Git 101

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About me

- FIIT STU
 - PhD student personalized search
 - Teaching courses
 - Database Systems
 - Building Web Applications

• minio, s.r.o.

About

FIIT STU



My Recommended Movies

anything ‡

Tomáš ▼

Home Activity My Lists



₽ search





Action - 2012

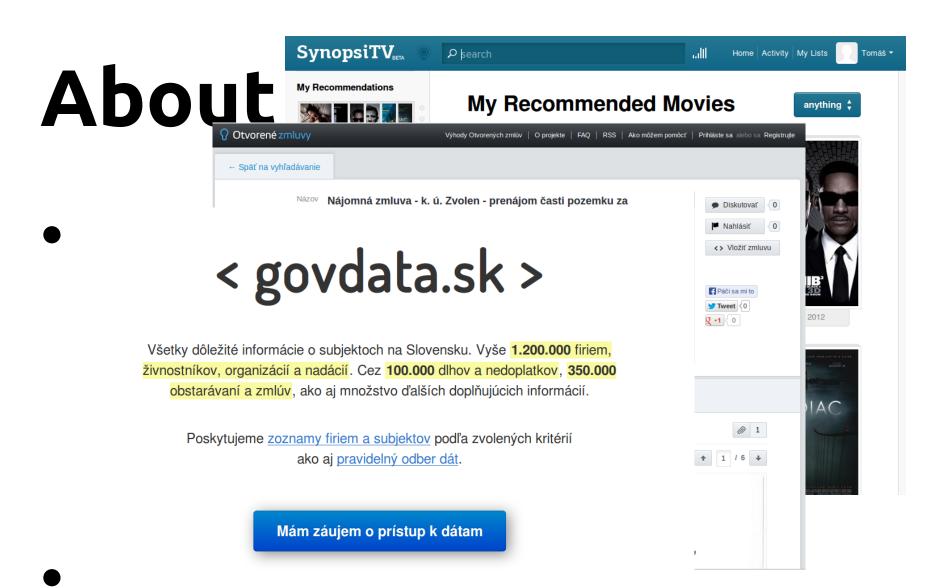






• minio, s.r.o.





Rozsiahle, denne aktualizované, štruktúrované, prečistené a poprepájané dáta



Academic Edition

Theory most of us only seen at school, this time in real world projects.

- Semantic search in databases
- Installation plan decomposition
- Fast similarity search
- Learning to rank fulltext results from clicks



