

目录

1. Git & Github
 - Git
 - Github
 - 两者关系
2. Repository
 - Create a repo
 - Create a new file in github
 - Modify a file in github
 - Upload a new file in github
3. Branch
 - 创建分支
 - 合并分支
4. Fork
5. Pull Request
6. Issue
7. Git与使用命令
 - Git概述
 - 基本Linux命令
 - 初次使 Git
8. Clone
9. Status & Add & Commit
 - 一些概念
 - 本地修改
 - 进入缓存区
 - 提交修改
 - 查看修改日志
10. Push/Pull
 - Push
 - Pull
11. Init

1. Git & Github

Git与Github是两个不同的概念。

1) Git

Git is one of the most popular **version control system(VCS)**. It is a mature, actively maintained, open source project compatible with many operating systems and IDEs.

Git 是一款免费的、开源的分布式版本控制系统。

什么是版本控制？

简单来说，版本控制是指，将每次对项目的修改，包括修改内容、修改者、修改时间等内容储存起来，以便 track或roll back。

2) Github

Github是基于Git版本控制的代码托管平台。即，Github上上传的所有项目代码均是基于Git进行版本控制的。但Github的功能除了Git为它提供的版本控制外，还有其他许多强大的功能，比如项目协作等。

3) 两者关系

Github使用Git进行版本控制，同时提供其他强大功能。

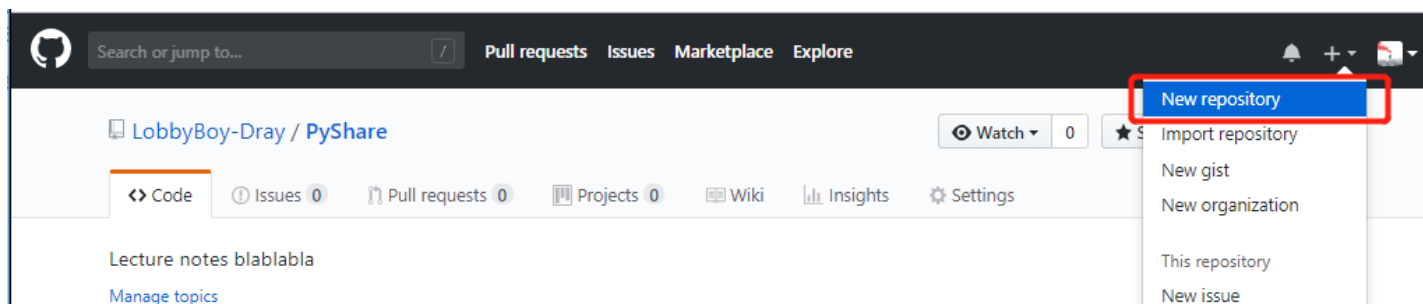
“大概就是「魔兽争霸」与「对战平台」的关系吧”——某知乎网友。

2. Repository

Repository, or "**Repo**": 可以简单理解为**Project**，存储着一个项目，可以包含很多文件，即Repository of files；如果想在Github上拥有一个项目，就必须创建一个Repository。

1) Create a repo

在加号的下拉菜单中点击 `New repository`：




进入创建repo的界面：

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner

 LobbyBoy-Dray ▾

Repository name

/ Lyrics ✓

repo名称

Great repository names are short and memorable. Need inspiration? How about [jubilant-winner](#).

Description (optional)

This is a repo for my lyrics.

