

Tutorial for Github and R markdown

HUST Bioinformatics course series

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TOC

- ① install Github, sign up and sign in
- ② clone existing repository (e.g. this repo) to local computer, and get updates
- ③ create a new repository, add contents and upload to Github server
- ④ R markdown

what is Github?

- GitHub 是一个面向开源及私有软件项目的托管平台
- 支持 git 作为唯一的版本库格式进行托管
- GitHub 于 2008 年 4 月 10 日正式上线
- 2018 年 6 月 4 日，被微软 75 亿美元收购

注：资料来自百度百科

1. install Github, sign up and sign in

下载 Github desktop

go to: desktop.github.com

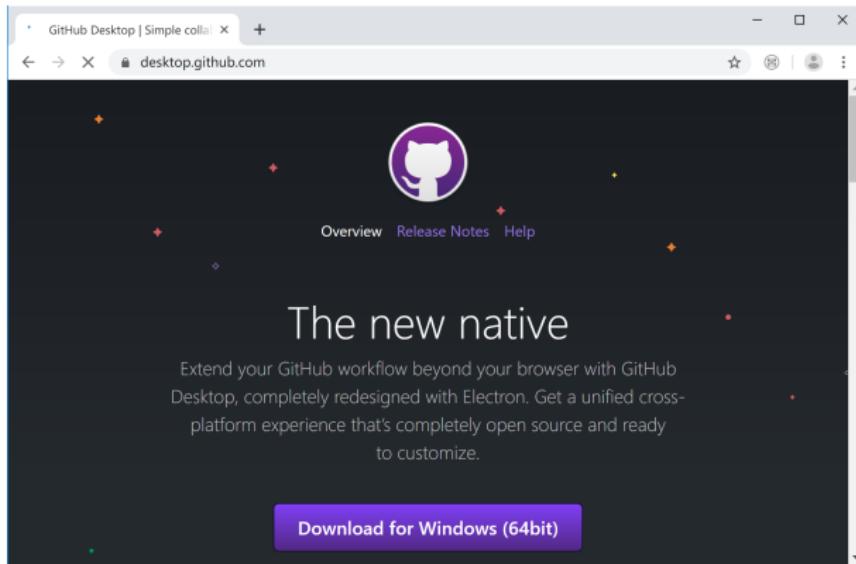


Figure 1: choose a version for your OS and download the desktop Github app

the welcome screen

start the app, and choose sign up (or sign in if you have an account)

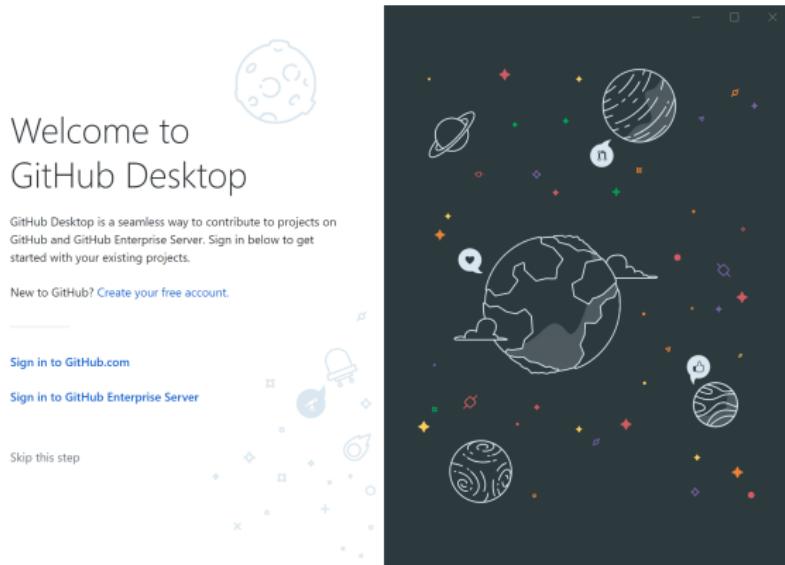


Figure 2: the welcome screen

sign up

click the sign up link, you will be redirected to the Github website in a browser