18.7.2013 19:00

@rubyslava http://rubyslava.sk

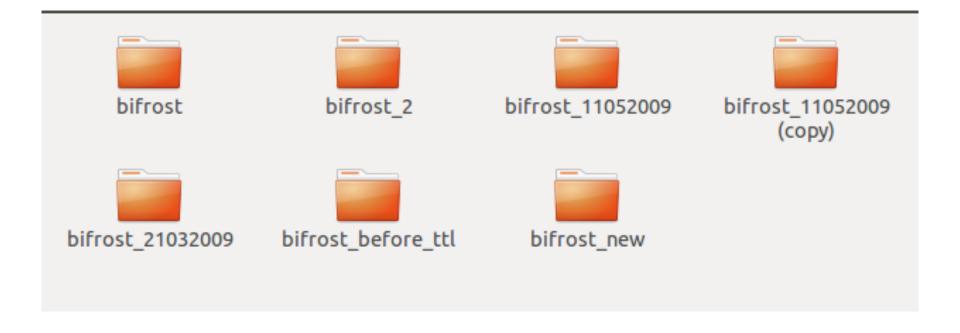
#1. SCM

Source Control Management

What The Fuck?

```
Fix order of arguments
 * 9f3489a
            (2 weeks)
                       <Tomas Kramar>
 * 079164b
                       <Tomas Kramar>
                                         Parse additional data from ORSR
            (2 weeks)
 * c31886e
                                         Deduplicate a bit
                       <Tomas Kramar>
 * def9db8
                                         ||= won't cache boolean values
                       <Tomas Kramar>
 * 84e1a85
                                         Fail ORSR parsing when encountering unknown part
                       <Tomas Kramar>
 * 31a204e
                                         Added basic rate limiter.
                       <Jan Suchal>
 * 1940394
            (5 weeks)
                       <Jan Suchal>
                                         Added a shitload of special cases cleanup, fixes #601.
 * 0bdfa4f
                                         Handle nil address.
            (5 weeks)
                       <Jan Suchal>
 * 1f04de9
           (5 weeks)
                       <Tomas Kramar>
                                         Limit max-width to 950px
 * 734805f
                                         Show more data in admin
            (5 weeks)
                       <Tomas Kramar>
 * 1c14bd3
            (5 weeks)
                       <Tomas Kramar>
                                         Remove forgotten puts
* 5cd43fd
           (5 weeks)
                       <Tomas Kramar>
                                         Parse shares from section "Akcie"
 * 5cfc620
                       <Tomas Kramar>
                                         Clean up extract update
 * c6f0fce (5 weeks)
                       <Jan Suchal>
                                         Index ICOs with leading zeros.
 * 81b4eef
                       <Jan Suchal>
                                         Ignore spaces in ico search.
 * dbdb13d
            (5 weeks)
                       <Jan Suchal>
                                         Remove spaces from regis address.
 * 0038ca8
            (5 weeks)
                       <Jan Suchal>
                                         Add address cleaning to consolidation.
 * 779b9f9
            (5 weeks)
                       <Jan Suchal>
                                         Add euvat to autoform if applicable.
 * 615f605
                       <Jan Suchal>
                                         Remove the duplicated value from response by using typeahead.js right.
 * 9bbfafb
           (5 weeks)
                       <Jan Suchal>
                                         Added private or public key with signature authorizer.
```

Why Should Care?



- History
- Safety Net
- Backup
- Collaboration
 - Sharing changes
 - Project overview
 - Conflicts
- Development alternatives
- Statistics

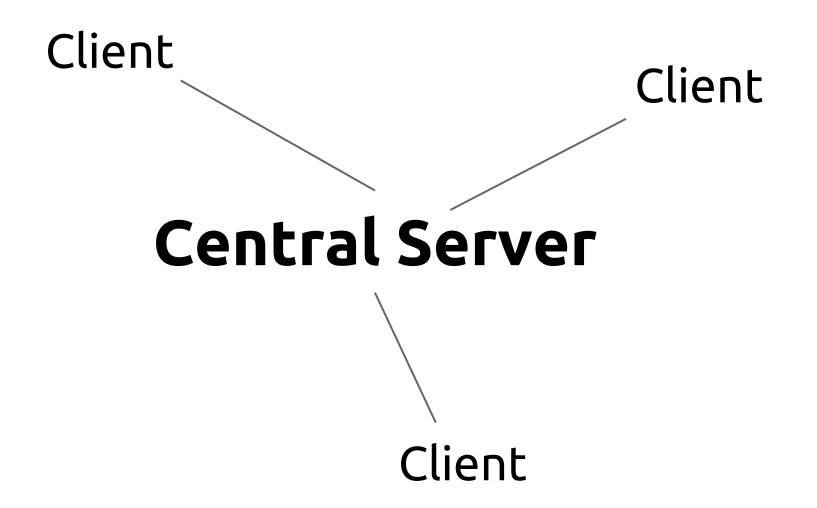
Which SCM Should Use?

