Git_GitHub

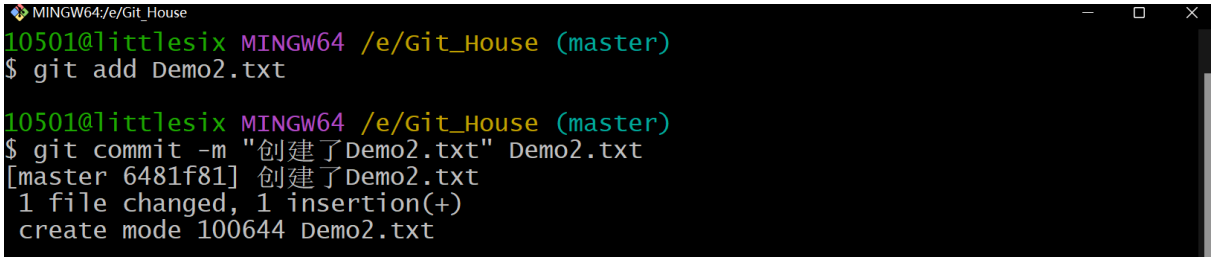
目录

Git

GitHub

push 操作(邀请加入团队)

【1】更新本地库信息

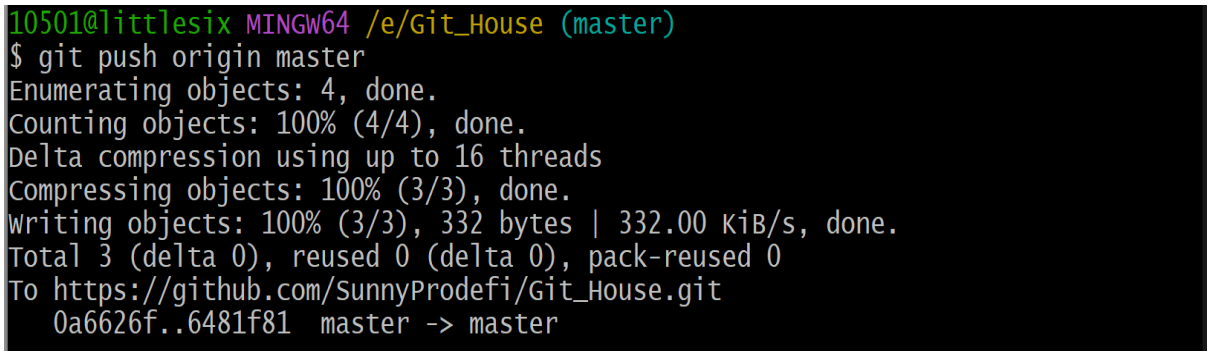


【2】push 内容到远程库中去

可以直接 push 进去，并没有要求录入账号密码

原因：git 使用的时候在本地有缓存

解决：将缓存删除，搜索管理凭据



【3】邀请加入团队即可 push

远程库修改的拉取操作

【1】拉去操作 pull 操作，相当于 fetch+merge

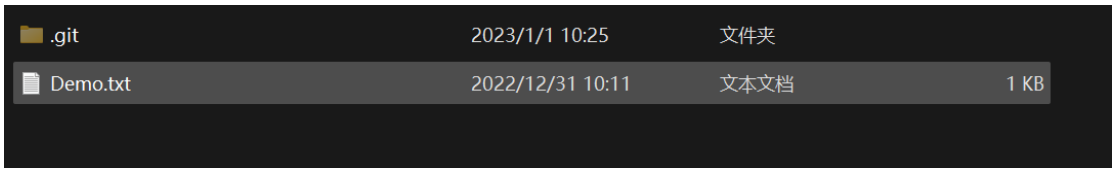
【2】项目经理先确认远程库内容是否更新了

【3】项目经理进行拉取

（1）先是抓取操作：fetch

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git fetch origin master
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 6 (delta 1), reused 5 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 532 bytes | 44.00 KiB/s, done.
From https://github.com/SunnyProdefi/Git_House
 * branch            master     -> FETCH_HEAD
   0a6626f..af3aa95  master     -> origin/master
```

在抓取操作执行后，只是将远程库的内容下载到本地，但是工作区并没有更新



抓取后可以去远程库看看内容是否正确

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git checkout origin/master
Note: switching to 'origin/master'.
```

```
10501@littlesix MINGW64 /d/Git_House ((af3aa95...))
$ ll
total 3
-rw-r--r-- 1 10501 197609  3 Dec 31 10:11 Demo.txt
-rw-r--r-- 1 10501 197609 50 Jan  1 10:30 Demo2.txt
-rw-r--r-- 1 10501 197609  3 Jan  1 10:30 Demo3.txt

10501@littlesix MINGW64 /d/Git_House ((af3aa95...))
$ cat Demo3.txt
bbb
```

发现内容都正确就可以进行合并操作

合并之前将分支切换回来

```
10501@littlesix MINGW64 /d/Git_House ((af3aa95...))
$ git checkout master