repo简介

☒  **Public**

Anyone can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

是否创建readme文件，最好选中

☒ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

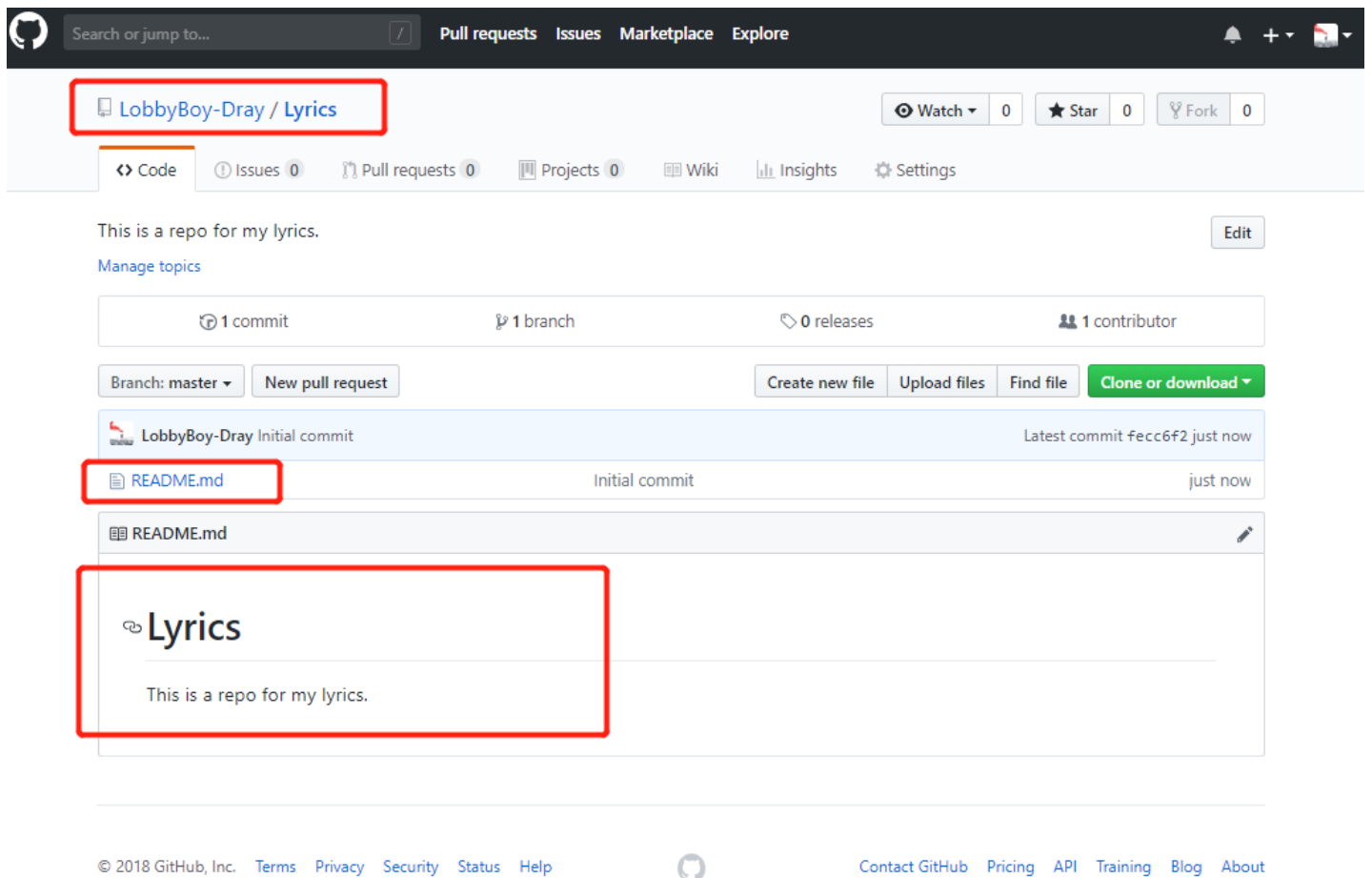
Add a license: **None** ▾



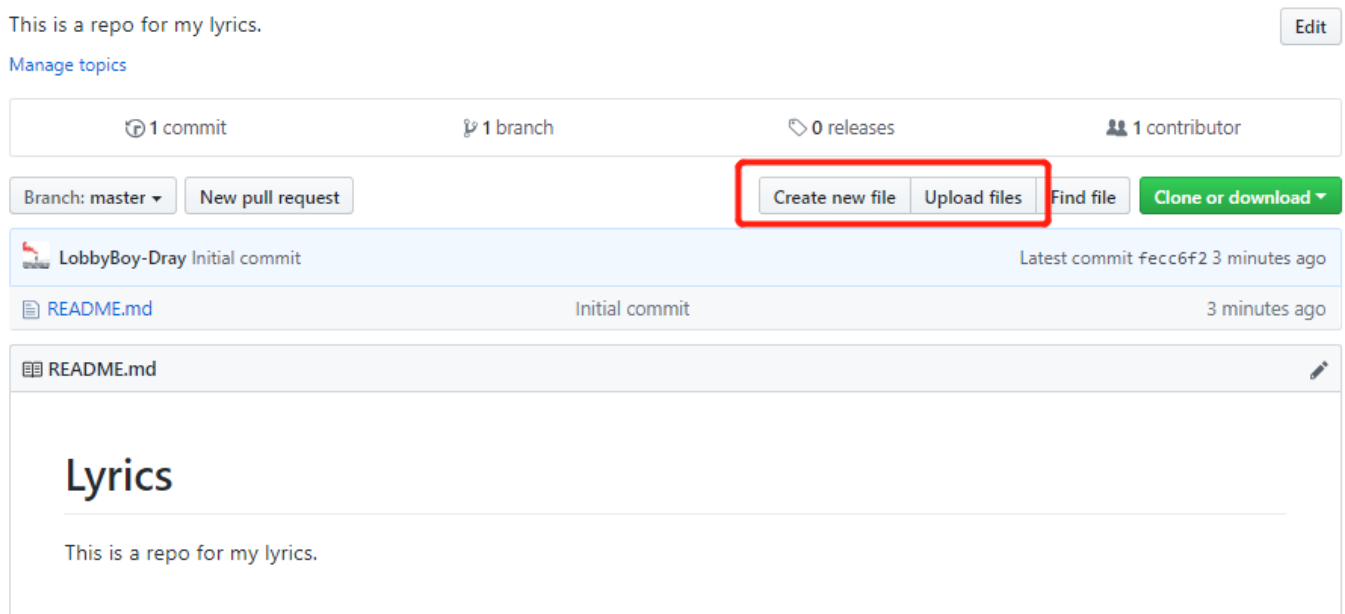
Create repository

创建repo

创建成功后自动跳转到该repo内部：



可以在github中创建文件或上传文件：



2) Create a new file in github

点击 `Create new file` ，进入文本编辑界面，输入内容即可（注意文件名要加后缀）。完成后，点击 `commit new file`

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Lyrics That girl.md Cancel 文件名