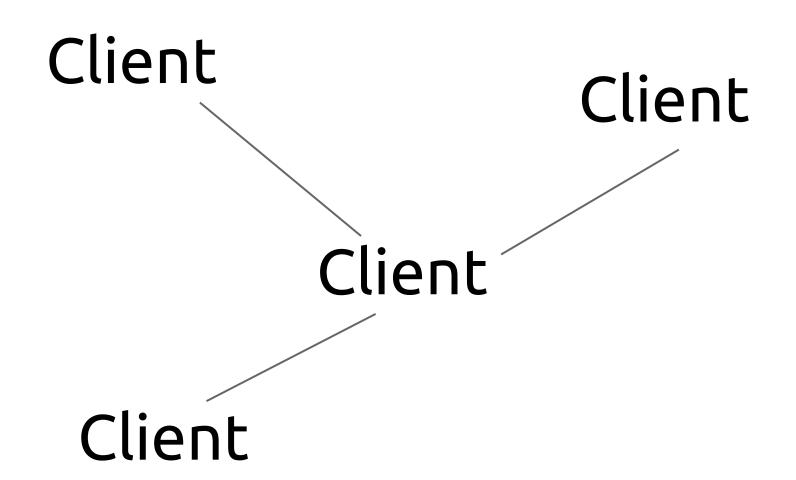
Distributed Distributed

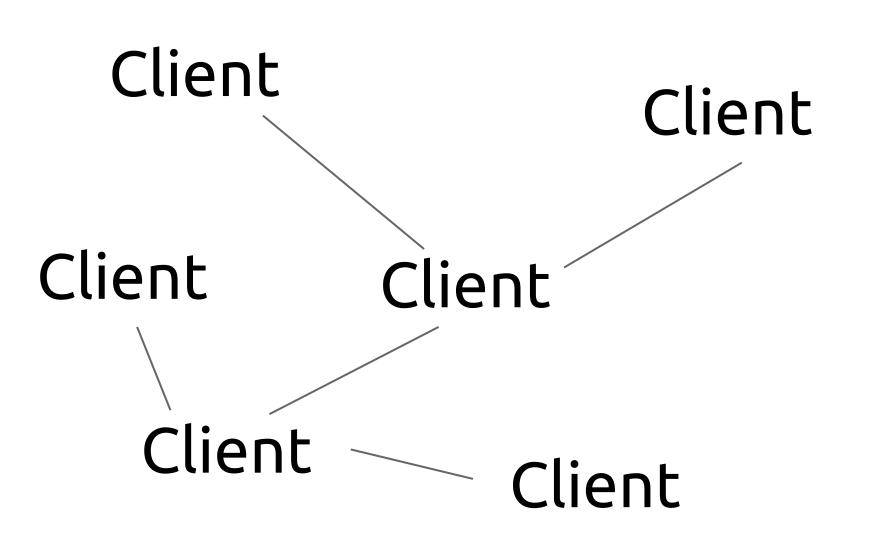
Distributed

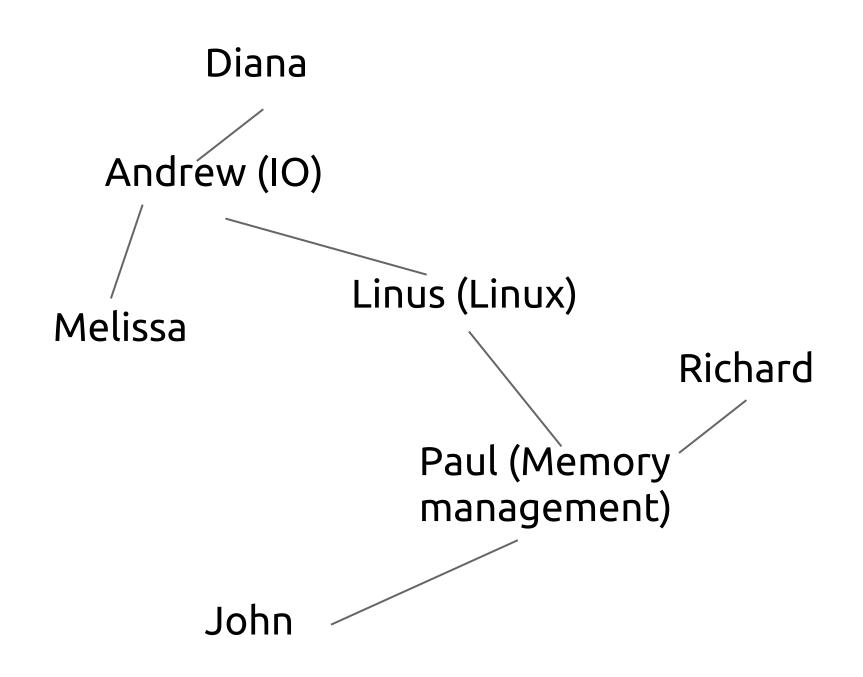
Distributed

Centralized









Choose distributed

Offline work

Fast!

Make mess, clean up, publish Workflow

#2. Git

Minimum

> git init

> git status

- > git add main.py
- > git add.
- > git add app/*.py
- > git add -i

Use The Shell Luke

> git rm main.py

> git add -i

> git add -all

- > git diff
- > git diff main.py

- > git commit
- > git commit -m "Initial commit"
- > export EDITOR=vim

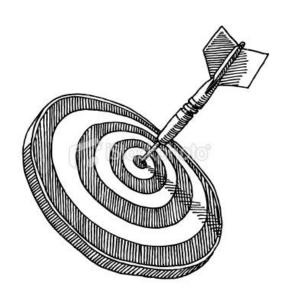
> git commit --ammend

> git log

> git show <rev>

> vim ~/.gitignore

Try it.



init, status, add, rm, diff, commit, log, show > man git init

Synchronizing

> git remote add <name> <url>

> git push <name>

If only there was a way to have a convenient public repository.

