



git



Version control with Git

Presentation by David Weis

What is version control?

- Track history of your code
- Share code with colleagues
- Backup your code
- Centralized vs Distributed

What is Git?



- Distributed version control system
- Created by Linus Torvalds
- Free under the GNU General Public License
- “Stupid content tracker”

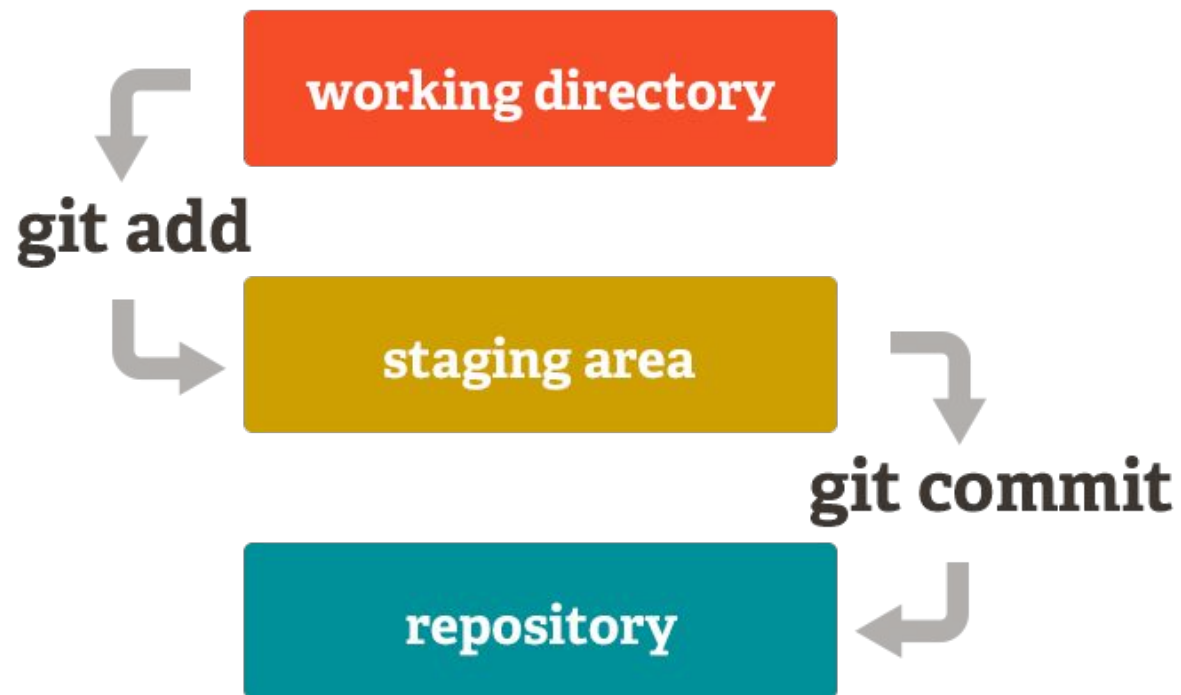
What is GitHub?

- Git Repository hosting service
- One of many (Others include GitLab, bitbucket)
- Git does not belong to GitHub
- Focus on open source
- Many other features beside Git



Basic terms

- Repository
- Staging area
- Commit
- Remote
- Branch
- Collaborator



Git Basics

- `git init`
- `git status`
- `git add <filename> | -A`
- `git commit -m`
- `git pull`
- `git push`



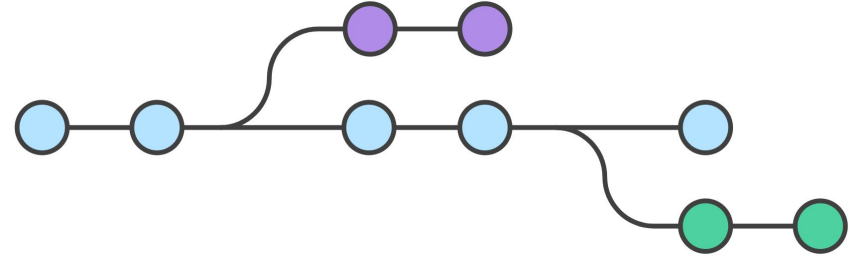
Commit messages

- Important because they create history
- Short and concise
- If applied, this commit will...
 - What-with what-where
 - “Fix typo in introduction to user guide”
- Commit with command:
 - `git commit -m “My commit message”`

	COMMENT	DATE
○	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
○	ENABLED CONFIG FILE PARSING	9 HOURS AGO
○	MISC BUGFIXES	5 HOURS AGO
○	CODE ADDITIONS/EDITS	4 HOURS AGO
○	MORE CODE	4 HOURS AGO
○	HERE HAVE CODE	4 HOURS AGO
○	AAAAAAA	3 HOURS AGO
○	ADKFJSLKDFJSDKLFJ	3 HOURS AGO
○	MY HANDS ARE TYPING WORDS	2 HOURS AGO
○	HAAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT MESSAGES GET LESS AND LESS INFORMATIVE.

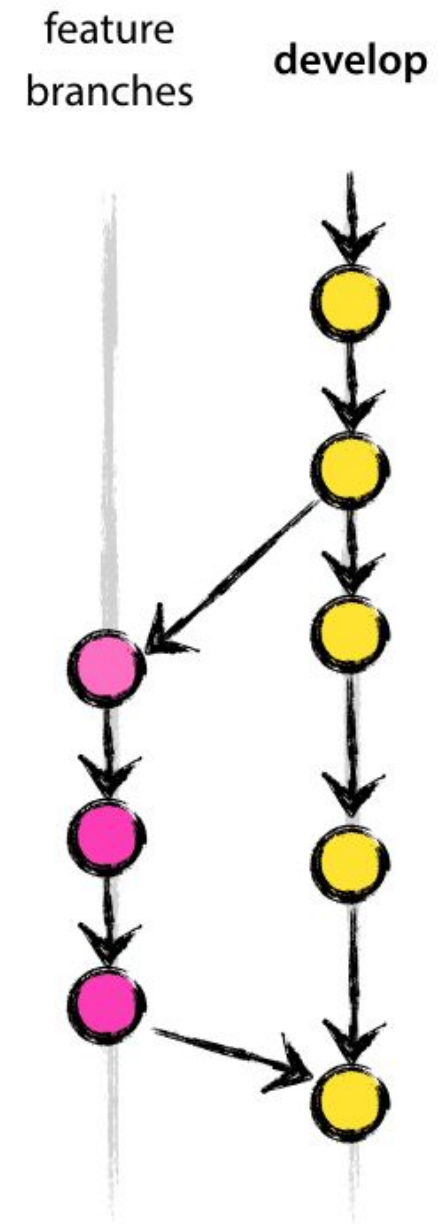
Branching



- Branching and Merging in Git is simple
 - As opposed to other VCS systems
- Merge conflicts are not something you evade
 - They are easy to resolve
- Common names
 - Master
 - Develop
 - Release
- [Git branching in a nutshell](#)

Feature branch

- May branch from Develop
- Must merge to Develop
- Name can be anything
 - Should start with word Feature
- Pull request used to merge back into Develop
 - Pull request should be Reviewed
- Deleted once it's merged



Pull request

- Not a git term
- Used in VSTS, Jira, GitHub
- Requests that changes are applied to main branch
 - List of changes, commits and reasons for changes
- Can automatically run test!
- Should to be reviewed by at least one another person

Resources

- First aid

- <http://firstaidgit.io/#/>