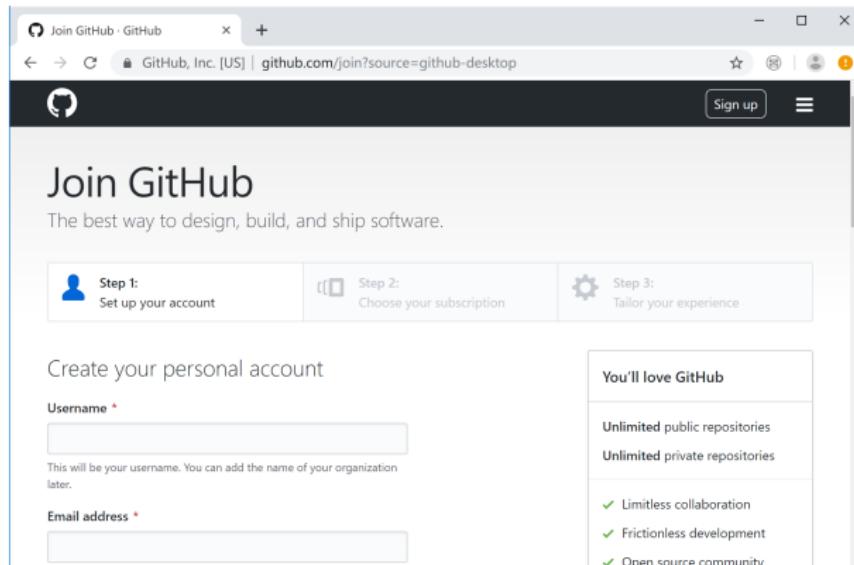


Figure 3: sign up at the github website

sign in

create a new account, go back to the desktop app to sign in

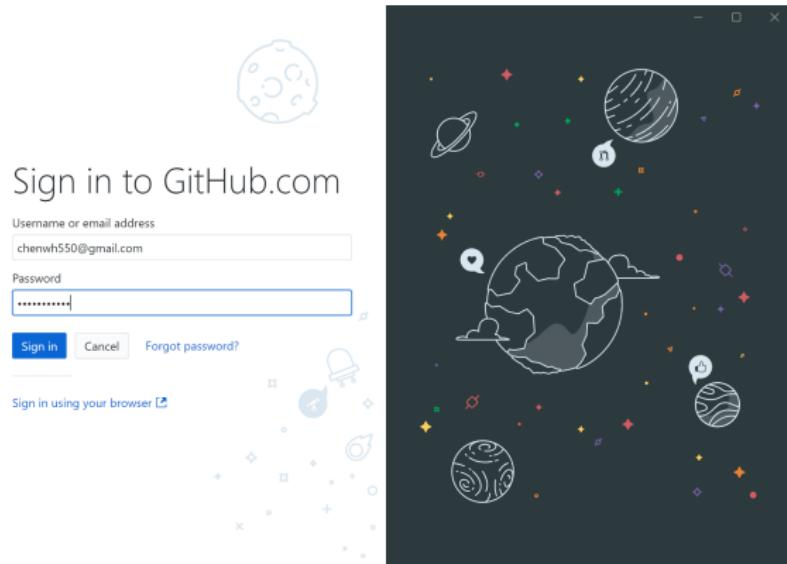


Figure 4: login using the desktop app

clone a existing repository and update

clone a repository, step 1

From your Github desktop app

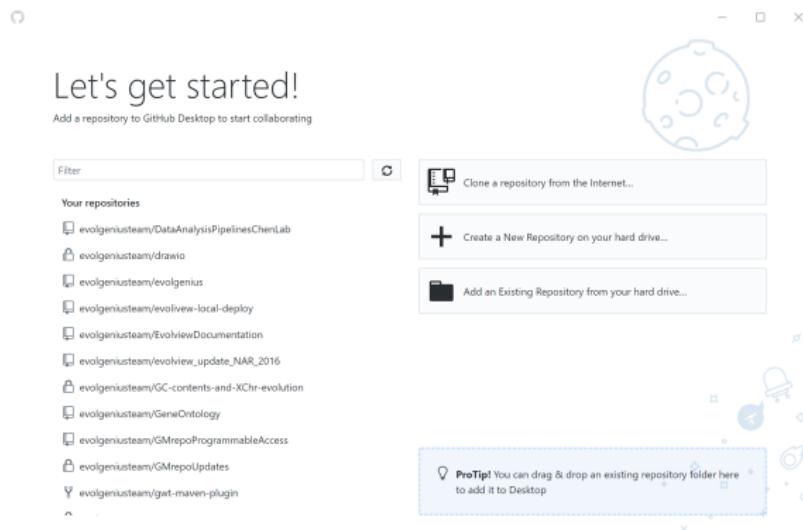


Figure 5: choose “clone a repository from the internet ...”