If only there was a

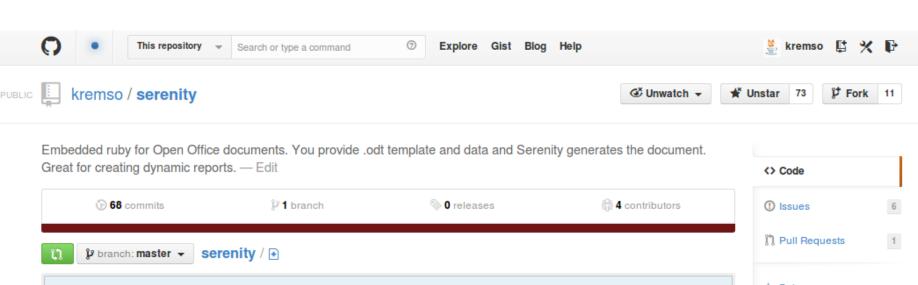


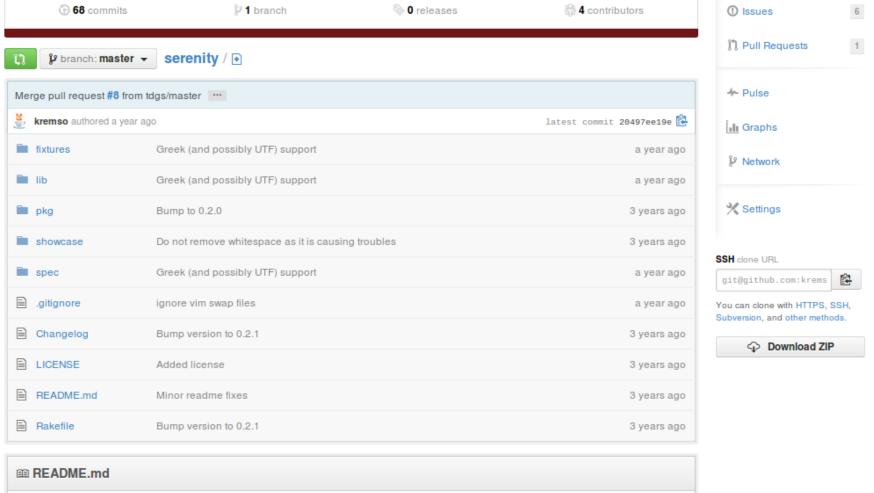
naGitHub

lei

repositor

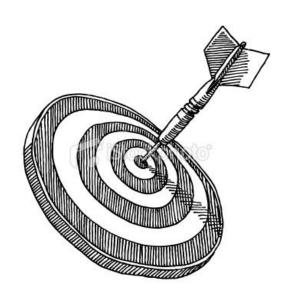






> git clone <url>

> git pull <name>



http://github.com remote add, push, pull, clone

Synchronizing will get you into trouble.

Conflicts happen.



- 1. Try to push while someone changed remote.
- 2. Pull commit, which changes the same file as you did.

Git will auto-merge if it can.

> git mergetool

... if it cannot

May I recommend meld?



push, pull, mergetool (meld)

Branches

> git branch

- > git branch bugfix
- > git checkout bugfix

> git checkout -b bugix

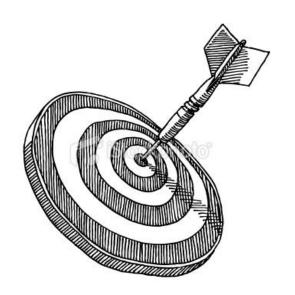
> gitk



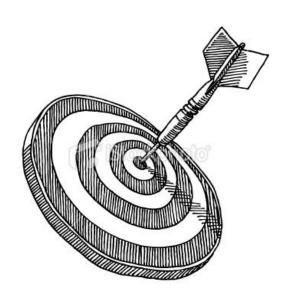
- Create branch, commit changes.
 Change to master, see log.
- 2. Compare master with new branch.



- Create branch, commit changes.
 Change to master, see log.
- 2. Compare master with new branch. git diff master..bugix



- 1. Merge branch into master.
- 2. Delete branch (+ from remote)