Previous HEAD position was af3aa95 创建了Demo3.txt
Switched to branch 'master'
```

（2）进行合并：merge

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git merge origin/master
Updating 0a6626f..af3aa95
Fast-forward
 Demo2.txt | 1 +
 Demo3.txt | 1 +
 2 files changed, 2 insertions(+)
 create mode 100644 Demo2.txt
 create mode 100644 Demo3.txt
```

远程库的拉去可以直接利用 pull 命令来完成

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git pull origin master
From https://github.com/SunnyProdefi/Git_House
 * branch            master     -> FETCH_HEAD
Already up to date.
```

fetch+merge 操作——为了保险、慎重

pull——代码简单、省事

协同开发合作时冲突的解决办法

【1】经理

向远程库推送数据

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 282 bytes | 282.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/SunnyProdefi/Git_House.git
   af3aa95..df09e65  master -> master
```

【2】小兵

做了一个拉取操作

```
10501@littlesix MINGW64 /e/Git_House (master)
$ git pull origin master
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0
Unpacking objects: 100% (3/3), 262 bytes | 37.00 KiB/s, done.
From https://github.com/SunnyProdefi/Git_House
 * branch            master     -> FETCH_HEAD
   af3aa95..df09e65  master     -> origin/master
Updating af3aa95..df09e65
Fast-forward
 Test.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 Test.txt
```

到这里为止，现在远程合作没有任何问题

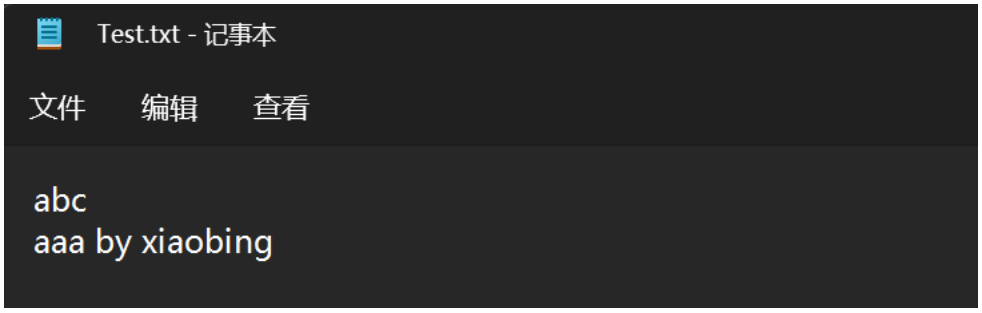
现在操作同一个文件的同一个位置的时候，就会引起冲突

【3】小兵

再次做了推送操作

