Git and GitHub crash Course

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@MyPitit

Founders
& Coders

1. Agenda

1. What is GitHub
2. What is Git
3. Diferences?
4. Git flow

2. Agenda

GitHub

A walkthrough GitHub platform:

1. How to create an organisation
2. How to create a repository
3. Raising issues
4. Creating pull requests
5. Merging pull requests
6. Introduction to Wiki pages

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3. Agenda

Git

1. Clone a repository
2. Create / delete / change branch
3. Add / Push / Commit
4. Pull from master

Let’s go!

1. Agenda

1. What is GitHub
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1.1. What is GitHub?

- Web-based Git repository hosting service.
- It can be public or private, you can choose.
- If you want to create a private repositories you will need to pay a small fee.
- If your repositories are public you can use the service for free.

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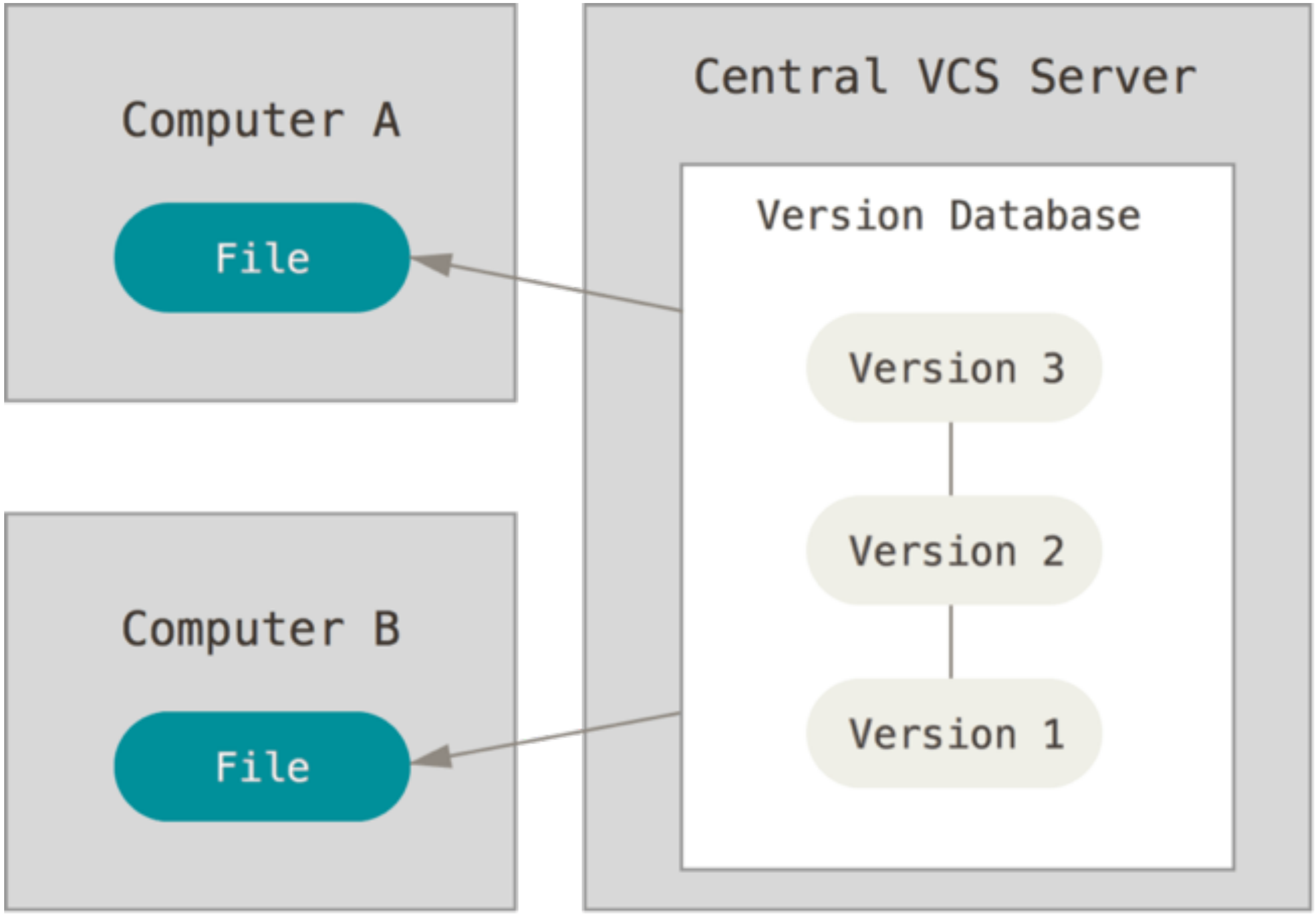
1. What is GitHub
2. What is Git
3. Diferences?
4. GitHub flow

1. 2. What is Git?

Git is a free and open source distributed version control system that is used for software development.



Git was initially designed and developed by Linus Torvalds for Linux kernel development in 2005.