clone a repository, step 2

repository: evolgeniusteam/R-for-bioinformatics

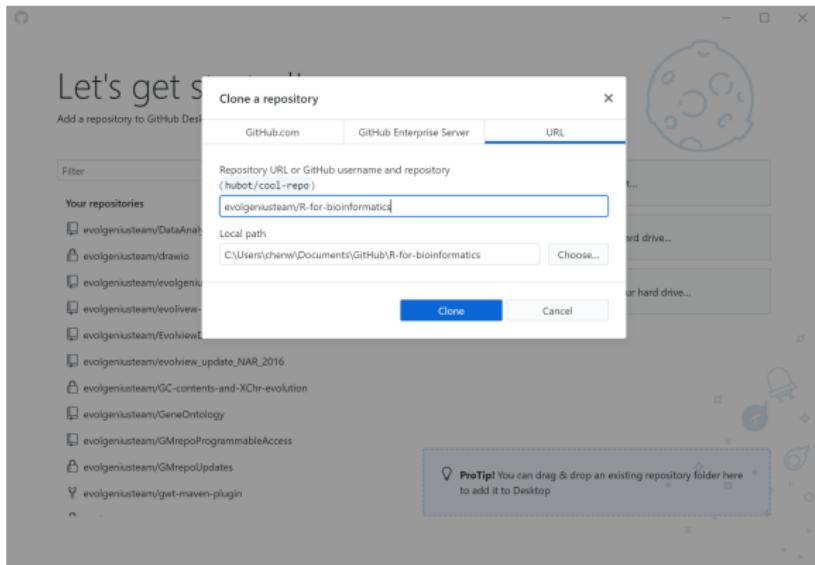


Figure 6: select “URL”, and add repository URL or username/repository_name

clone a repository, step 3



Figure 7: cloning to local folder

clone a repository, step 4

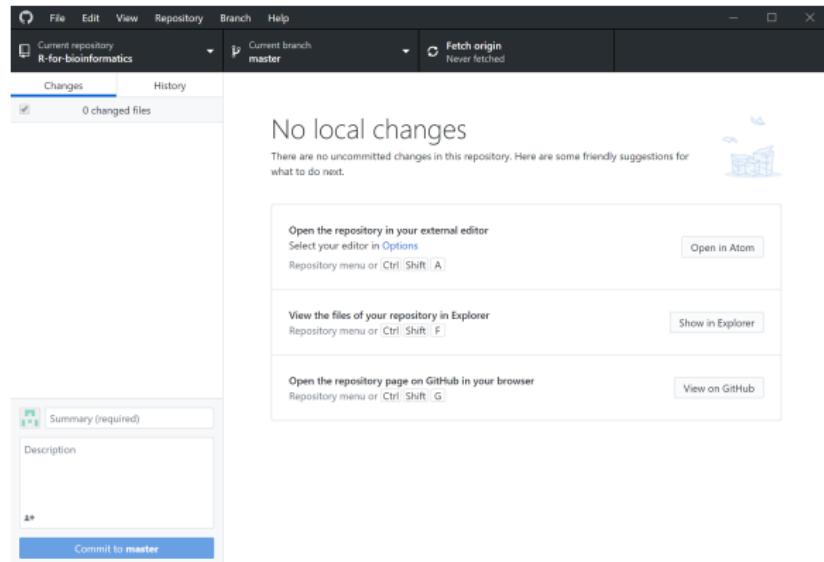


Figure 8: 完成 clone

check the local folder

go the local github folder, and check the files downloaded from Github

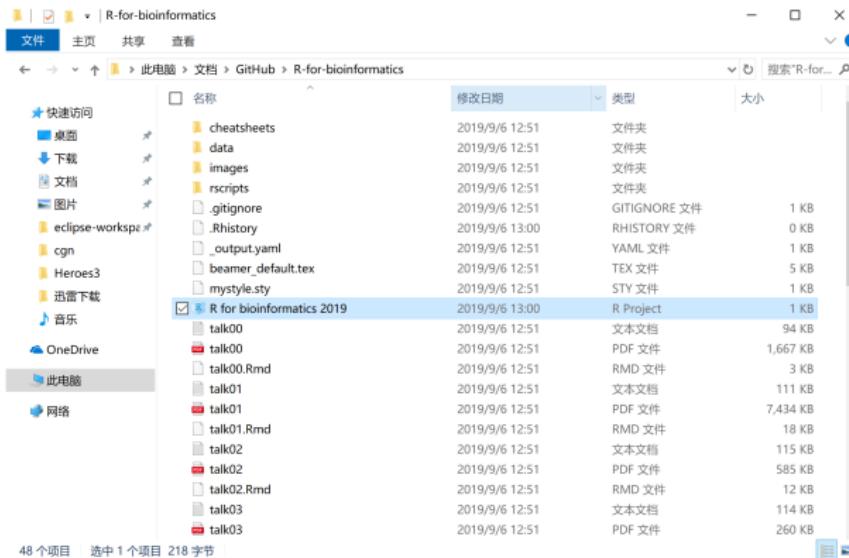


Figure 9: files downloaded to local folder