```
10501@littlesix MINGW64 /e/Git_House (master)
$ git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 291 bytes | 291.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/SunnyProdefi/Git_House.git
   df09e65..0a26b81  master -> master
```

改动位置



【4】经理

改动 Test.txt 中内容，然后进行推送

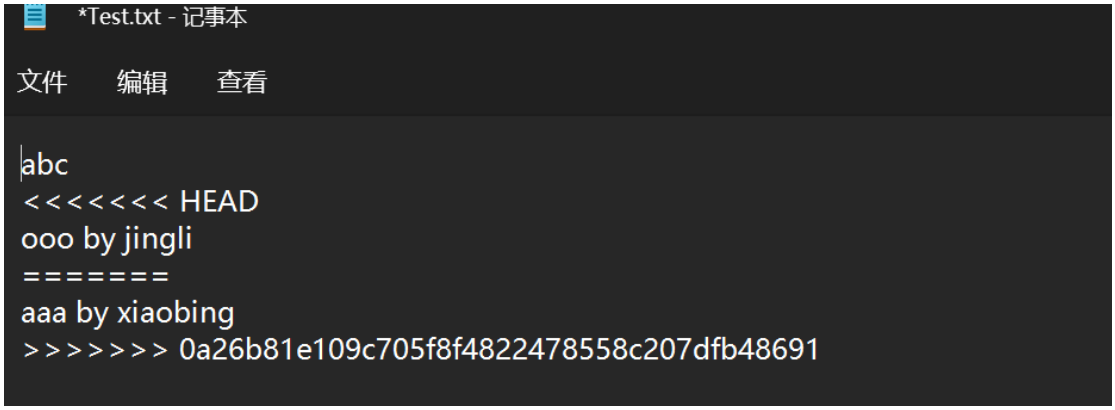
```
10501@littlesix MINGW64 /d/Git_House (master)
$ git push origin master
To https://github.com/SunnyProdefi/Git_House.git
 ! [rejected]        master -> master (fetch first)
error: failed to push some refs to 'https://github.com/SunnyProdefi/Git_Ho
use.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushi
ng
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