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1. Agenda

1. What is GitHub
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3. Diferences?
4. GitHub flow

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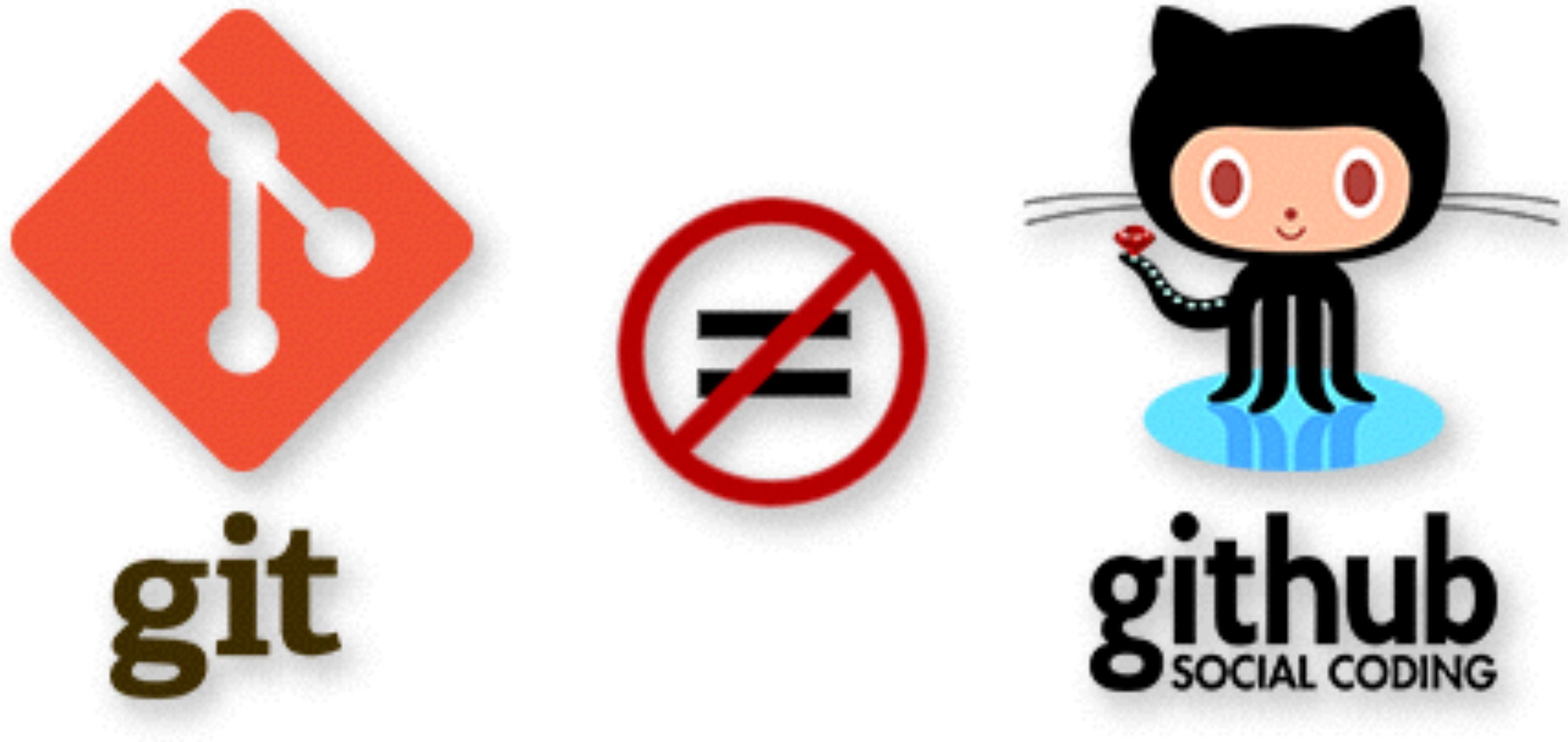
1. 3. Diferences



- GitHub is a Git repository hosting service.

- GitHub provides Web-based graphical interface.

- Git is a command line tool.

- With GitHub you can copy a repository from one user’s account to another (`fork`).
  You can send notifications (`pull request`).
  You can merge the changes with one click.

1. Agenda

1. What is GitHub
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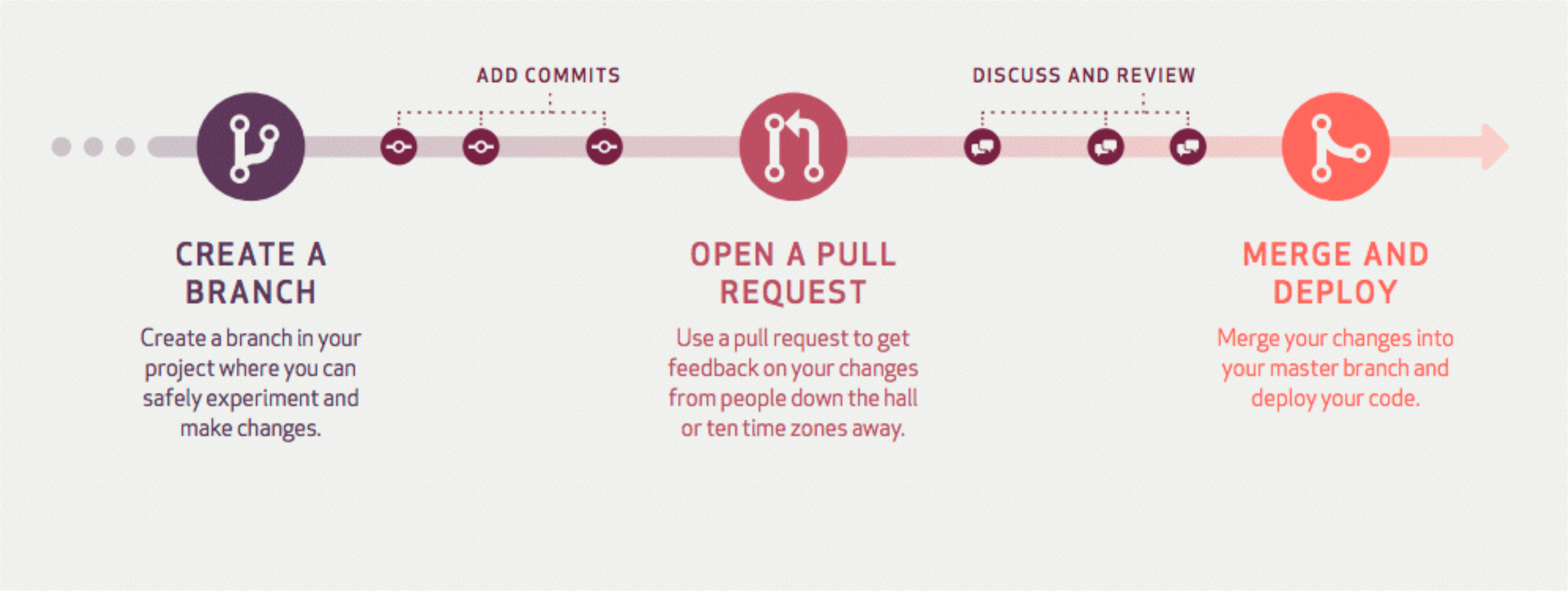
1. 4. GitHub flow



ADD COMMITS
DISCUSS AND REVIEW
CREATE A BRANCH
Create a branch in your project where you can safely experiment and make changes.
OPEN A PULL REQUEST
Use a pull request to get feedback on your changes from people down the hall or ten time zones away.
MERGE AND DEPLOY
Merge your changes into your master branch and deploy your code.

