



Git: from commit to merge

João Marins



João Marins



@jgcmarins



@jgcmarins



ENTRIA

THE
TEAM

History



Linus Torvalds

Writing an OS

- Multiple teams over the world
- Lots of features
- Lots of bug fixes
- How to not overwrite anything?

Existing Tools

- CVS
- BitKeeper

GIT

“Source code control: the way it
was meant to be.”

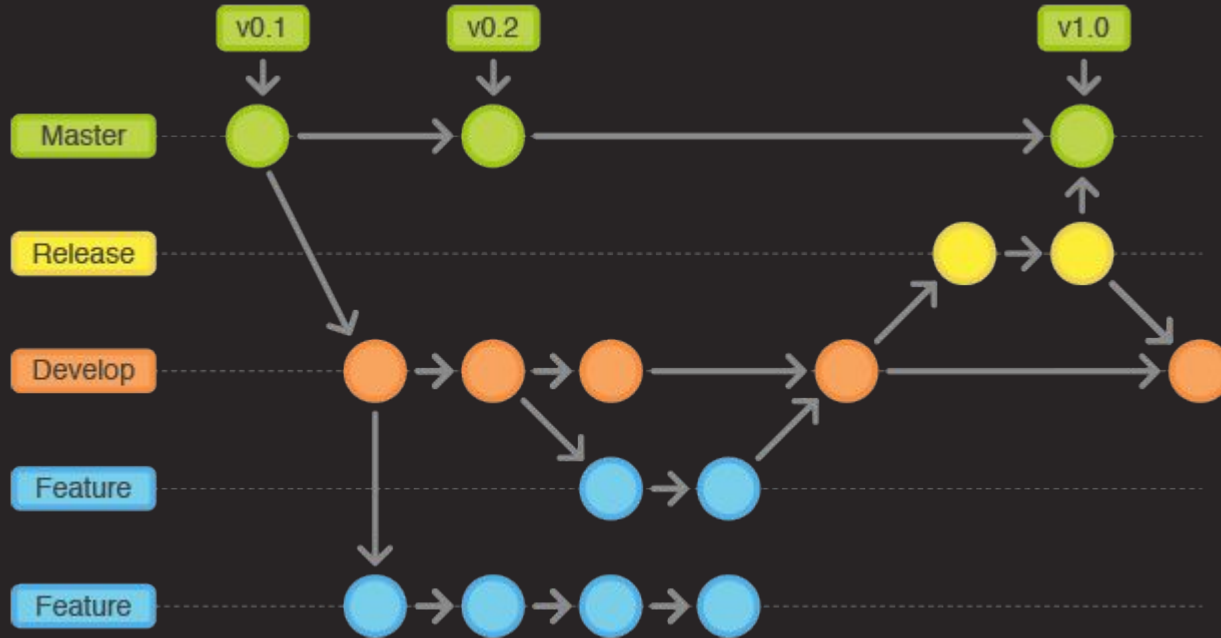
Linus Torvalds

<https://www.youtube.com/watch?v=4XpnKHJAok8>

Concurrency



Branch System



Distributed System

- Work on your local copy (branch)
- Push your changes
- Request approval
- Get merged

Remotes

- Software source code
- Also source of truth
- Safe

Commit

- Do your work locally
- Create a branch from another
- Add your changes to the new branch
- Commit your changes with a message

Push

From locally to remote \o/

Pull Request

- Your branch is ready on remote
- Open pull request
- Review
- Approved \o/

Merge: get shit done

- Your branch to master branch
- Do not be afraid
- Make sure your code works
- Congratulations \o/

Resolving Conflicts

- Sometimes it happens
- Same files
- Move fast
- Merge first



Writing a Software



Introducing features to a code base

- git clone x git remote add
- git fetch
- git pull
- git branch
- Git status
- git checkout
- git add
- git commit
- git push
- Git diff

Team work

Pull before Push \o/

Code Review

- You are responsible for your code
- Be nice with your coworkers
- Review what is to be reviewed
- Just make sure it makes sense

Best Practices



7 rules

- Separate subject from body with a blank line
- Limit the subject line to 50 characters
- Capitalize the subject line
- Do not end the subject line with a period
- Use the imperative mood in the subject line
(example: Create instead of Created or Creating)
- Wrap the body at 72 characters
- Use the body to explain what and why vs. how

7 rules

<https://chris.beams.io/posts/git-commit/>

Branch Naming

- [kind-of-change]/[what-is-being-changed]

Examples:

- fix/user-name-during-login
- improvement/login-screen
- feature/charge-customer-screen

Promote to production

- After everything get approved, merged, tested etc
- Promote code to production

Tools



SSH

- Clone you repo with ssh instead of https
- Easy
- Safe
- Fast

Alias

```
jgcmarins@entrias-MacBook-Pro-2 ~/workshops/git-semcomp-beta-2018 (master) $ git st
On branch master
Your branch is up to date with 'origin/master'.
```

Changes not staged for commit:

(use "git add <file>..." to update what will be committed)

(use "git checkout -- <file>..." to discard changes in working directory)

```
    modified:   links.txt
    modified:   topics.txt
```

Untracked files:

(use "git add <file>..." to include in what will be committed)

```
    assets/branches.png
    assets/chuck.gif
    assets/coding.gif
    assets/hommer.gif
    assets/linus.jpeg
    assets/monkey.gif
```

no changes added to commit (use "git add" and/or "git commit -a")

```
jgcmarins@entrias-MacBook-Pro-2 ~/workshops/git-semcomp-beta-2018 (master) $ git lg
```

```
* 0b04874 - (HEAD -> master, origin/master, origin/HEAD) Merge pull request #1 from jgcmarins/feat/basic-files (80 minutes ago) <João Marins>
| \
| * 5bd3665 - (origin/feat/basic-files, feat/basic-files) feat(basic-files): add basic files for presentation (80 minutes ago) <João Marins>
| /
* 1b56cf1 - Initial commit (2 hours ago) <João Marins>
```

```
jgcmarins@entrias-MacBook-Pro-2 ~/workshops/git-semcomp-beta-2018 (master) $
```

Hands on

- Presence List
- Master vs Production
- Multiple Remotes
- Mono Repo

Challenge

- Choose a open source project you like
- Fork it
- Make your local changes
- Open a Pull Request
- Get your changes MERGED \o/

Links

- <https://github.com/sibelius/cmds/blob/master/README.md#git>
- <https://stackoverflow.com/questions/492558/removing-multiple-files-from-a-git-repo-that-have-already-been-deleted-from-disk>
- <https://git-scm.com/docs/git-cherry-pick>
- <https://chris.beams.io/posts/git-commit/>



Thanks!!!

We are hiring



NTRIA

| T T T H E E C A H M