- 1. Merge branch into master.
- 2. Delete branch (+ from remote) git branch -d bugfix git push origin:bugix

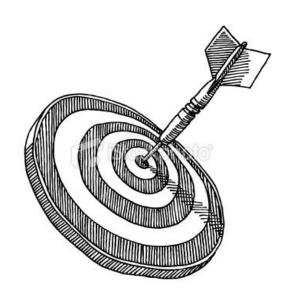
#3. Git Workflow

Commandments

- 1. Master should be stable.
 - What happens when you need to ship critical bugfix and master contains new unfinished features?
- 2. Code should be reviewed.

New branch per bugfix. New branch per feature.

- 1. Code
- 2. Get feedback
- 3. Adapt
- 4. Repeat 2.
- 5. Merge into master



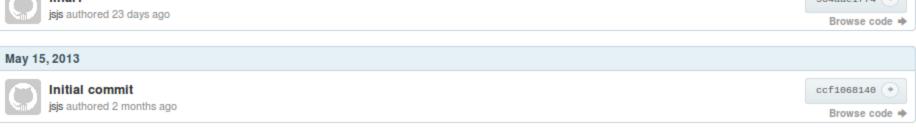
1. Create pull-request on github.com. Review code. Iterate. Merge.

#4. Best

Practices

Browse code -





Write good commit messages.

Explain what happened. Why it happened.

One-line summary, blank line, and then explain.

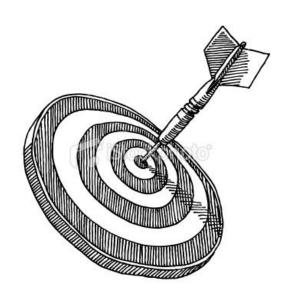
One commit = one change.

Using word "and" in commit summary is a bad smell.

Setup your git name and email.

```
vim .gitconfig
[user]
 name = Tomas Kramar
 email = kramar.tomas@gmail.
```

Do it.



1. Setup your git name and email.

Don't commit commented code.

You have git history.