发现推送失败！

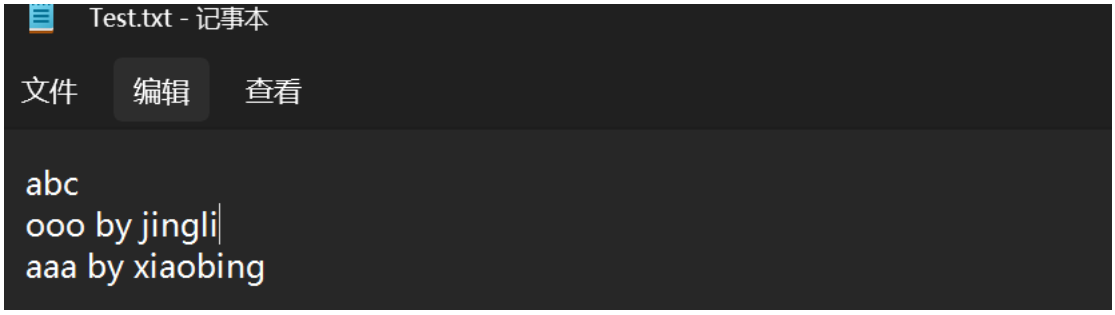
在冲突的情况下，先应该拉取下来，然后修改冲突，然后再推送到远程库

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git pull origin master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0
Unpacking objects: 100% (3/3), 271 bytes | 45.00 KiB/s, done.
From https://github.com/SunnyProdefi/Git_House
 * branch            master     -> FETCH_HEAD
   df09e65..0a26b81  master     -> origin/master
Auto-merging Test.txt
CONFLICT (content): Merge conflict in Test.txt
