

GIT AND GITHUB IN PYLADIES BERLIN

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OUTLINE

Pyladies, who we are

Version Control

What is Git

Configure Git

Hands-on session

WHO WE ARE

- Website: [PyLadies Berlin](#)
- Meetup: <http://www.meetup.com/PyLadies-Berlin/>
- Youtube: <https://www.youtube.com/user/PyLadiesBerlin>
- Twitter: <https://twitter.com/PyLadiesBer>
- GitHub: <https://github.com/PyLadiesBerlin/materials>

Good old times

ReadMe1.txt

ReadMe2.txt

ReadMe3.txt

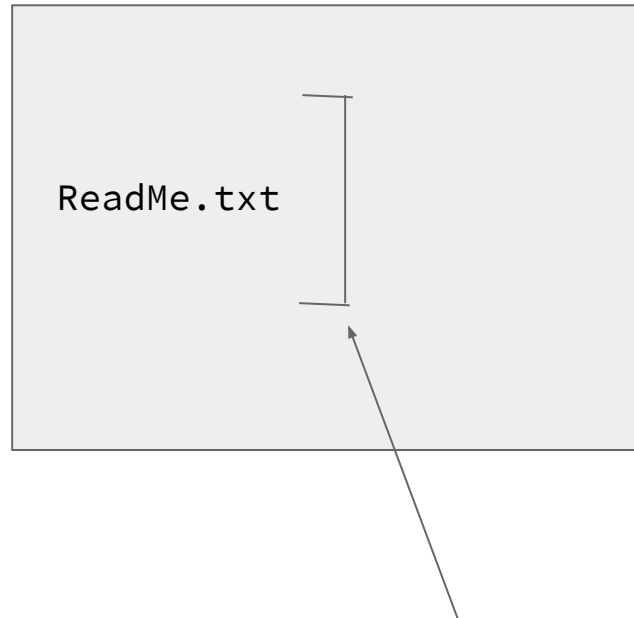
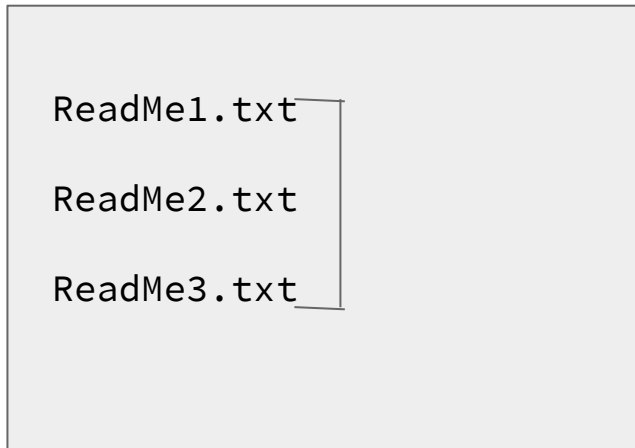
Good old times

ReadMe1.txt

ReadMe2.txt

ReadMe3.txt

Good old times



Version Control Systems do this for you

BUT WHAT IS GIT?

- Open source
- Fully distributed
- Fast
- Support for non-linear development
- Handles big projects

COLLABORATION PLATFORMS

- <https://github.com/>
- <https://github.com/explore>
- <https://github.com/integrations>
- <https://git-lfs.github.com/> - large repos
- <https://bitbucket.org> - more private repos for free

INSTALLING GIT

Step: Install Git

- **Windows:** It's recommended to download GitHub for Windows, which includes Git and has an easier install: windows.github.com. Use the **Git Shell** for your terminal.
- **Mac:** You can also download GitHub for Mac, which includes Git, mac.github.com (from Preferences, select the command line tools install), or
 - download Git by itself at: git-scm.com/downloads and follow the installation instructions.

INSTALLING GIT

Step: Install Git

- **Linux:** Debian-based Distribution
\$ sudo apt-get install git-all
- **Linux:** Fedora-based Distribution
\$ sudo yum install git-all

CONFIGURE GIT

Your identity

- `git config --global user.name "John Doe"`
- `git config --global user.email johndoe@example.com`

CONFIGURE GIT

Checking your settings

- `git config --list`
- `git config user.name`

? Q&A ?