pull updates, step 1

pull: 是从 repository 下载 project 或更新的过程

点击“Fetch origin”按钮，如果有更新，它会变为：“Pull origin”：

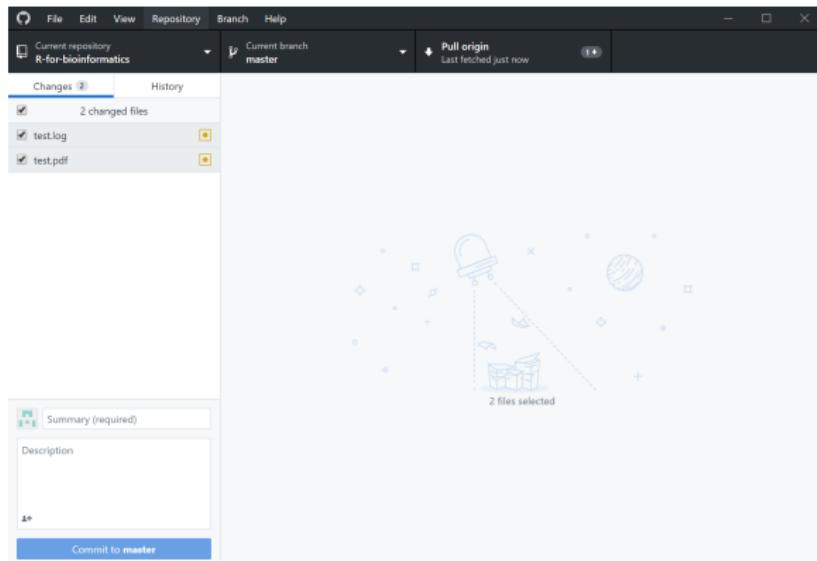


Figure 10: files downloaded to local folder

pull updates, step 2

完成更新后，可通过“History” tab 查看更新内容

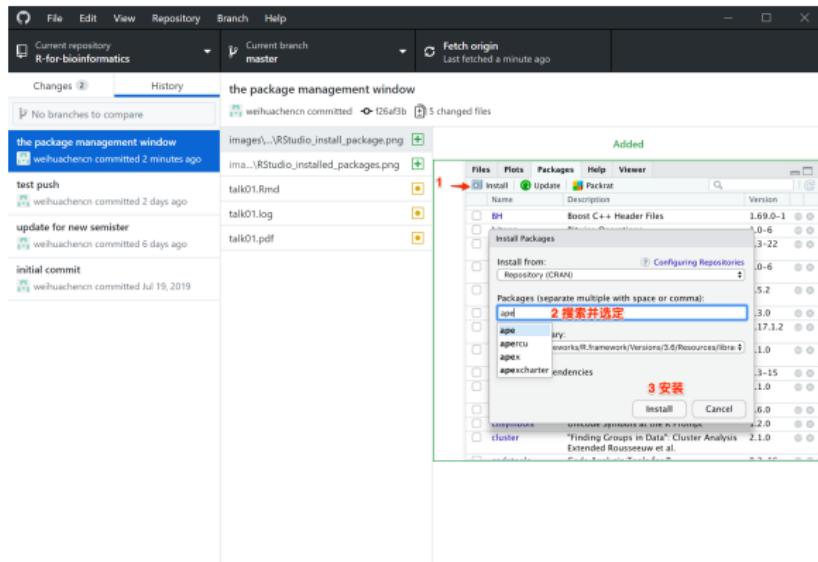


Figure 11: files downloaded to local folder

3. create a new repository and push to Github

create a new repo on your computer

from the Github desktop app, select “File” menu -> “New repository ...”

