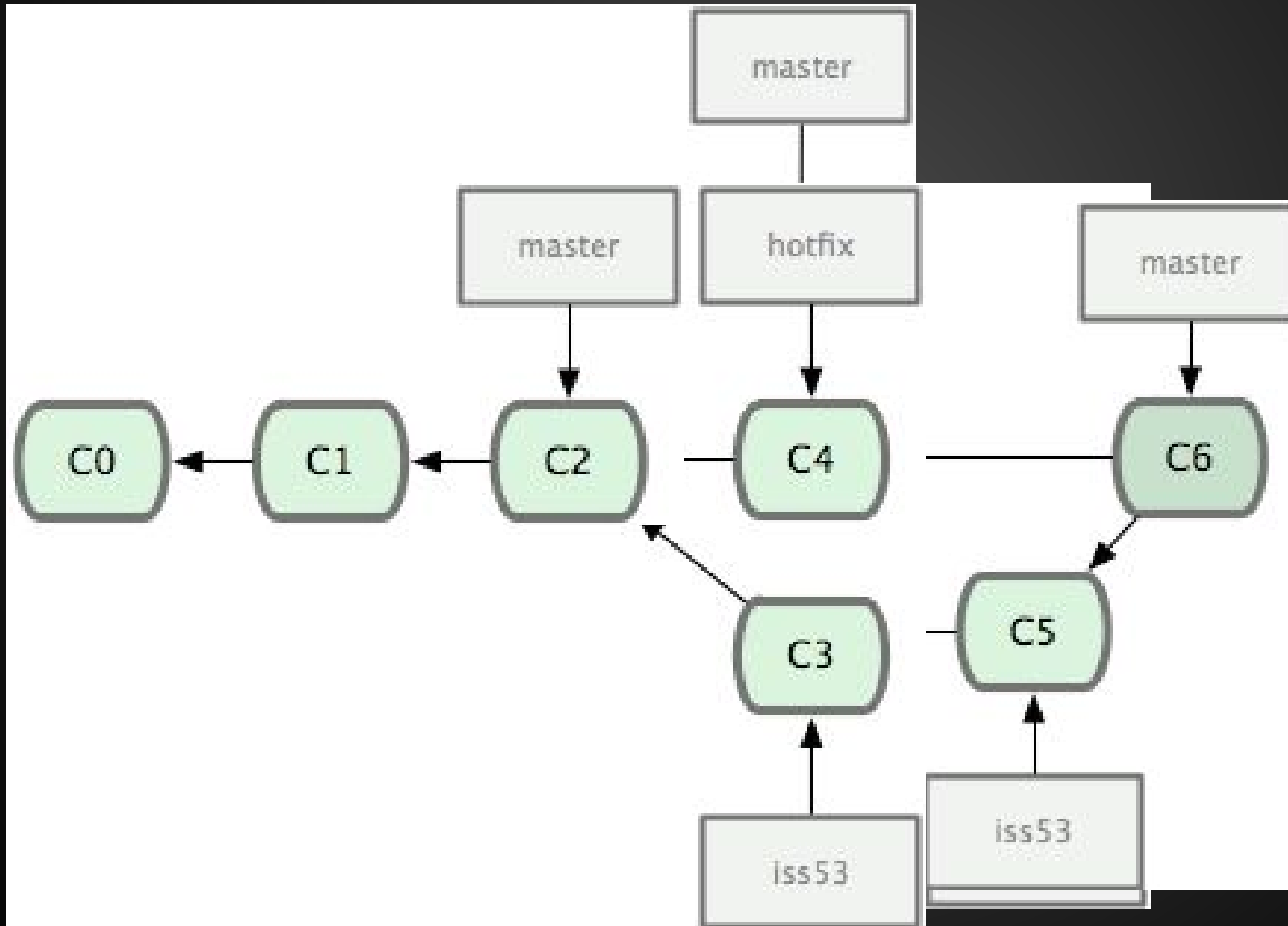
No. Packing  
(Pro Git 9.4)

# Using git

- Start with `$ git init`
- Or make a copy of an existing repo with `$ git clone <URL>`
- Stage files with `$ git add <file>`
- Create a snapshot or a commit with `$ git commit`



