R-Ladies Montpellier

Version control with GITHUB

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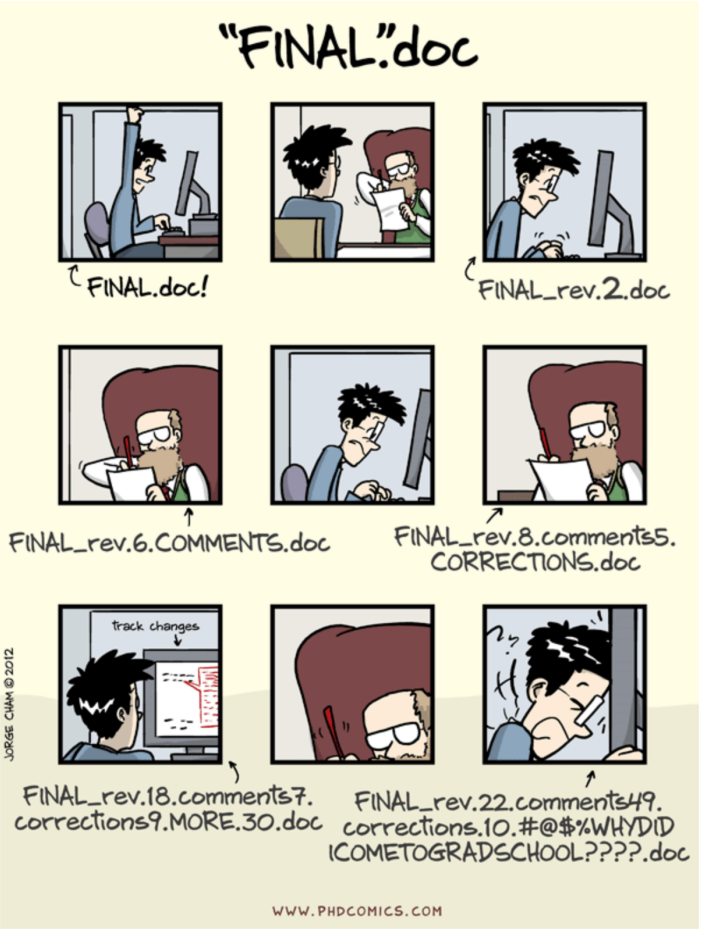
GitHub: @CriscelyLP

Get start! YEAH!

Why is important version control?



phdcomics.com

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- Collaborations
- Save time!

Version control software

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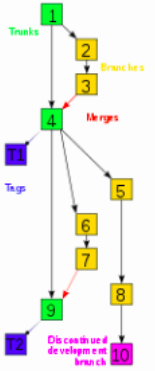
V • T • E	Version control software	[hide]
Years, where available, indicate the date of first stable release. Systems with names *in italics* are no longer maintained or have planned end-of-life dates.		
Local only	**Free/open-source**	RCS (1982) · SCCS (1972)
	Proprietary	PVCS (1985) · *QVCS* (1991)
Client–server	**Free/open-source**	CVS (1986, 1990 in C) · CVSNT (1998) · QVCS Enterprise (1998) · Subversion (2000)
	Proprietary	AccuRev SCM (2002) · ClearCase (1992) · *CMVC* (1994) · Dimensions CM (1980s) · *DSEE* (1984) · Endevor (1980s) · Integrity (2001) · Panvalet (1970s) · Perforce Helix (1995) · SCLM (1980s?) · Software Change Manager (1970s) · StarTeam (1995) · Surround SCM (2002) · Synergy (1990) · Team Concert (2008) · Team Foundation Server (2005) · Visual Studio Team Services (2014) · Vault (2003) · *Visual SourceSafe* (1994)
Distributed	**Free/open-source**	*ArX* (2003) · BitKeeper (2000) · *Codeville* (2005) · Darcs (2002) · *DCVS* (2002) · Fossil (2007) · Git (2005) · *GNU arch* (2001) · GNU Bazaar (2005) · Mercurial (2005) · Monotone (2003) · Pijul (2015) · *SVK* (2003) · Veracity (2010)
	Proprietary	*TeamWare* (1990s?) · Code Co-op (1997) · Plastic SCM (2006) · Team Foundation Server (2013) · Visual Studio Team Services (2014)
Concepts	Baseline · Branch · Changeset · Commit · Data comparison · Delta compression · Fork (Gated commit) · Interleaved deltas · Merge · Repository · Tag · Trunk	
Category · Comparison · List		



Wikipedia

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Slide taken from Mine Cetinkaya-Rundel.