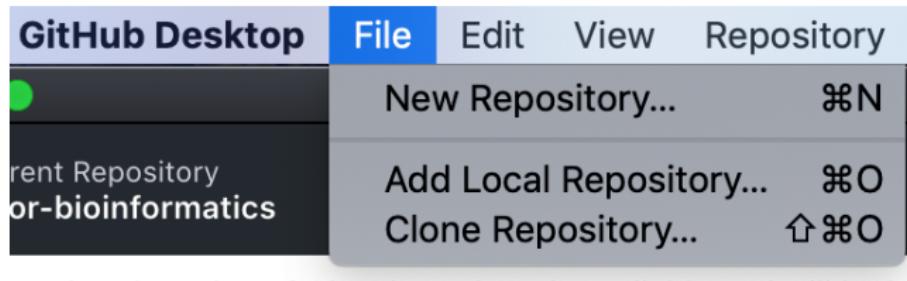


Figure 12: create new depository using the Desktop app

create a new repo, step 2

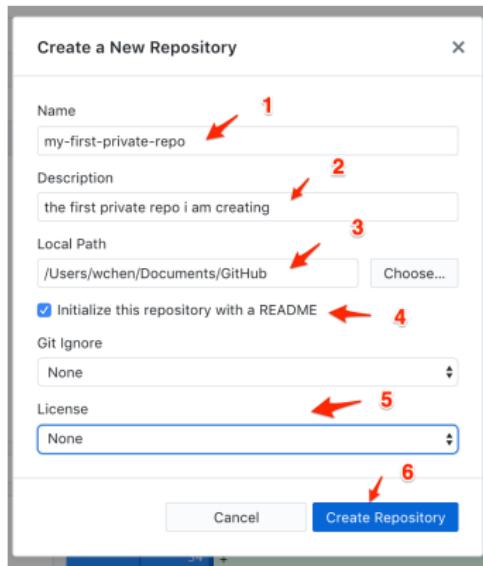


Figure 13: fill in necessary information and create

create a new repo, step 3

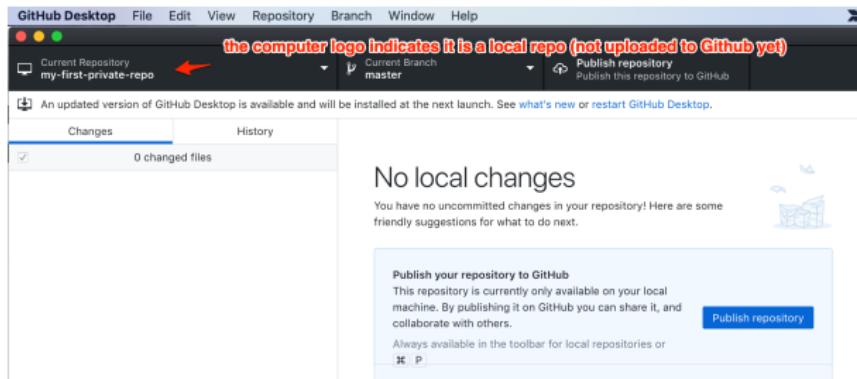
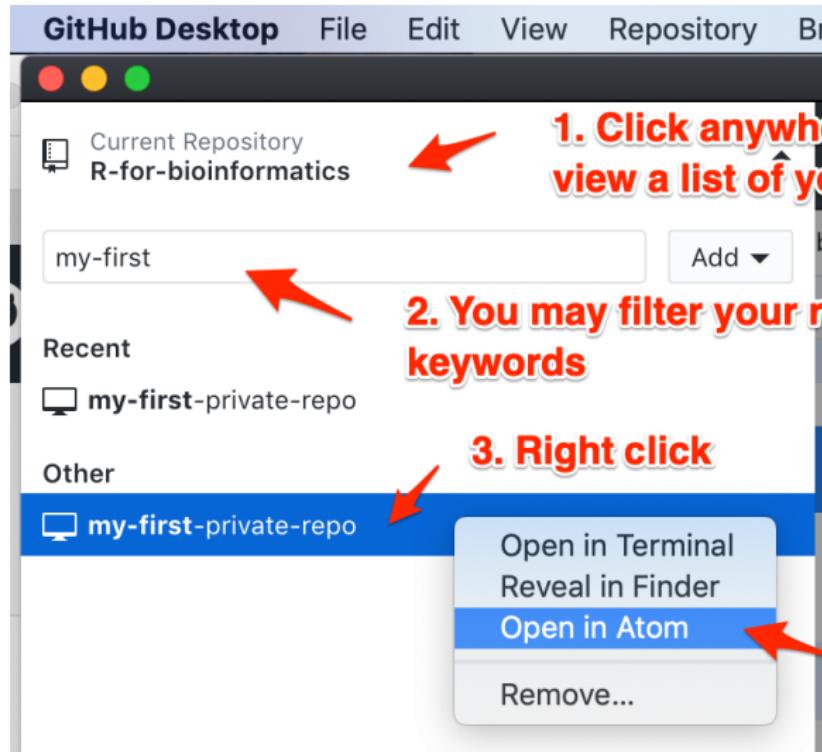