# Branches (Lines Are Boring)





# that's not an octopus, that's a Cthulhu merge -Linus

```
*-----2cde51f - Merge remote-tracking branches 'asoc/topic/ad1836', 'asoc/topic/ad193x', 'asoc/topic/adav80x',
* | 784cbf8 - ASoC: Rename mid-x86 directory to intel (10 months ago) <Mark Brown>
* | 9a199b8 - ASoC: wm9081: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | d44008b - ASoC: wm8995: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | b888edb - ASoC: wm8994: Move DCS done IRQ request later (10 months ago) <wangbiao>
* | a0a0591 - ASoC: wm8991: Verify device ID during probe() (10 months ago) <Mark Brown>
* | e463480 - ASoC: wm8991: Move basic initialisation to I2C level probe (10 months ago) <Mark Brown>
* | a86552e - ASoC: wm8991: Convert to direct regmap API usage (10 months ago) <Mark Brown>
* | 8982498 - ASoC: wm8991: Convert to table based control and widget init (10 months ago) <Mark Brown>
* | 6a07733 - ASoC: wm8991: Use a supply to manage input power (10 months ago) <Mark Brown>
* | 0112b62 - ASoC: wm8990: Convert to direct regmap API usage (10 months ago) <Mark Brown>
* | d2fd5fe - ASoC: wm8990: Use supplies to manage input power (10 months ago) <Mark Brown>
* | f6b415b - ASoC: wm8990: Convert to table based control and DAPM init (10 months ago) <Mark Brown>
* | 93818c9 - ASoC: wm8990: Convert to module_i2c_driver() (10 months ago) <Mark Brown>
* | 6368711 - ASoC: wm8988: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 50c9697 - ASoC: wm8985: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | e40e0b5 - ASoC: wm8974: Convert to direct regmap API usage (10 months ago) <Mark Brown>
* | c3e8494 - ASoC: wm8962: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | fbbf7fe - ASoC: wm8940: Convert to direct regmap API usage (10 months ago) <Mark Brown>
* | 6435e5b - ASoC: wm8940: Convert to table based control and DAPM init (10 months ago) <Mark Brown>
* | 3f30026 - ASoC: wm9081: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | f25cf34 - ASoC: wm8900: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | f3f9a60 - ASoC: wm8804: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 1769267 - ASoC: wm8776: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 2c48643 - ASoC: wm8753: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 9ea6fbc - ASoC: wm8750: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 26090a8 - ASoC: wm8741: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | b65ab73 - ASoC: wm8731: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 5c15371 - ASoC: wm8728: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 2309d67 - ASoC: wm8711: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | f58c4fc4 - ASoC: wm8580: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 008ef94 - ASoC: wm8523: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 8e6ad35 - ASoC: wm8510: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 8c5178f - ALSA: Add params_width() helpers (9 months ago) <Mark Brown>
* | 06b2bd2 - ASoC: uda1380: Use IS_ENABLED() macro (10 months ago) <Fabio Estevan>
* | 38136bd - ASoC: txx9: Don't set unused struct snd_pcm_hwdep fields (9 months ago) <Lars-Peter Clausen>
* | 625bcac - ASoC: twl6040: Remove self managed local reg_cache support (9 months ago) <Peter Ujfalusi>
* | 79ae513 - ASoC: twl6040: Remove register restore functionality (9 months ago) <Peter Ujfalusi>
* | 5350910 - ASoC: twl6040: Custom caching for sensitive DL1/2 path registers (9 months ago) <Peter Ujfalusi>
```



# Remotes (Sharing Is Caring)

- `$ git remote add <name> <URL>`
- `$ git fetch [<remote>|--all]`
- Remote branches are `<remote>/<branch>`
- `$ git pull` don't do this! (auto-merges)
  - Although it's ok with `--ff-only`
- `$ git push [<remote> [<refspec>]]`
- Remember not everyone has all the branches you do and vice versa.

# More info

- Pro Git
  - <http://git-scm.com/book>
- man pages
  - info for git pull is `man git-pull`
- Git Fix Um
  - <http://sethrobertson.github.io/GitFixUm/fixup.html>
- Git - The Simple Guide
  - <http://rogerdudler.github.io/git-guide/>
- `irc://chat.freenode.net/#git`