GitHub Inc.

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A web-based hosting service for version control using Git.

GitHub

Download logo

Download mark

Download Octocat

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- Tips about the name acount:
  - Use your actual name!
  - Shorter is better than longer!
  - Be as unique as possible!
  - Reuse your name from other context, e.g. `Twitter` or `Slack`!

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- **If git is not installed YET**: See Install git to follow the correct steps to install git according your system operative! :)

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- There are diverse options of Git editor.

Git Clients

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- Some Git clients:
  - SourceTreen
  - GitKraken
  - GitUp
  - SmartGit
  - git-cola
  - ... others...
  - **RStudio**

Almost ready!

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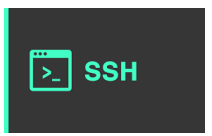

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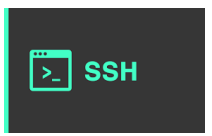

If you plan to push/pull using SSH protocol, you can follow Set up keys for SSH for more information.

RStudio and GitHub

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Setup Git + RStudio + GitHub

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- Tools / Global Options / Select Git/SVN tab.
- Create the RSA key.
- Click, View public key, and copy the displayed public key.
- Save the key on your GitHub account: Settings / SSH key / Add SSH key.

Step by step here: Connecting RStudio and GitHub

Now we can really have fun!

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- Initializa the repository using the `README`.

Create a new repository

A repository contains all project files, including the revision history.

Owner **Repository name** *

CriscelyLP /

Great repository names are short and memorable. Need inspiration? How about **stunning-system**?

Description (optional)

Public
Anyone can see this repository. You choose who can commit.

Private
You choose who can see and commit to this repository.

Initialize this repository with a README
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** | Add a license: **None**

Create repository

Clone a repo

Using RStudio

- File -> New Project

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- Fill `Repository URL` and project name (what you want the folder to be called locally).

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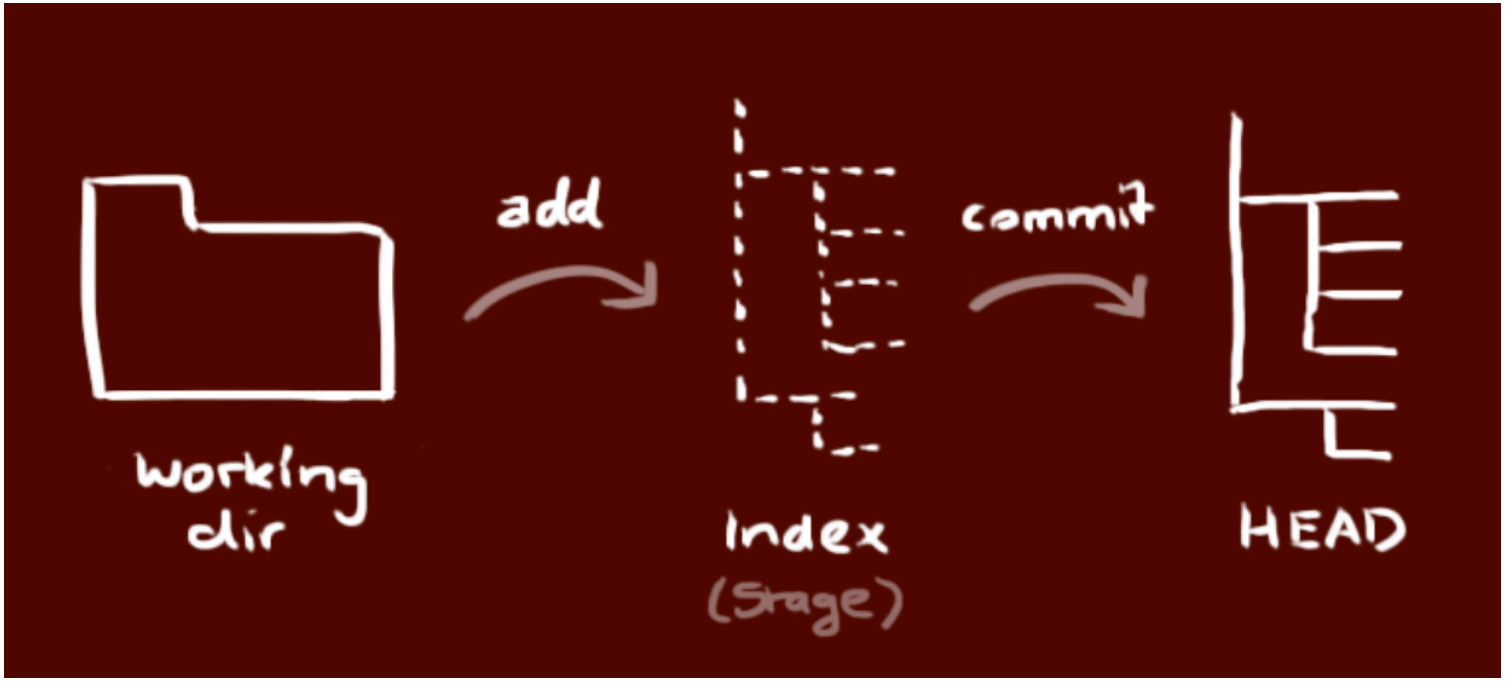
- When you are using a remote server, your command will be: `git clone username@host:/path/to/repository`
- For example:

```
git clone git@github.com:r-ladies-montpellier/20181212-RLadiesMontpellier-Meetup1.
```