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GitHub

2. Agenda

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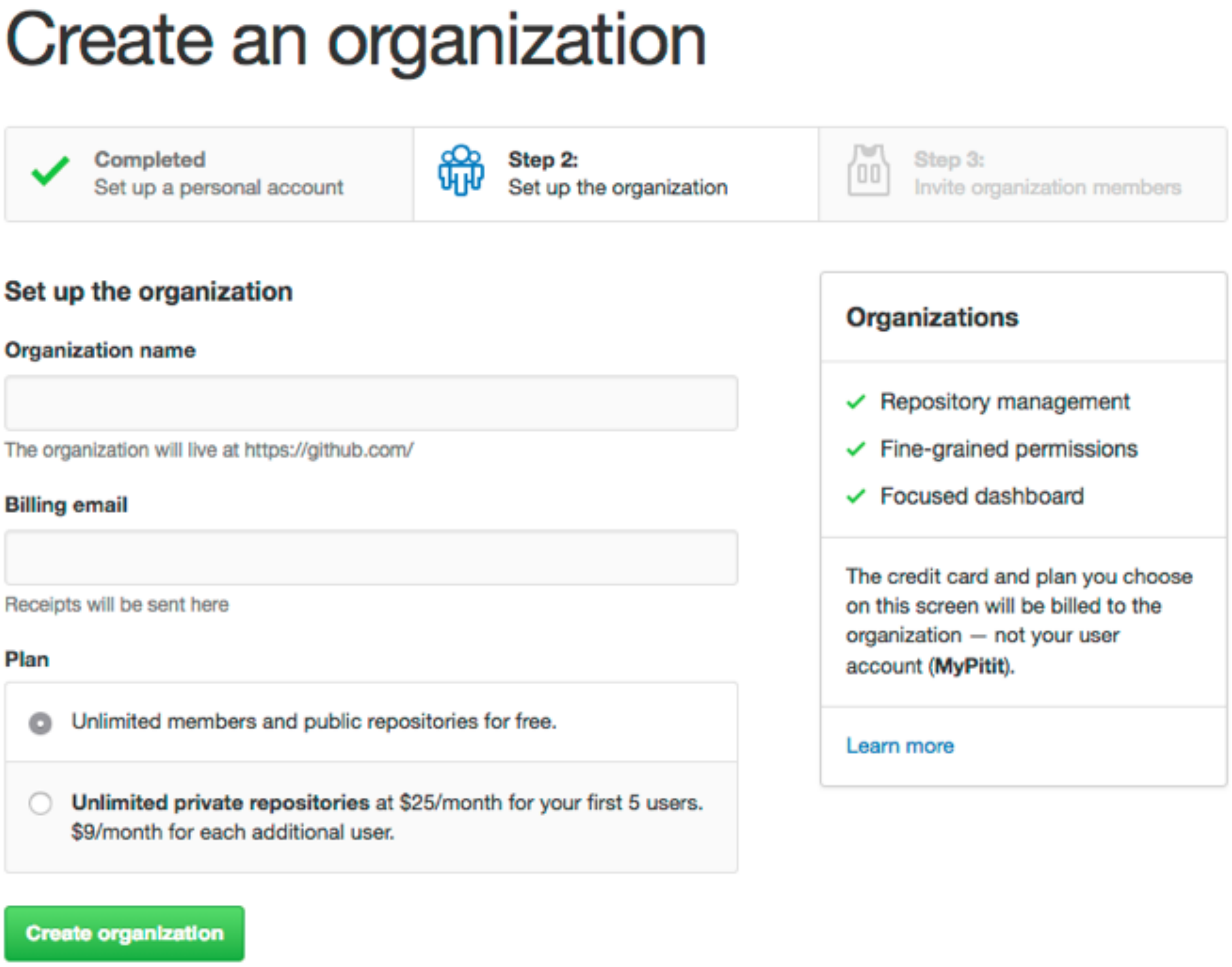
2. 1. How to create an organisation



Create an organization

✓ Completed
Set up a personal account

Step 2:
Set up the organization

Step 3:
Invite organization members

Set up the organization

Organization name

The organization will live at https://github.com/

Billing email

Receipts will be sent here

Plan

● Unlimited members and public repositories for free.

○ **Unlimited private repositories** at $25/month for your first 5 users. $9/month for each additional user.

Organizations

- ✓ Repository management
- ✓ Fine-grained permissions
- ✓ Focused dashboard

The credit card and plan you choose on this screen will be billed to the organization — not your user account (**MyPitit**).