Automatic merge failed; fix conflicts and then commit the result.
```

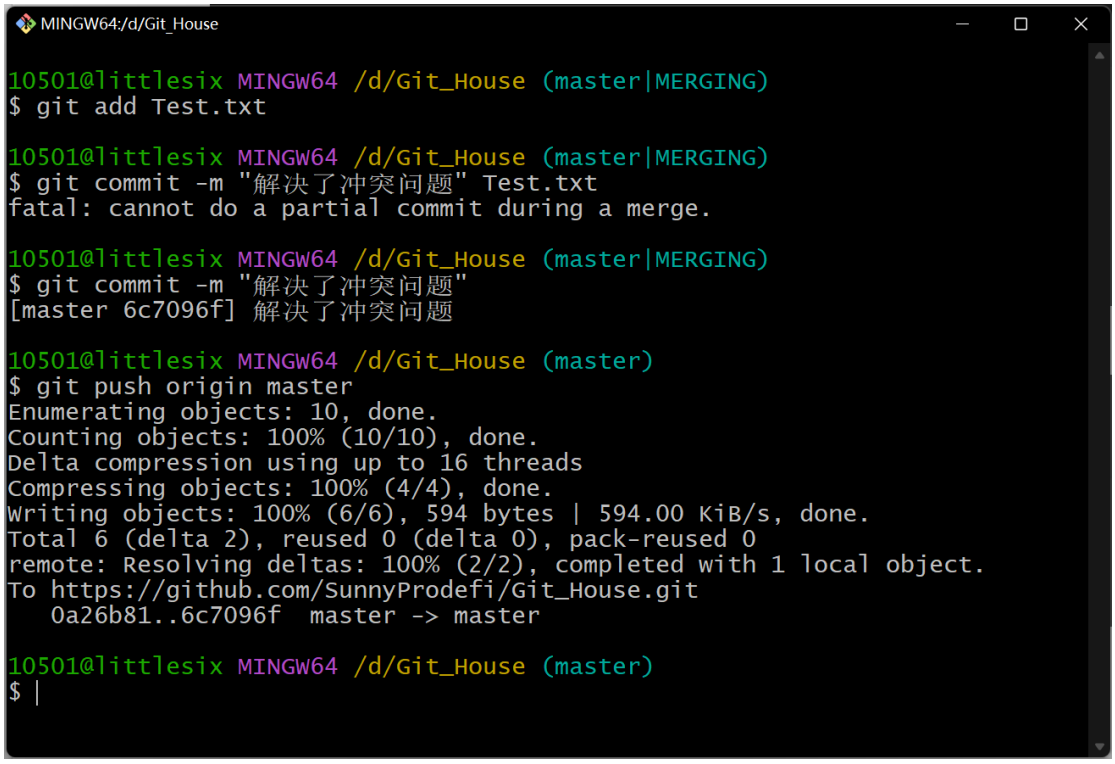
查看冲突：



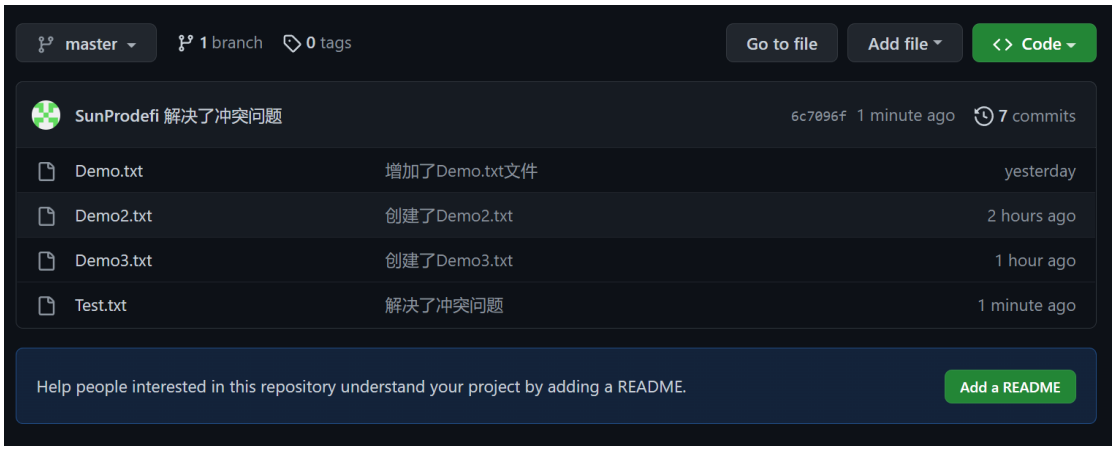
人为解决这个冲突：



解决完冲突之后，向远程库推送：



解决了冲突



跨团队合作

【1】得到远程库的地址：A 的项目经理

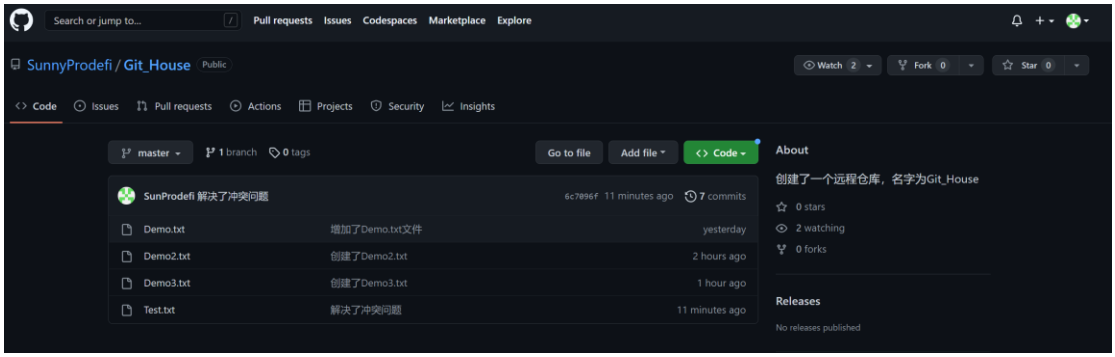
地址：

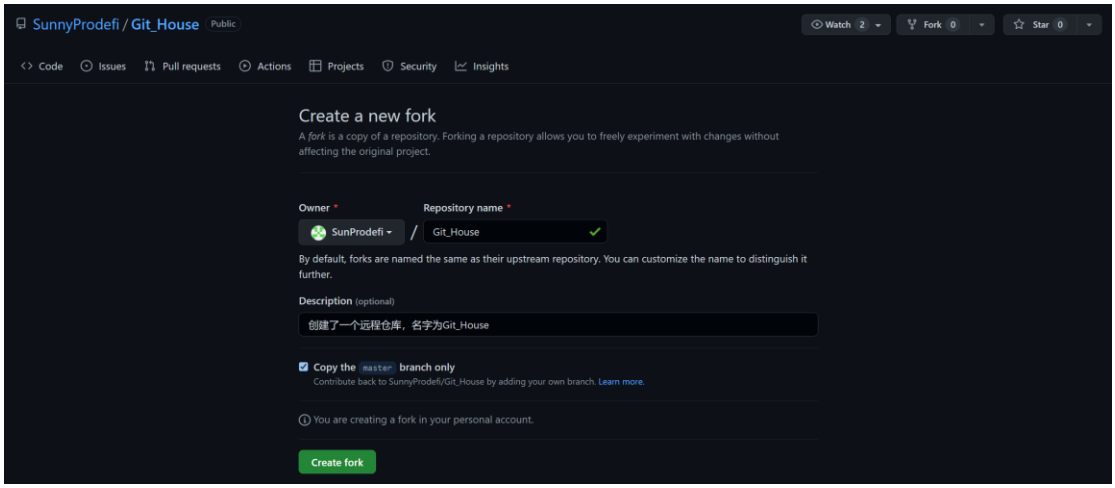
https://github.com/SunnyProdefi/Git_House.git

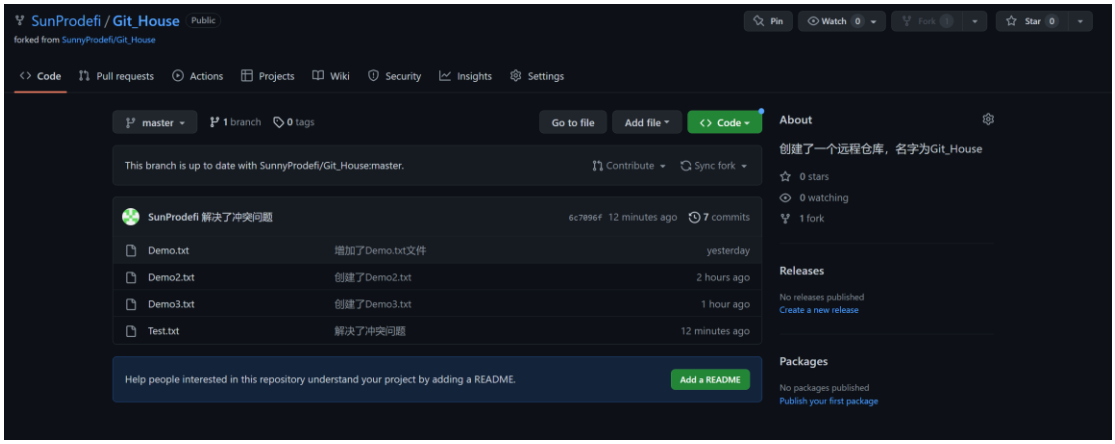
【2】进行 fork 操作：B 的小兵

进入到账号后:复制地址：https://github.com/SunnyProdefi/Git_House.git

点击 Fork 操作







【3】然后就可以克隆到本地，并且进行修改：B 的小兵