Workflow

Your local repository consists of three "trees" maintained by git.



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Now the file (or changes in general) is committed to the `HEAD`, but not in your remote repository YET!

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If you dont know that is a `branch`, the next slide is for YOU! 

Branches are used to develop features ISOLATED from each other!

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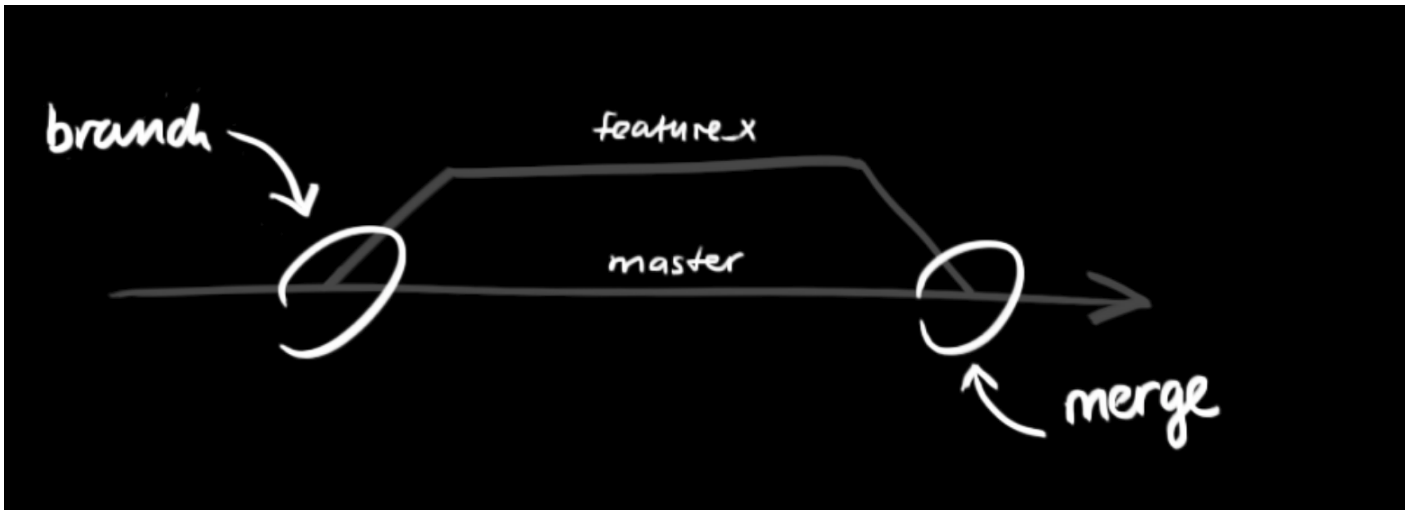