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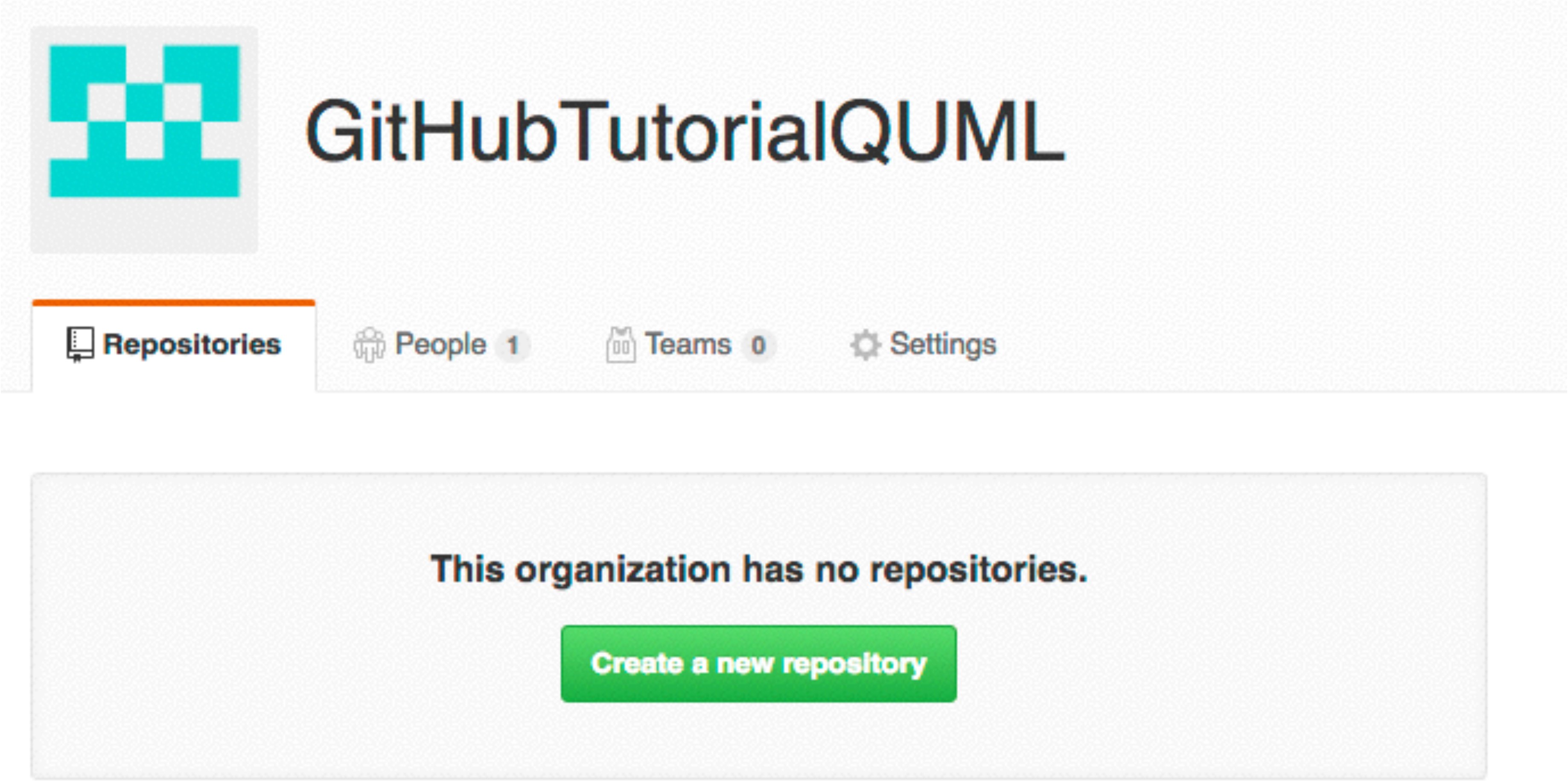
2. 2. How to create a repository


GitHubTutorialQUML

This organization has no repositories.

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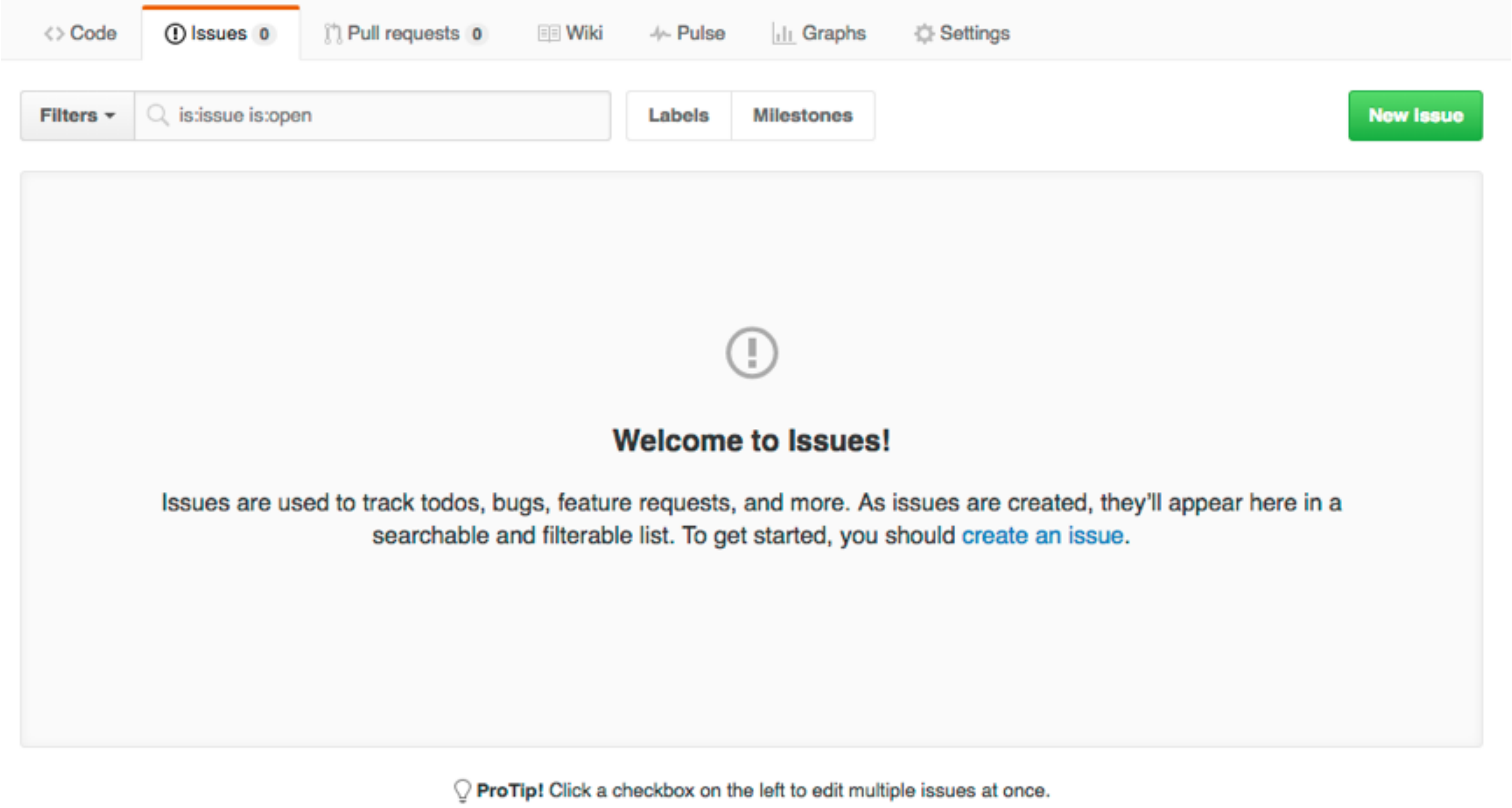
2. 3. Raising Issues



Welcome to Issues!