Edit new file Preview 预览模式 Spaces 2 No wrap

```
1 > This is the first song for that girl.
2
3 There's a girl but I let her get away
4 It's all my fault cause pride got in the way
5
6
7
8
```

内容

Commit new file 对此次创建(修改)的描述(备注)

This is the first version, not too bad

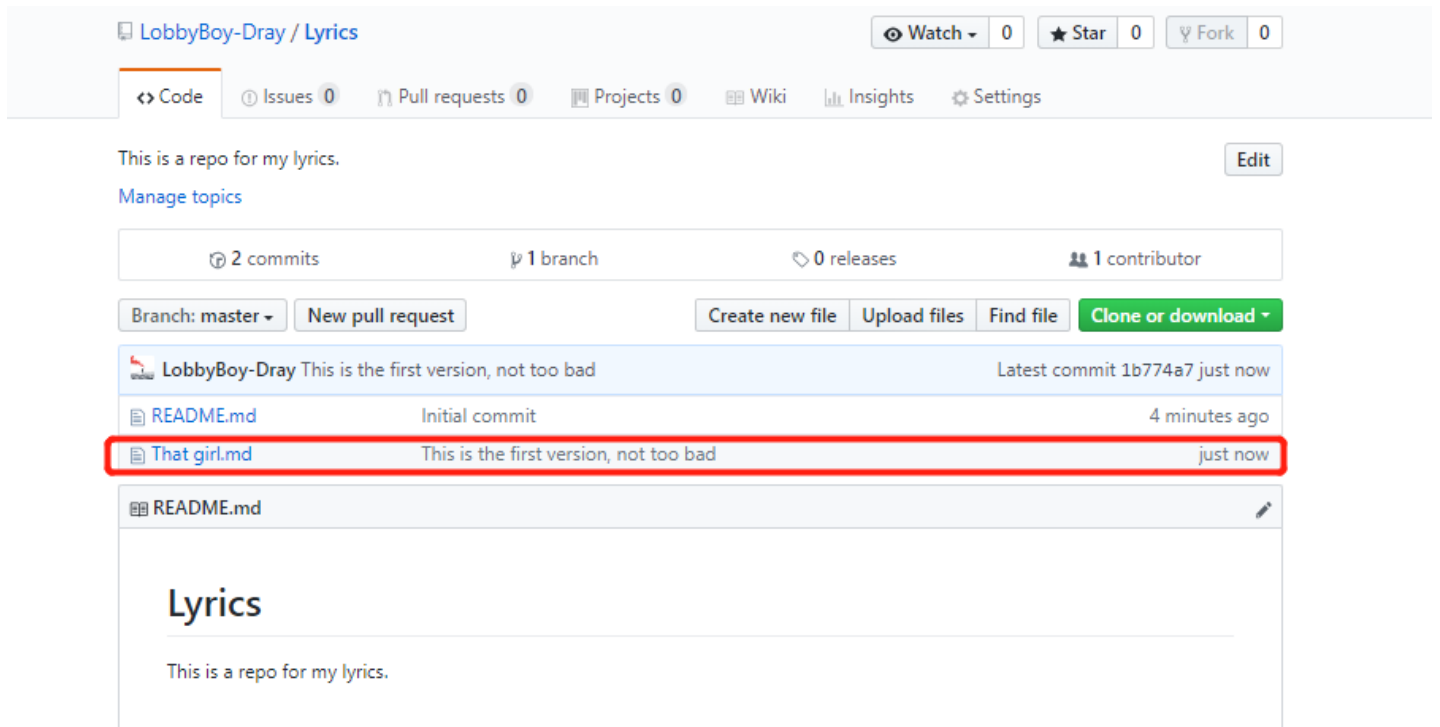
Add an optional extended description...

☒ Commit directly to the master branch.

☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

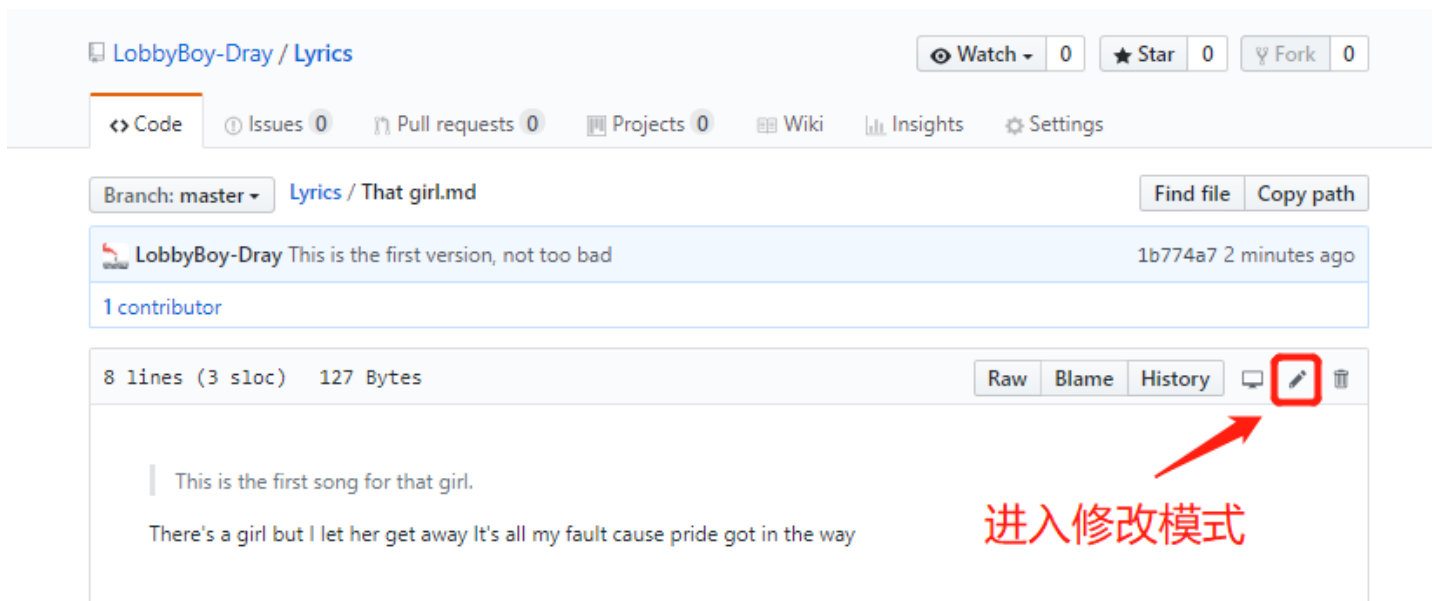
Commit new file Cancel 提交(执行)该创建

创建完毕：



3) Modify a file in github

点击文件，再点击“笔”，进入修改模式：



修改完成，点击commit changes：

Navigation bar: <> Code | Issues 0 | Pull requests 0 | Projects 0 | Wiki | Insights | Settings

Lyrics / That girl.md [icon] or cancel

<> Edit file | Preview changes

Spaces 2 Soft wrap

```
1 > This is my first song for that girl.
2
3 There's a girl but I let her get away
4
5 It's all my fault cause pride got in the way
6
7
8
9
```



Commit changes

Fix some bugs

Add an optional extended description...

- ☒ Commit directly to the master branch.
- ☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changes

Cancel

修改历史（历史版本）可以在 History 中查看：

LobbyBoy-Dray / Lyrics

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Branch: master Lyrics / That girl.md Find file Copy path

LobbyBoy-Dray Fix some bugs a9641ca 9 hours ago

1 contributor

9 lines (3 sloc) 127 Bytes Raw Blame History

```
This is my first song for that girl.  
There's a girl but I let her get away  
It's all my fault cause pride got in the way
```

每次修改记录均可见：

LobbyBoy-Dray / Lyrics

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

History for Lyrics / That girl.md

Commits on Oct 15, 2018

Fix some bugs Verified a9641ca

LobbyBoy-Dray committed 9 hours ago

This is the first version, not too bad Verified 1b774a7

LobbyBoy-Dray committed 9 hours ago

Newer Older

点击进入可以查看更加详细的修改信息：

LobbyBoy-Dray / Lyrics

Watch 0

Star 0

Fork 0

<> Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights

Settings

Fix some bugs

Browse files

master

LobbyBoy-Dray committed 9 hours ago

Verified

1 parent 1b774a7 commit a9641caa54e9af7b40fcdc19833cea139b09fe70

Showing 1 changed file with 2 additions and 1 deletion.

UnifiedSplit

3 That girl.md

<>View

... @@ -1,6 +1,7 @@

1 - > This is the first song for that girl.

1 + > This is my first song for that girl.