```
10501@littlesix MINGW64 /g
$ git clone https://github.com/SunProdefi/Git_House.git
Cloning into 'Git_House'...
remote: Enumerating objects: 21, done.
remote: Counting objects: 100% (21/21), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 21 (delta 5), reused 18 (delta 2), pack-reused 0
Receiving objects: 100% (21/21), done.
Resolving deltas: 100% (5/5), done.
```

然后进行更改：

SSH 免密登录

【1】进入用户的主目录中：

```
10501@littlesix MINGW64 /c
$ cd ~
```

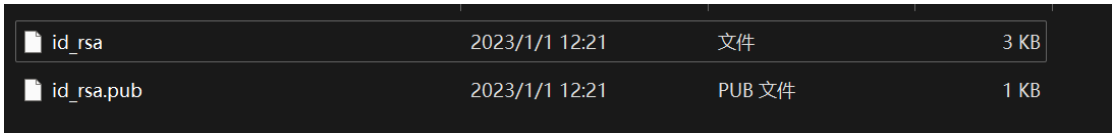
【2】执行命令，生成一个.ssh 的目录：

```
10501@littlesix MINGW64 ~
$ ssh-keygen -t rsa -C sunprodefi@gmail.com
```

keygen——key generation
注意：C 大写
后面的邮箱是你的 github 注册的账号的时候对应的邮箱
三次回车确认默认值即可