Figure 14: main page of Github desktop app after the new repo was created

open the repo using Atom

Atom can be downloaded from: <https://atom.io>



1. Click anywhere on the tab to view a list of your repos

2. You may filter your repos with keywords

3. Right click

4. Open in Atom

view and edit repo using Atom

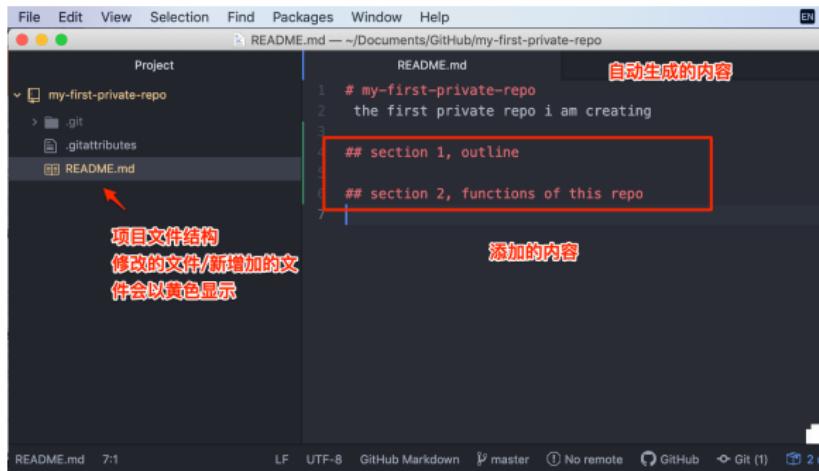


Figure 15: open the new repo and edit using Atom

Please read more about markdown at here:

<https://guides.github.com/features/mastering-markdown/>

edit and preview markdown file

enable the “Markdown Preview Enhanced” package to preview the markdown file on the fly. This package should be obtained from:
<https://atom.io/packages/markdown-preview-enhanced>.

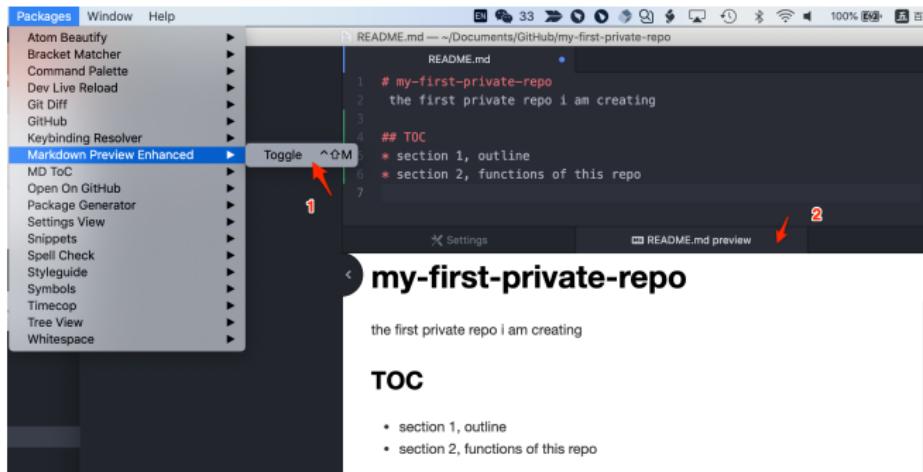
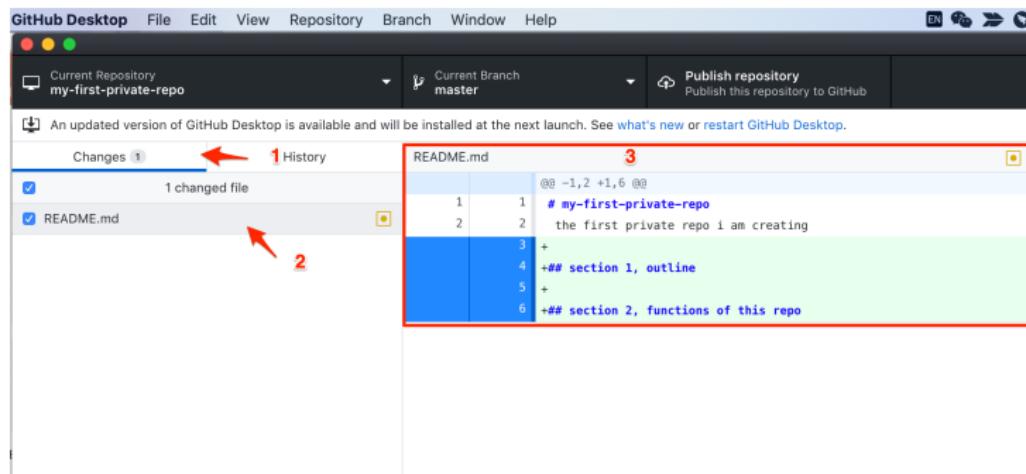