2 2

3 3 There's a girl but I let her get away

4 +

4 5 It's all my fault cause pride got in the way

5 6

6 7

0 comments on commit a9641ca

Lock conversation

WritePreview

AA B i “ <> @ @ @

Leave a comment

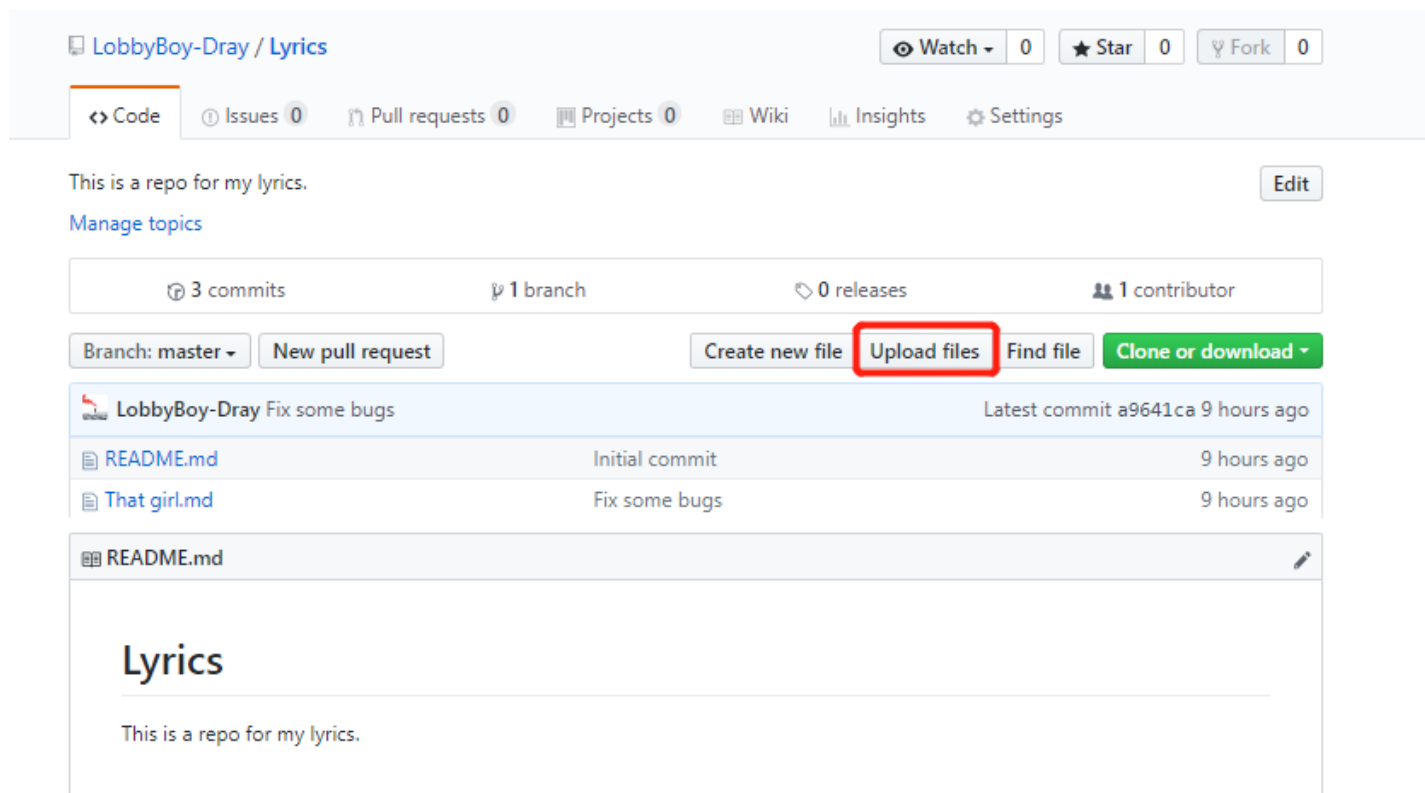
Attach files by dragging & dropping, selecting them, or pasting from the clipboard.

Styling with Markdown is supported

Comment on this commit

4) Upload a new file in github

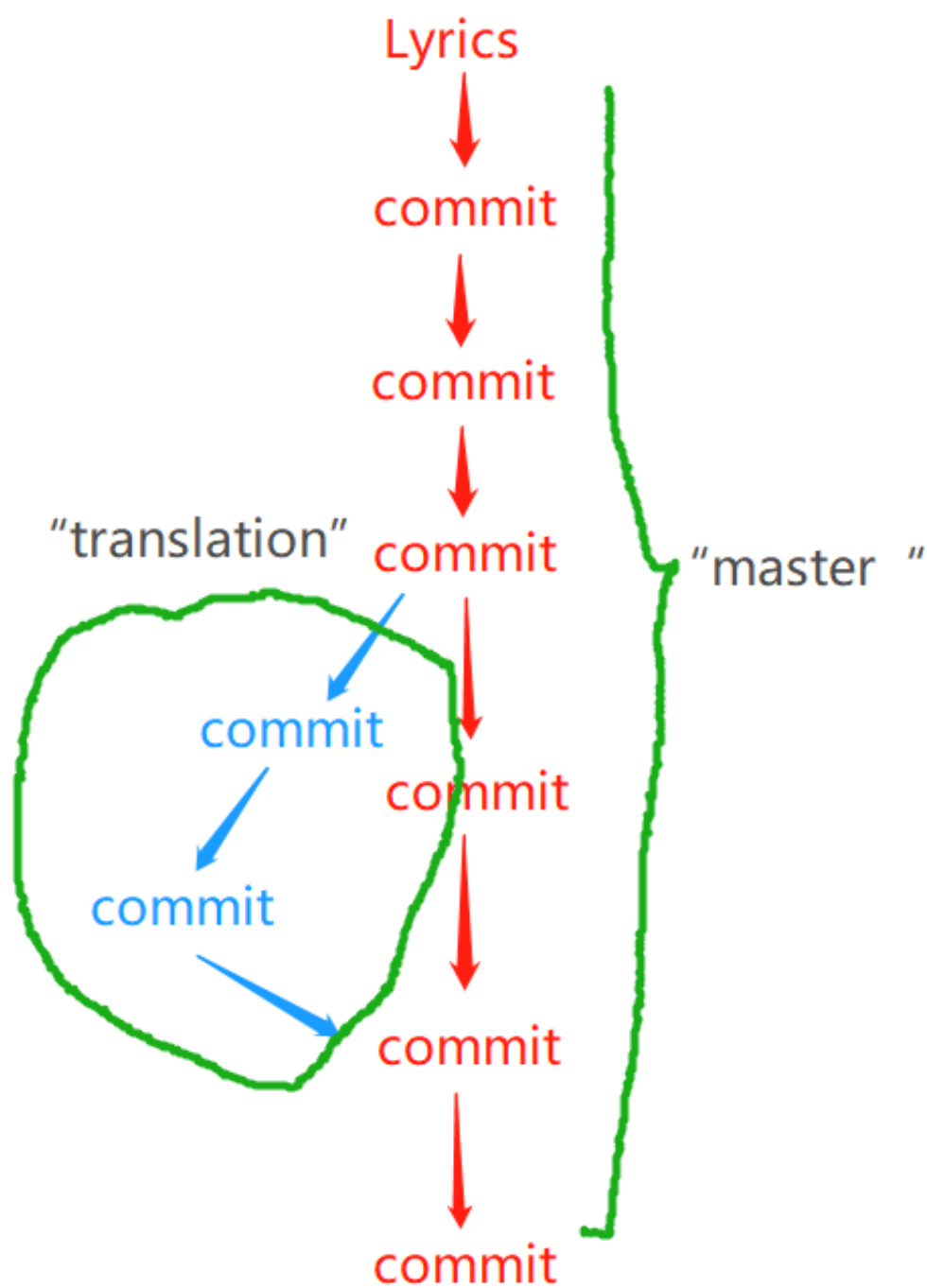
从本地上传文件至github:



3. Branch

分支。主要用于项目的团队开发，也可以用于个人work on different aspects of the project。

任何一个Repo都有一个主分支，名为“master”。You can think the history of a project as a linear list of commit，而这个linear list就是master，如下图所示：



即分支是一个流程，是由无数次的修改提交（commit）构成一个时间轴。

而当你想在Repo中为你的项目加入一些新特性，而又isn't sure whether you should keep it的时候，你需要一块专门的空间来做experimental try，在这个空间里，你做的任何改动不会影响“大局”，即“master”，你可以放心对文件进行修改，直到修改到满意为止。这个空间就是你新建的分支（branch），可以最终通过merge，将该分支合并到master上，相当于把原来在“试验田”中的新特性正式加到你的项目中。

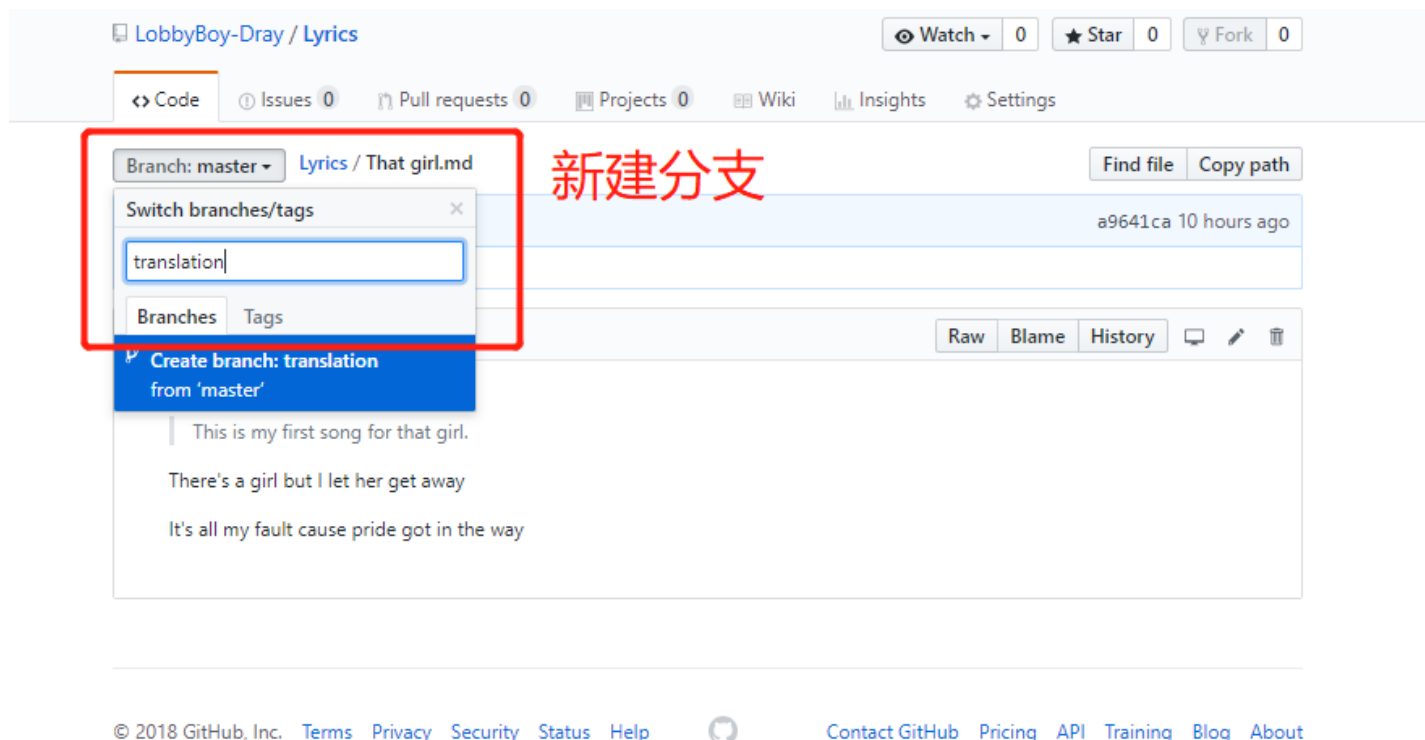
对于单人开发，可能只需要master和develop两个分支，平时的开发在develop分支进行，开发测试完成后，在发布前将develop合并到master分支即可。