Issues are used to track todos, bugs, feature requests, and more. As issues are created, they'll appear here in a searchable and filterable list. To get started, you should create an issue.

ProTip! Click a checkbox on the left to edit multiple issues at once.

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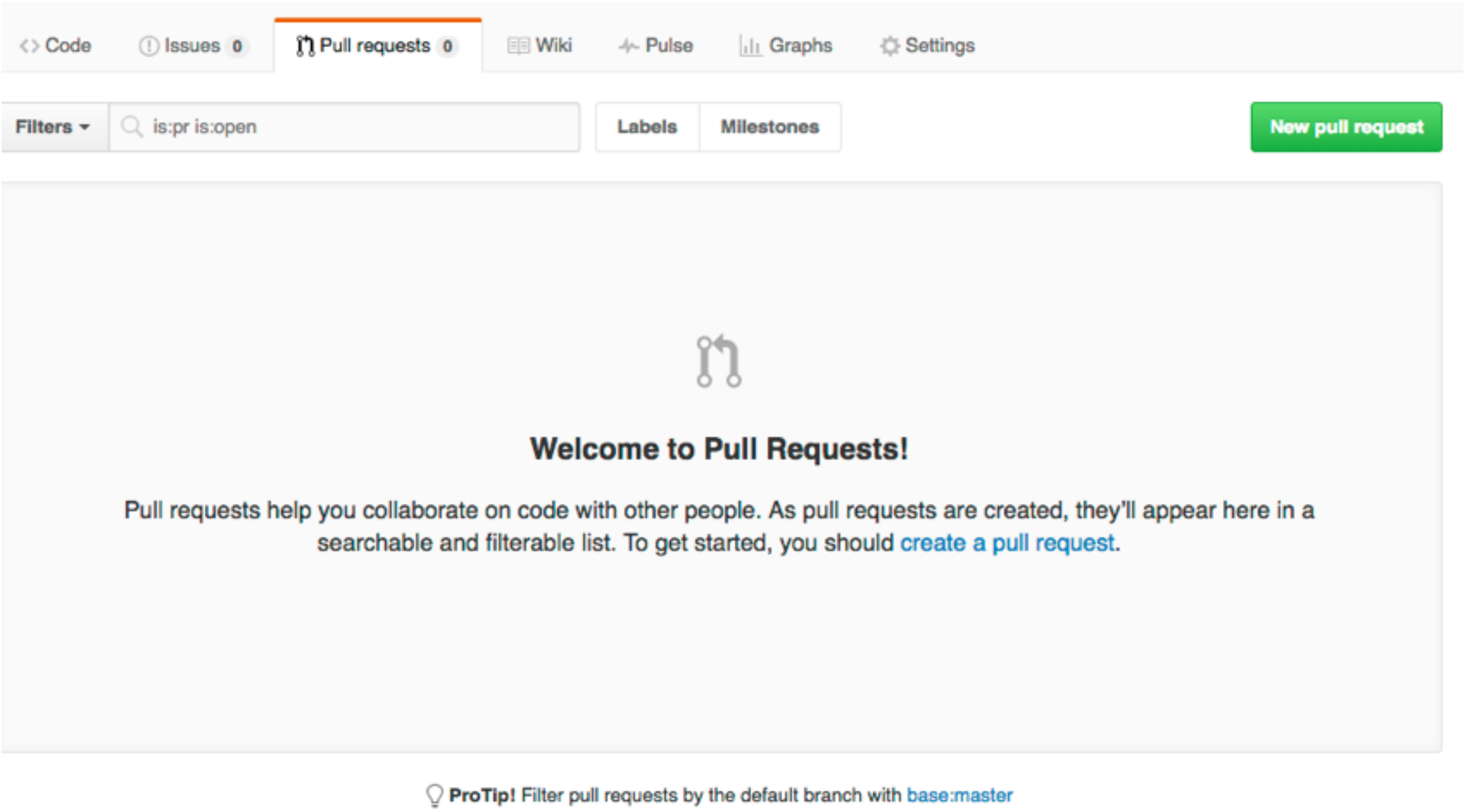
2. 4. Creating a pull request



Welcome to Pull Requests!

Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should create a pull request.