```
10501@littlesix MINGW64 ~
$ ssh-keygen -t rsa -C sunprodefi@gmail.com
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/10501/.ssh/id_rsa):
Created directory '/c/Users/10501/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/10501/.ssh/id_rsa
Your public key has been saved in /c/Users/10501/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:9tUaI1rM4aTkyxnR1wlI9qUNfvo6ZWO16bEGQO3ZXNw sunprodefi@gmail.com
The key's randomart image is:
+---[RSA 3072]----+
|          .o.o .o*|
|          o.o B +E|
|         o + = B  |
|        o B o = ..|
|         S * * ..o|
|        o B o B=+ |
|         = . .+=.o|
|             .. + |
|             ...  |
+----[SHA256]-----+
```

发现在.ssh 目录下有两个文件：

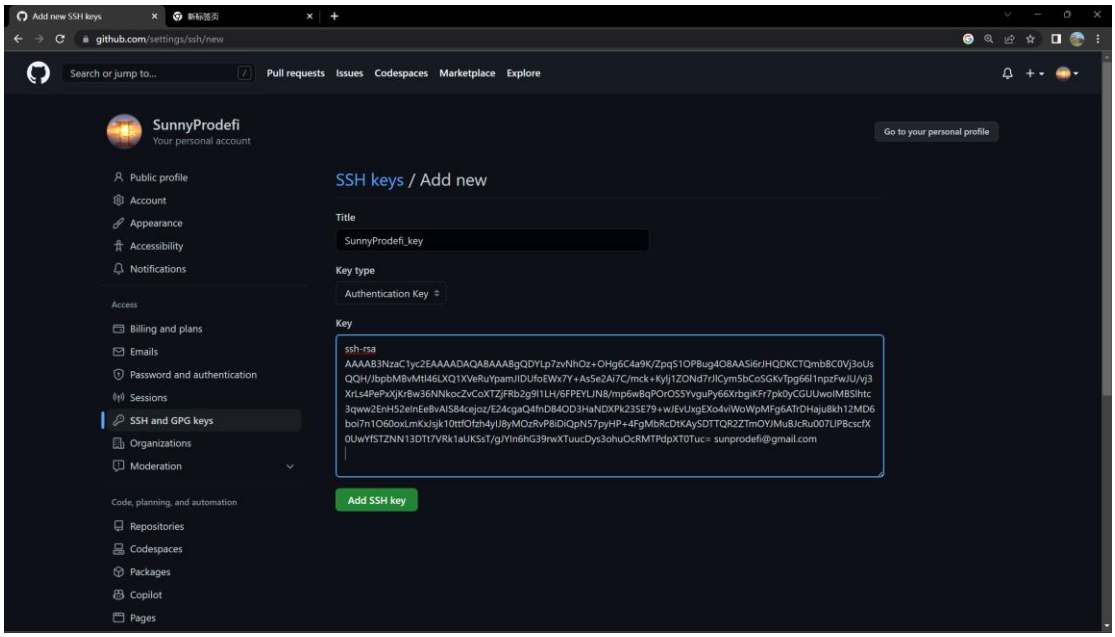


【3】打开 id_rsa_pub 文件，将里面的内容复制

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABgQDYLp7zvNhOz+OHg6C4a9K/ZpqS1OPBug4O8AASi
6rJHQDKCTQmbBCOVj3oUsQQH/JbpbMBvMt146LXQ1XVeRuYpamJIDUfoEWx7Y+As5e2Ai
7C/mck+Kylj1ZONd7rJ1Cym5bCoSGKvTpg6611npzFwJU/vj3XrLs4PePxXjKrBw36NNk
ocZvCoXTZjFRb2g911LH/6FPEYLJN8/mp6wBqPOrOS5YvguPy66XrbgiKFr7pkOyCGUUw
oIMBS1htc3qww2EnH52eInEeBvAIS84cejoz/E24cgaQ4fnD84OD3HaNDXPk23SE79+wJ
EvUxgEXo4viWoWpMFg6ATrDHaju8kh12MD6boi7n1O6OoxLmKxJsjk1OttfOfzh4yIJ8y
MOzRvP8iDiQpN57pyHP+4FgMbRcDtKAySDTTQR2ZTmOYJMuBJcRuOO7L1PBcscfXOUwYf
STZNN13DTt7VRk1aUKSsT/gJYIn6hG39rwXTuucDys3ohuOcRMTPdpXTOTuc=
```

sunprodefi@gmail.com

【4】打开 github 账号



【5】生成密钥以后，就可以正常进行 push 操作

对 ssh 远程地址起别名：

```
10501@littlesix MINGW64 /d/Git_House (master)
$ git remote add origin_ssh git@github.com:SunnyProdefi/Git_House.git
```