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IMPORTANT!!!!! Any branch in your local repository is available to others users unless you push the branch to the remore repository, doing:

```
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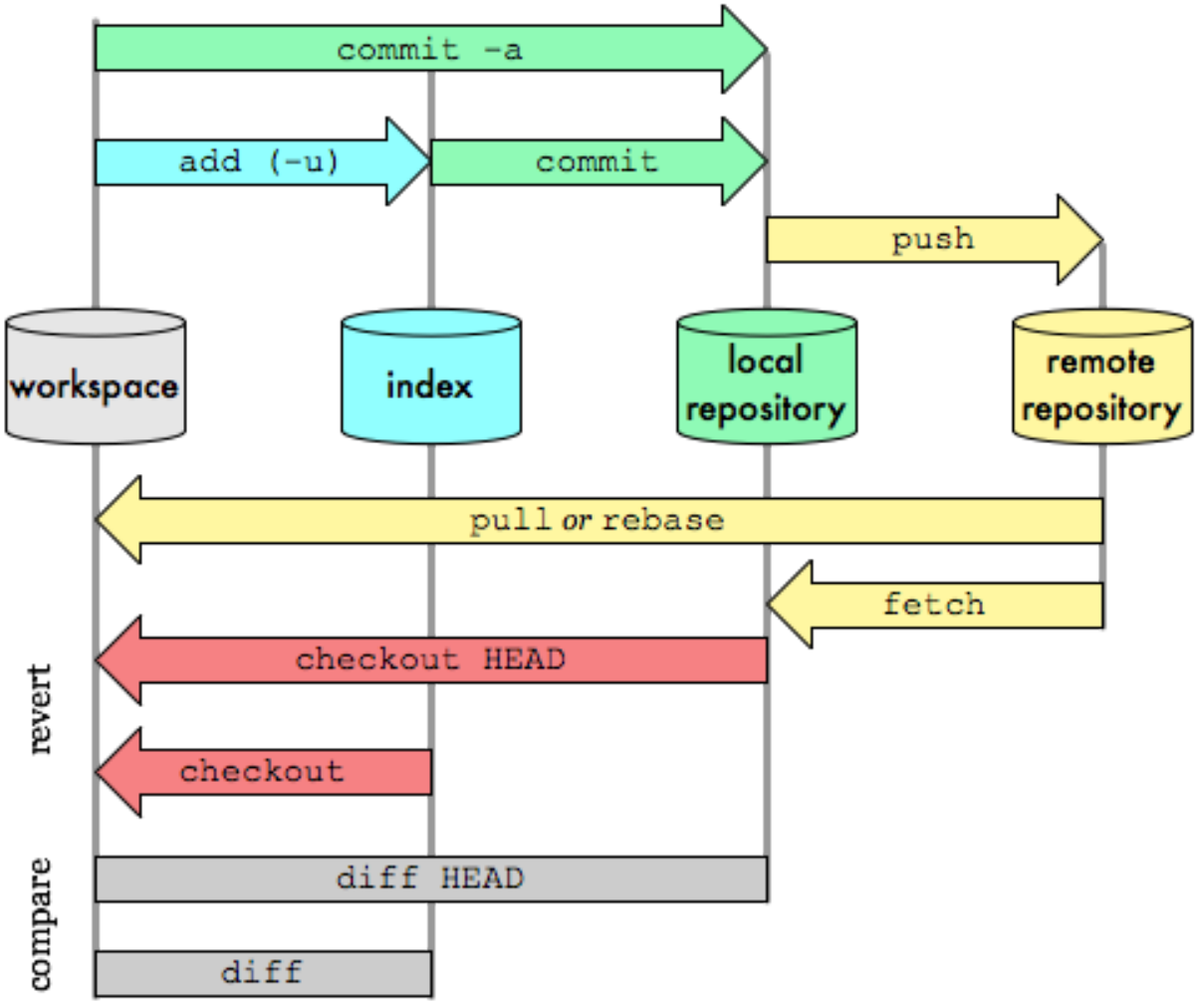
More information about git commands here: Git the Simple guide

Git Data Transport Commands

http://osteele.com



Exercise

- Create a repo in GitHub.
- Clone the repo in your computer.
- Make changes (editting also the README.md and .gitignore)
- Make commits, if is possible include emojis to have fun! :)
- Use: push / pull / merge / status / etc.
- Check the changes in you remore repository.
- Develop a new branch, delete it, play, enjoy and ...

...be in problems, we are here to help you!

Follow the R-Ladies Montpellier in GitHub.

Thanks!

- R-Ladies Global for the help and support.
- Jenny Bryan: Happy Git with R.
- Slides created via the R package **xaringan** with the **R-Ladies theme**
- Cowork'in Montpellier