ProTip! Filter pull requests by the default branch with base:master

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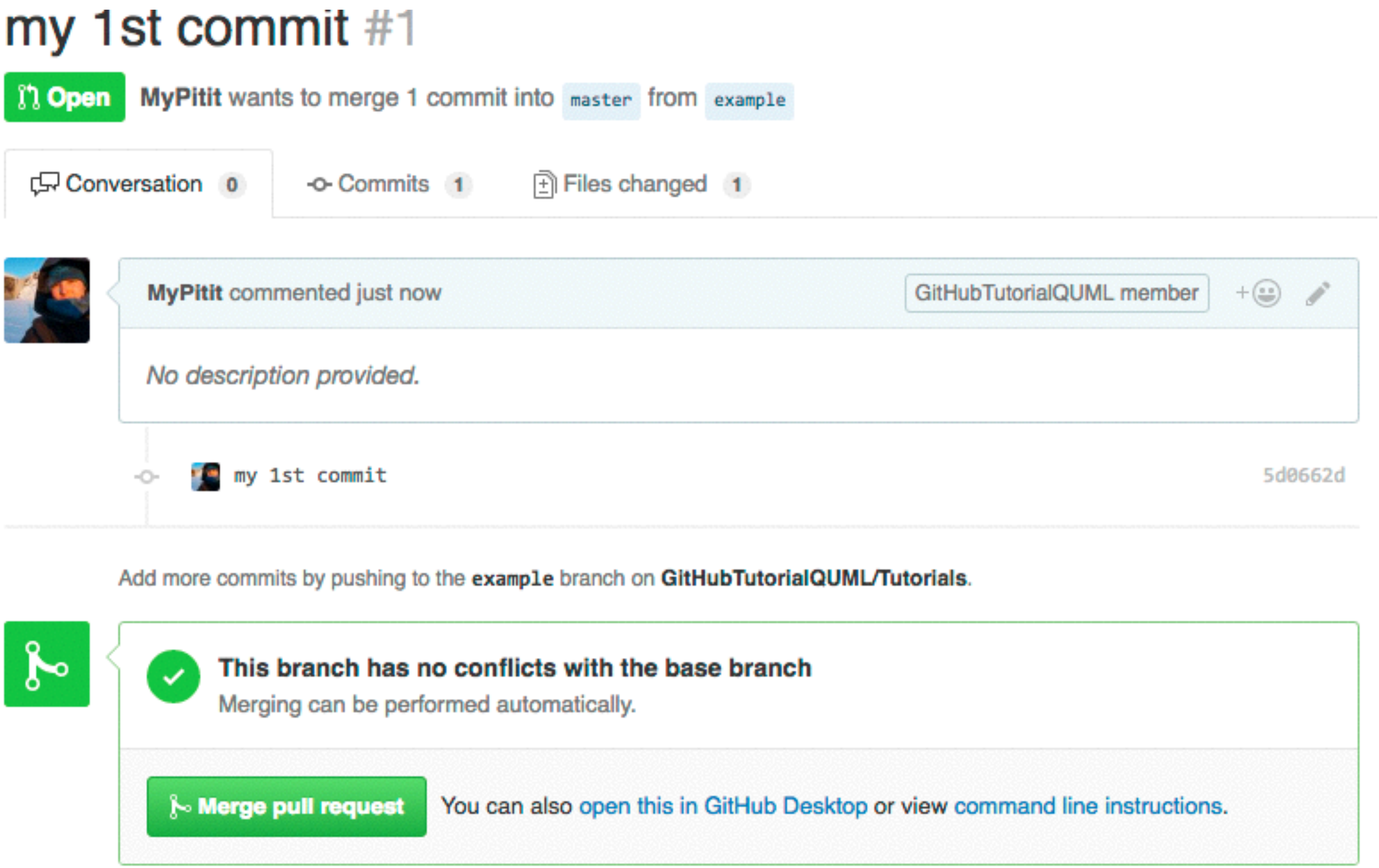
2. 5. Merging a pull request



my 1st commit #1

Open MyPitit wants to merge 1 commit into `master` from `example`

MyPitit commented just now

No description provided.

`my 1st commit` `5d0662d`

Add more commits by pushing to the **`example`** branch on **GitHubTutorialQUML/Tutorials**.

This branch has no conflicts with the base branch

Merging can be performed automatically.

You can also open this in GitHub Desktop or view command line instructions.

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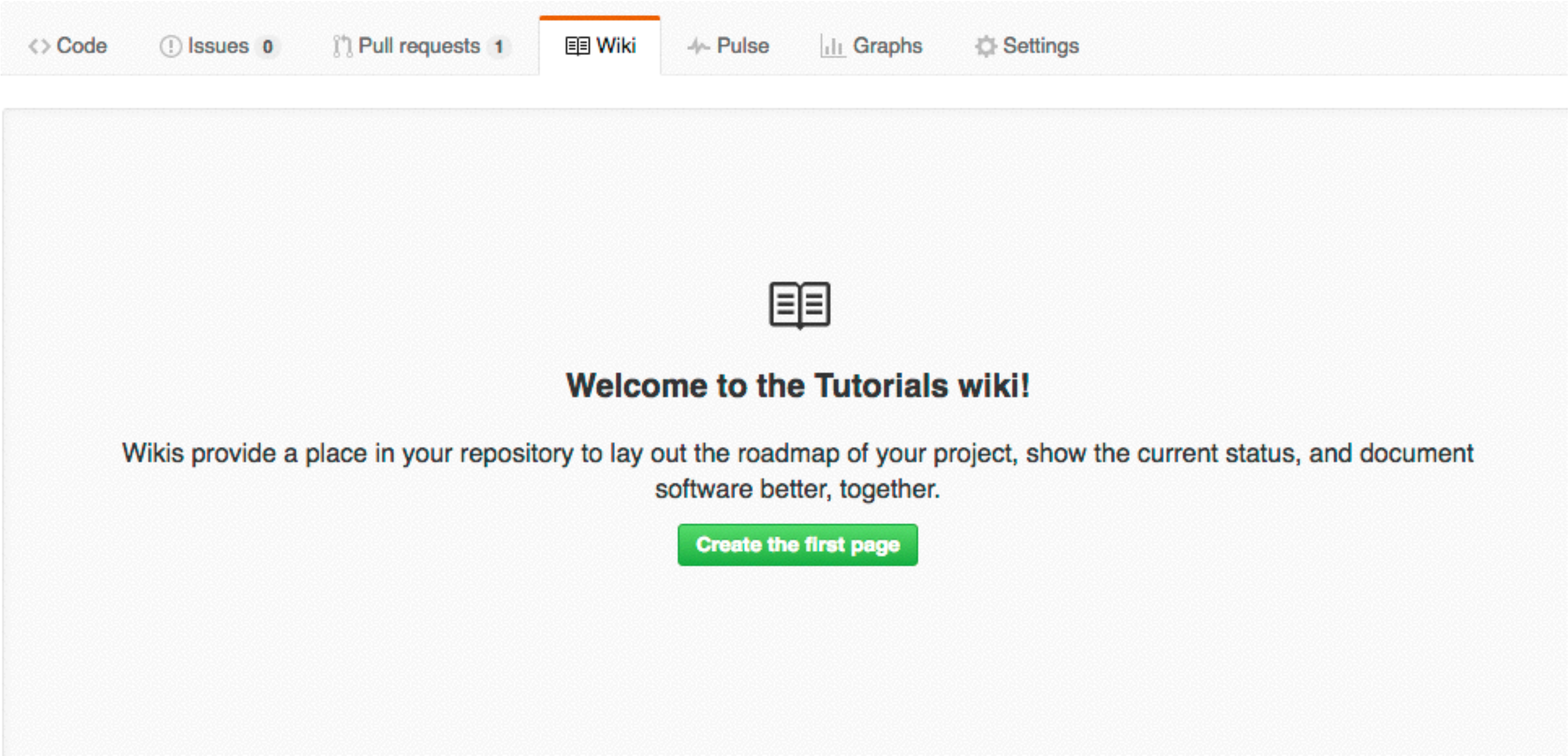
2. 6. Wiki



Welcome to the Tutorials wiki!