SNACK BREAK

LET THE GAME BEGIN

Create a new directory

- `mkdir hello`
- `cd hello`

Create a local repository

- `git init`

Create a new file

- `<favourite_editor> foo.txt`

Add the file to the staging area

- `git add foo.txt`

GIT STATES & SECTIONS

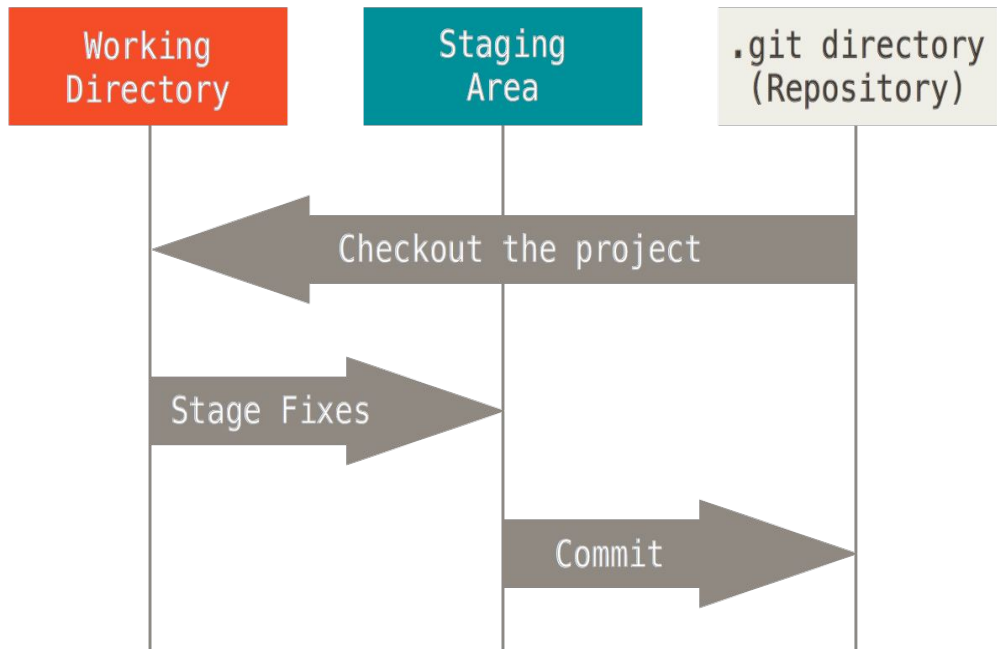
modified - working directory

staged - staging area

- `git add <file_name>`

committed - .git directory

- `git commit`



* <http://www.git-scm.com/book/en/v2/Getting-Started-Git-Basics>

LET THE GAME BEGIN

Check the status of the files

- `git status`

Commit the files

- `git commit -m "First Commit"`

Check the history

- `git log`

Create a new branch and checkout the branch

- `git branch feature`
- `git checkout feature (git checkout -b <new_branch>)`
- `<favourite_editor>bar.txt` - changing the file
- `git status`
- `git add -p bar.txt`
- `git commit -m "Second commit"`

LET THE GAME BEGIN

```
git checkout master
```

```
git merge feature
```

```
git checkout feature
```

```
vim foo.txt
```

```
git add foo.txt
```

```
git commit -m "committed foo file from feature branch"
```

We need to fix a bug in master

```
git checkout master
```

```
vim bar.txt
```

```
git add bar.txt
```

```
git commit -m "fix bug in master"
```

LET THE GAME BEGIN

```
git log --graph --decorate
```

Let's merge our master with the bug fix into feature branch and test our feature with the new changes.

```
git checkout feature
```

```
git merge master
```

SHARING OUR WORK

- <https://github.com/>

Alternative to github, more private repos for free

- <https://bitbucket.org>

GITHUB

Upload the repository to GitHub

- **git push**

You want to work on an existing project?

- **Fork it**
- **git clone [git@github.com](https://github.com):whatever folder-name**

GITHUB

Pull Requests

Ask for reviews

Issues

USEFUL LINKS

Git documentation:

- <http://www.git-scm.com/>

short guides:

- <https://try.github.io//levels/1/challenges/1>
- <https://guides.github.com/>

USEFUL LINKS

tools for learning about branching:

- <http://pcottle.github.io/learnGitBranching/>
- <http://onlywei.github.io/explain-git-with-d3/#branch>

Repos history visualization

- **gitk**

helpful commands (cheat sheet):

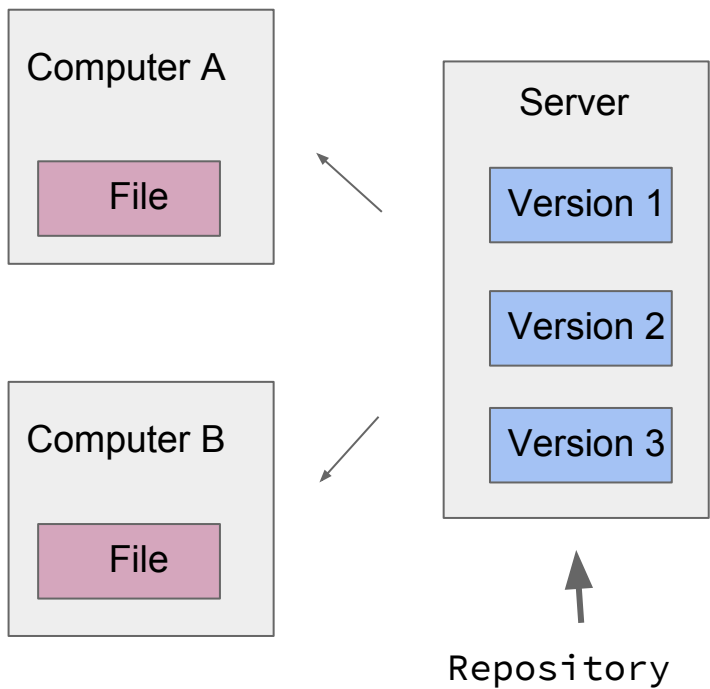
- <https://training.github.com/kit/downloads/github-git-cheat-sheet.pdf>

THANK YOU

Luminița and Betty

? Q&A ?

Centralized Version systems



Distributed Version systems