Figure 16: markdown file and preview

go back to Github desktop app

changes will be highlighted in the Github desktop app



publish the newly created repository

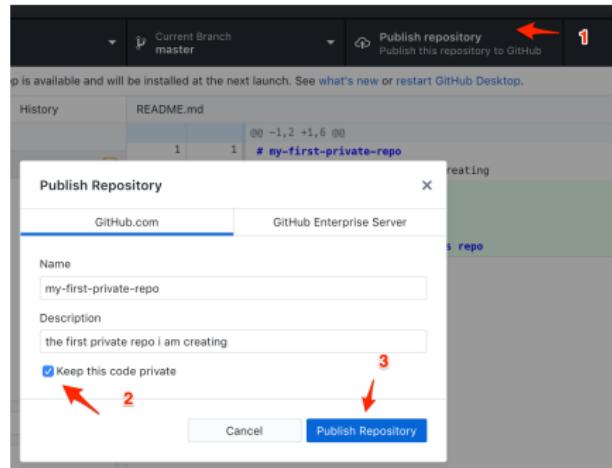


Figure 17: “publish” a private repository

check the new repository at Github website

the url will be : /

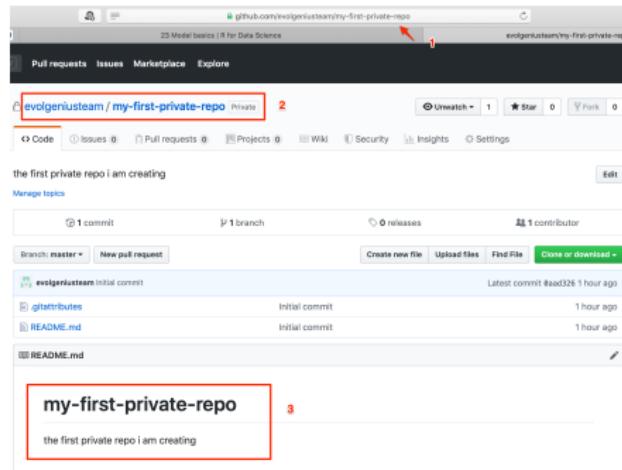


Figure 18: NOTE: newly added contents will NOT be uploaded to Github at this stage