Wikis provide a place in your repository to lay out the roadmap of your project, show the current status, and document software better, together.

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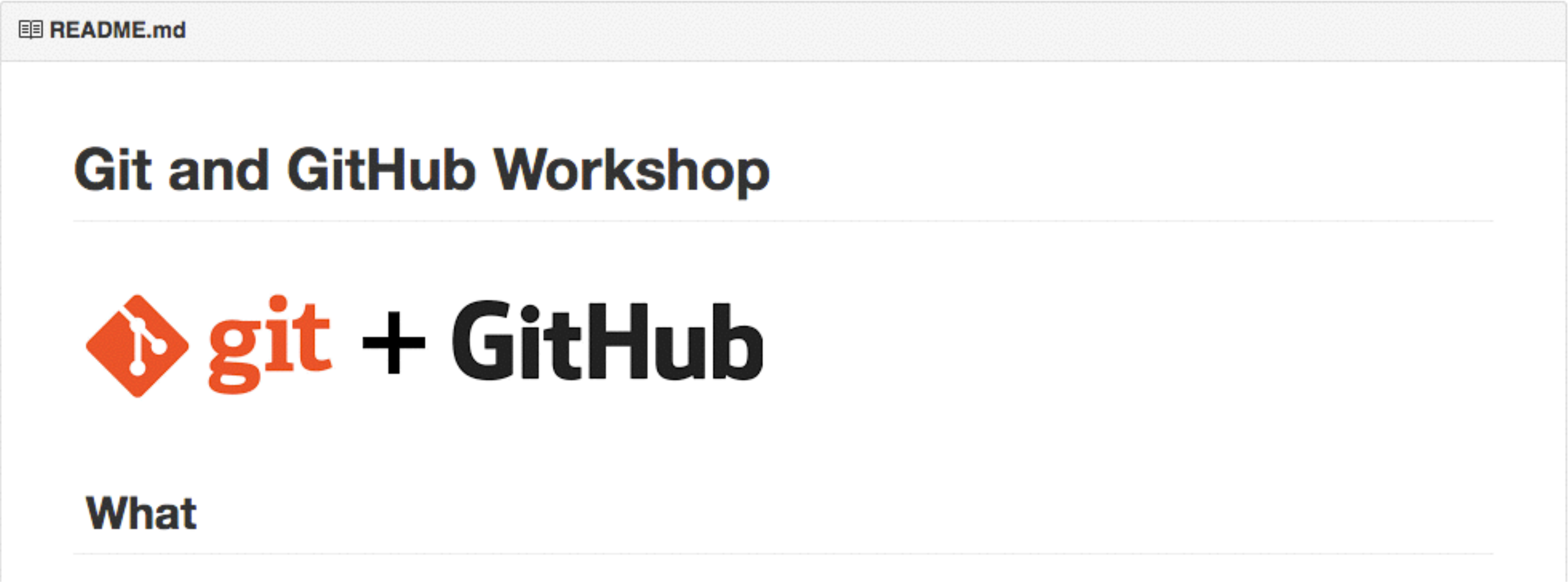
2. 7. README.md



README.md

Git and GitHub Workshop

What

git

3. Agenda

Git

1. Clone a repository
2. Create / delete / change branch
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3. 1. Clone a repository

```
$ git clone git@github.com:GitHubTutorialQUML/Tutorials.git
Cloning into 'Tutorials'...
remote: Counting objects: 3, done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
Checking connectivity... done.
```

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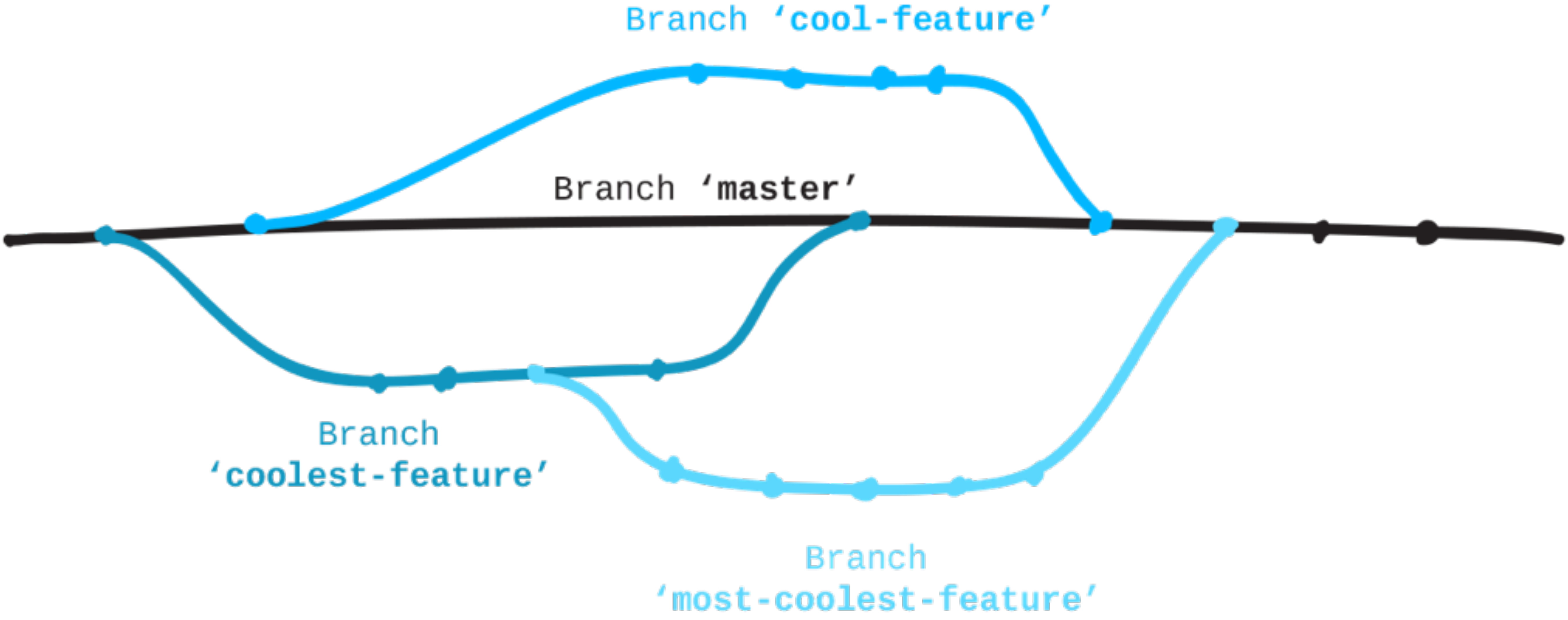
Branches

Why do you need branches?