对于团队开发，可以为每个开发者创建一个分支，每个人在自己的分支上开发自己的部分，然后逐步merge到master。

因此分支相当于生产零部件，master相当于主车间里的主体，最终零部件都是要进入主车间进行装配的。

1) 创建分支

举例：现在我想为我的歌词加入中文翻译，因此我可以创建一个分支，名为translation：



创建完毕后：

LobbyBoy-Dray / Lyrics

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Branch: translation Lyrics / That girl.md Find file Copy path

LobbyBoy-Dray Fix some bugs a9641ca 10 hours ago

1 contributor

9 lines (3 sloc) 127 Bytes Raw Blame History

```
This is my first song for that girl.  
There's a girl but I let her get away  
It's all my fault cause pride got in the way
```

此时不再是master，而是translation

已经进入translation分支，下面在该分支里对文件进行修改并提交：

Lyrics / That girl.md or cancel

Edit file Preview changes Spaces 2 Soft wrap

```
1 > This is my first song for that girl.  
2  
3 There's a girl but I let her get away  
4  
5 曾经心爱的女孩 我却让她擦肩而过  
6  
7 It's all my fault cause pride got in the way  
8  
9 自尊心作崇 一切都是我的错  
10  
11  
12
```

Commit changes

Add translation

Add an optional extended description...

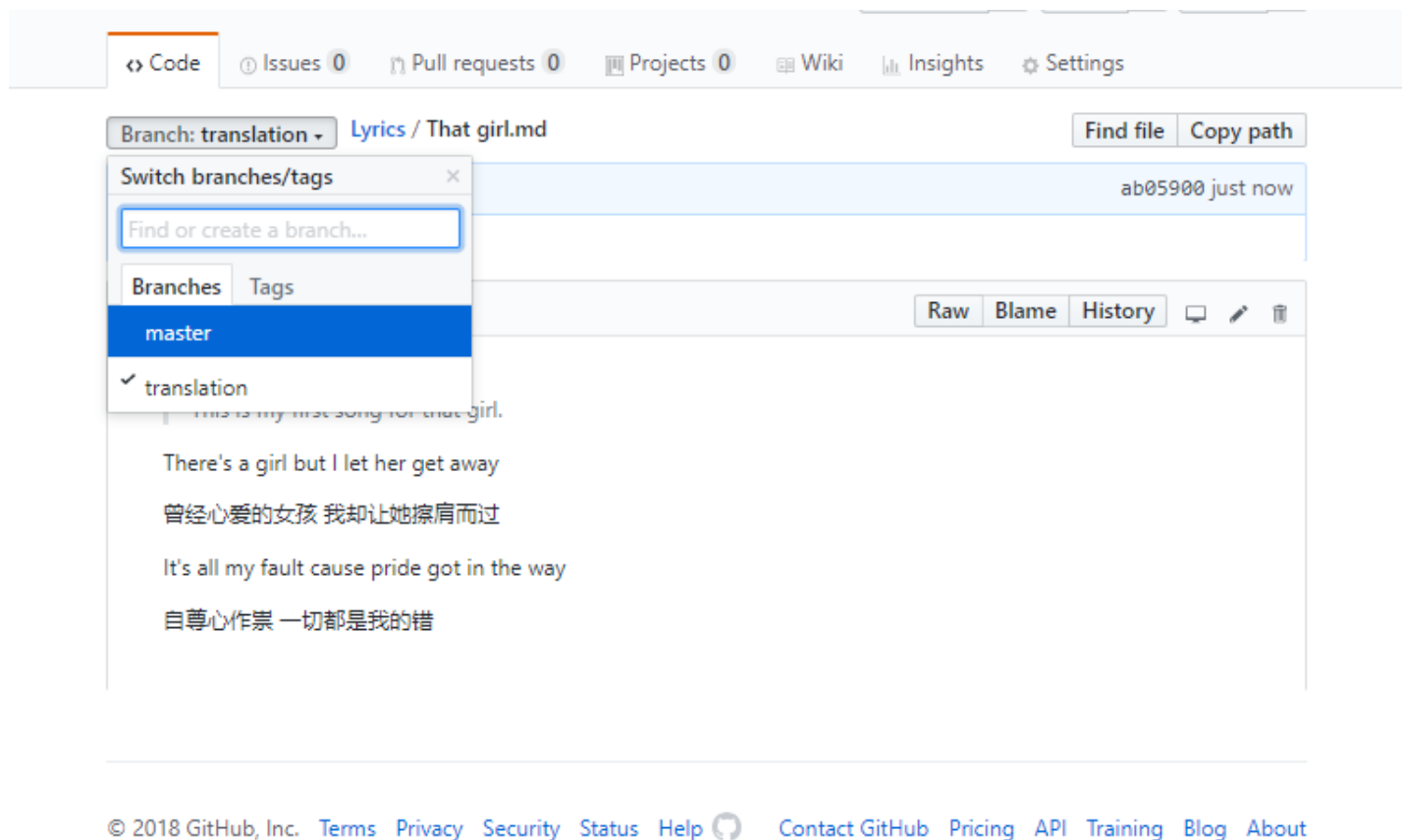
☒ Commit directly to the translation branch.

☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

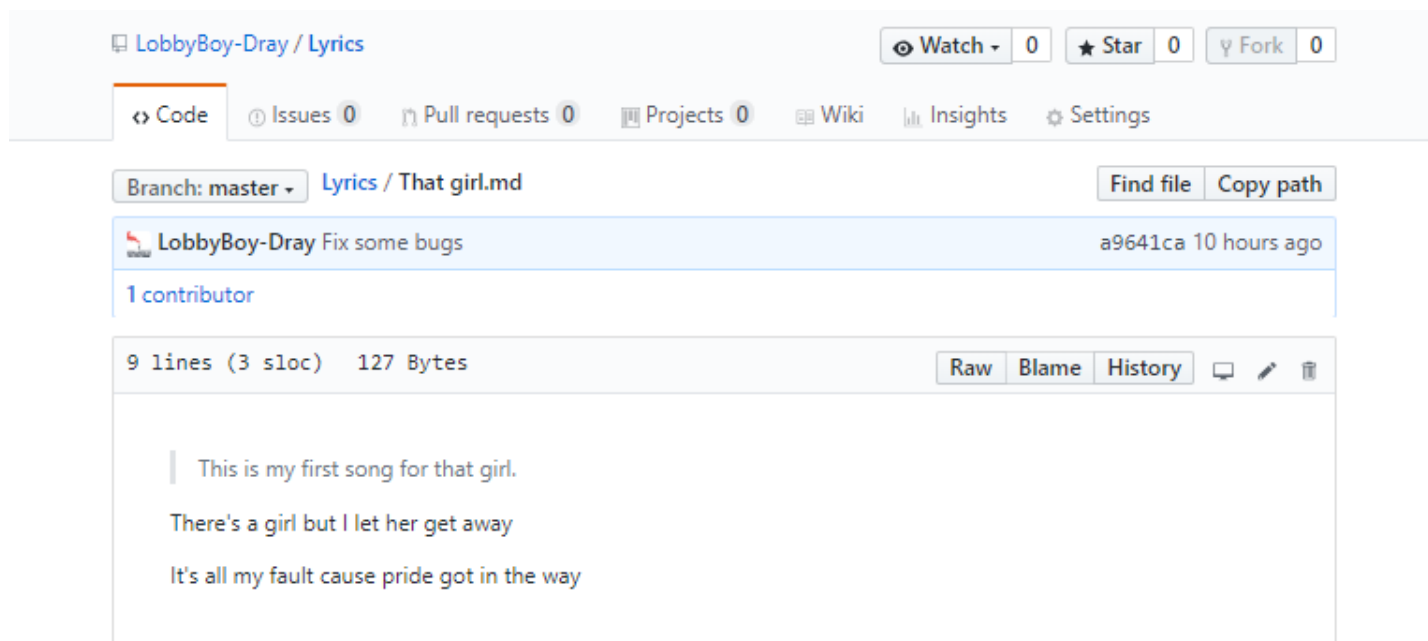
Commit changes Cancel

此时已经是commit到 translation分支，而不是master 分支，故不影响master

点击 Branch 可以切换回master分支：



可以看到在master分支中，中文翻译并没有被加入：



2) 合并分支

新建的分支可以在Repo主页面看到：

LobbyBoy-Dray / Lyrics

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

This is a repo for my lyrics. [Manage topics](#) [Edit](#)

3 commits 2 branches 0 releases 1 contributor

Your recently pushed branches:

[translation \(7 minutes ago\)](#) [Compare & pull request](#)

Branch: master New pull request Create new file Upload files Find file Clone or download

File	Commit	Time
README.md	Initial commit	10 hours ago
That girl.md	Fix some bugs	10 hours ago

README.md

Lyrics

This is a repo for my lyrics.

上图中的绿框 `Compare & pull request` 就好像这个分支的创建者（这里是我自己）对我说：would you please take my changes? would you please pull my request and merge into the master branch?

所以pull request的含义是：take some changes from the particular branch and bring them into another branch (usually master branch) 。

如果想要将该分支合并，点击该绿框，进入pull request页面：

LobbyBoy-Dray / Lyrics

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base: master compare: translation ✓ Able to merge. These branches can be automatically merged.

Add translation

Write Preview

AA B i “ < > ↺ ⋮ ≡ ✓ @ 📎 ↶

Leave a comment

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

Styling with Markdown is supported

Create pull request

Reviewers

No reviews

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone

No milestone

1 commit 1 file changed 0 commit comments 1 contributor

Commits on Oct 15, 2018

LobbyBoy-Dray Add translation Verified ab05900

Showing 1 changed file with 3 additions and 0 deletions. Unified Split

3 That girl1.md View

@@ -2,7 +2,10 @@

2 2

点击 `create pull request` 。但此时还没有完成merge，点击后github会检测两个合并的分支是否存在冲突，若不存在冲突，继续点击 `merge pull request` 、 `confirm merge` ：