upload newly added contents and/or changes to Github website

first, use the Github desktop app to upload (push) new contents and/or changes

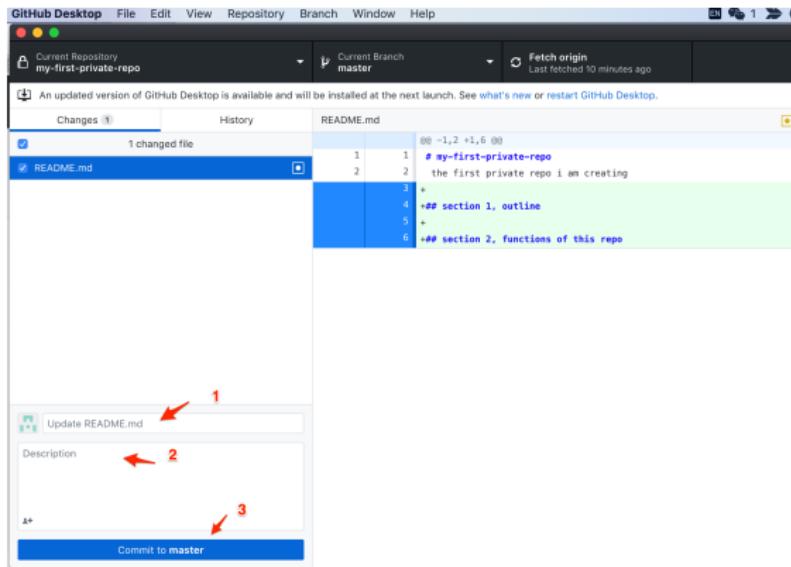


Figure 19: *commit to master*

upload newly added contents and/or changes to Github website, cont.

then use the “Push origin” button to actually upload the changes

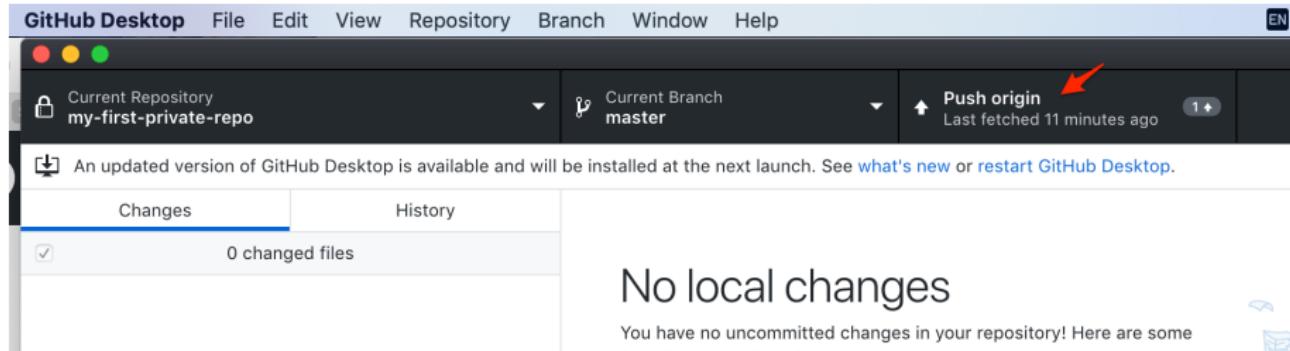


Figure 20: *Push origin*

Atom also ‘knows’

Atom then ‘knows’ that the changes have been synchronized to Github:

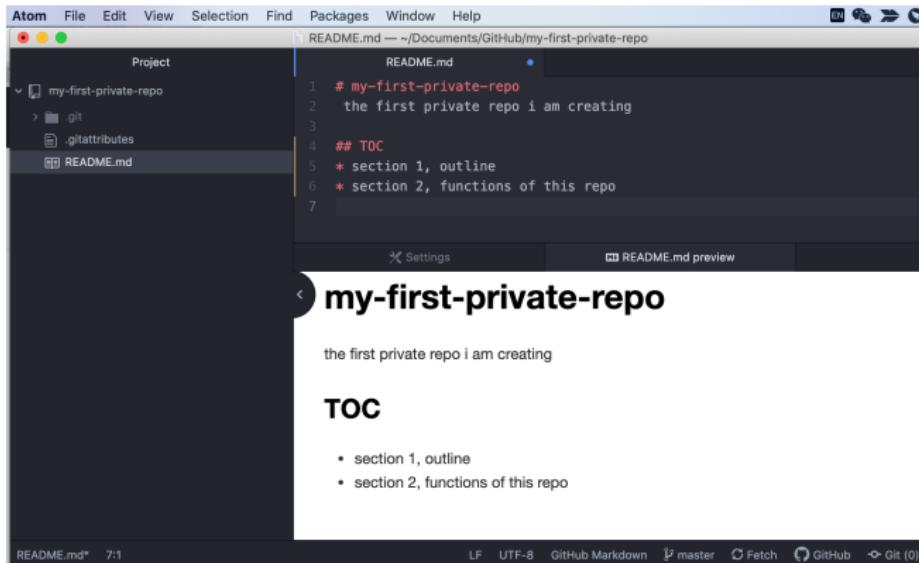


Figure 21: Atom knows

to be continued ...