Branch 'cool-feature'
Branch 'master'
Branch
'coolest-feature'
Branch
'most-coolest-feature'

3. 2. Create a new branch

```
$ git branch example

$ git branch
  example
* master
```

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3. 2. Changing branches

```
$ git checkout example
Switched to branch 'example'
```

```
$ git checkout master
Switched to branch 'master'
Your branch is up-to-date with 'origin/master'.
```

3. 2. Delete a branch

```
$ git branch -D example
Deleted branch example (was 5d0662d).
```

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Git

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3. 3. Add / Push / Commit

```
$ git add .


$ git commit -m "my 1st commit"
[example 5d0662d] my 1st commit
 1 file changed, 3 insertions(+), 1 deletion(-)


$ git push origin example
Counting objects: 3, done.
Writing objects: 100% (3/3), 271 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To git@github.com:GitHubTutorialQUML/Tutorials.git
 * [new branch]      example -> example
```

Everything was perfect until one day…

Merge conflicts time!!

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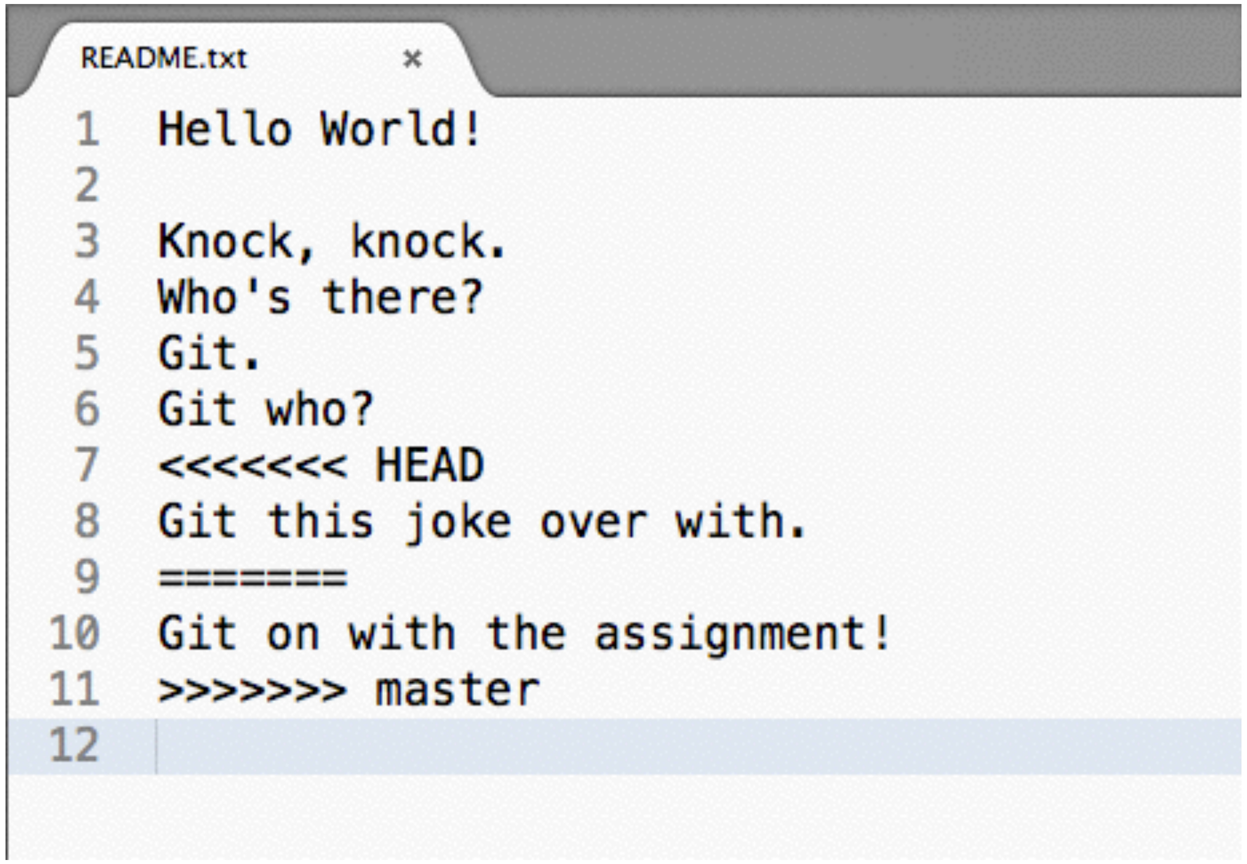
What is a merge conflict?



```
Hello World!

Knock, knock.
Who's there?
Git.
Git who?
<<<<<<< HEAD
Git this joke over with.
=======
Git on with the assignment!
>>>>>>> master

```

BE CAREFUL YOU MUST
memegenerator.net

3. Agenda

Git

1. Clone a repository
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3. 4. Pull from master

```
mypitit@nietzsche: ~/Desktop/example/Tutorials $ git pull <remote>
remote: Counting objects: 11, done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 7 (delta 2), reused 0 (delta 0)
Unpacking objects: 100% (7/7), done.
From ssh://my.remote.host.com/~/git/myproject
 * branch            master     -> FETCH_HEAD
Updating 9d447d2..f74fb21
Fast forward
 app/controllers/tutorials |   13 +++++++++++++
 1 files changed, 13 insertions(+), 0 deletions(-)
```

Questions?

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