展示别名：

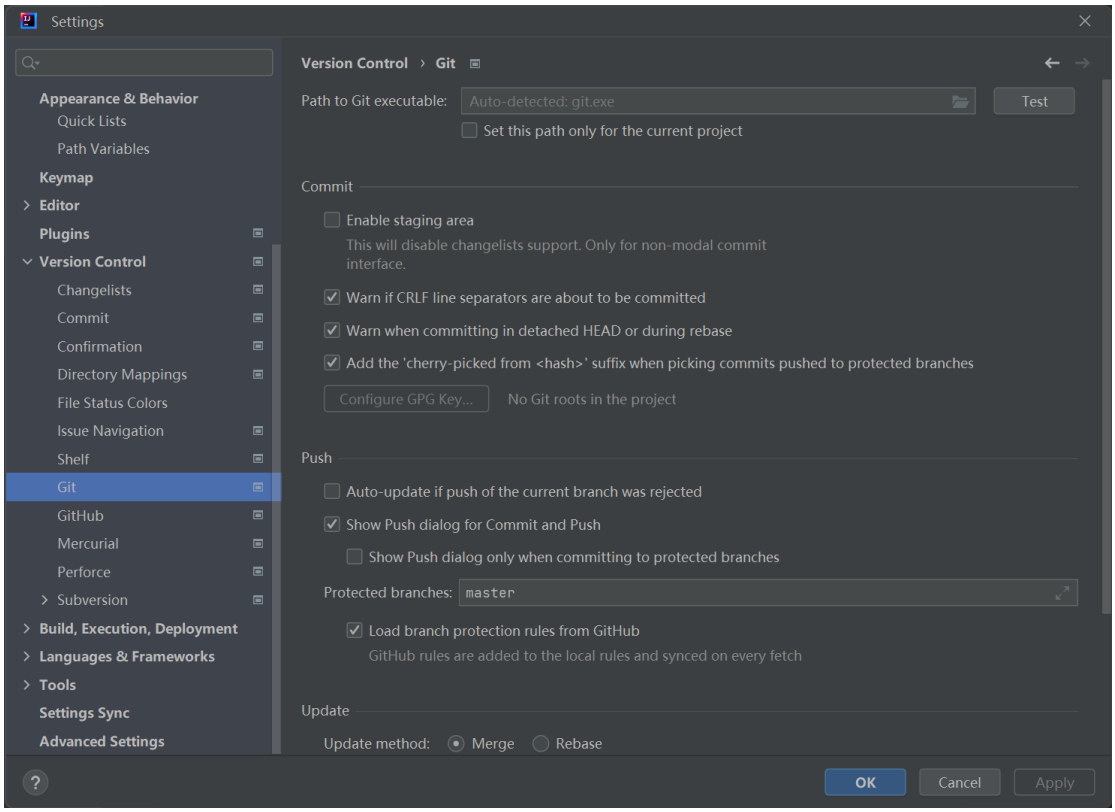
```
10501@littlesix MINGW64 /d/Git_House (master)
$ git remote -v
origin  https://github.com/SunnyProdefi/Git_House.git (fetch)
origin  https://github.com/SunnyProdefi/Git_House.git (push)
origin_ssh      git@github.com:SunnyProdefi/Git_House.git (fetch)
origin_ssh      git@github.com:SunnyProdefi/Git_House.git (push)
```

创建一个文件并提交到远程库（地址用的是 ssh 方式的地址）：

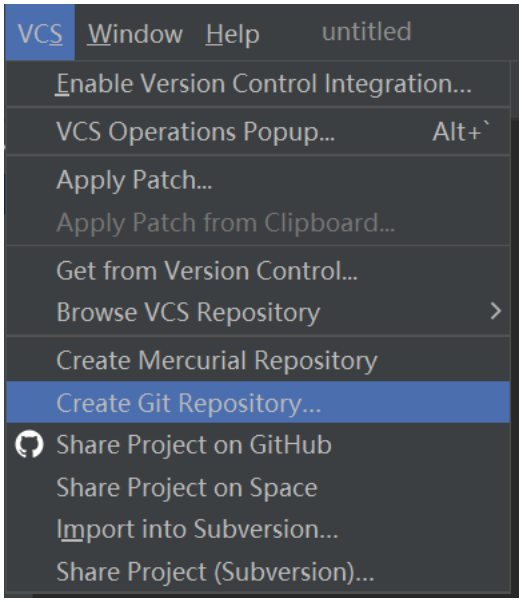
```
10501@littlesix MINGW64 /d/Git_House (master)
$ git push origin_ssh master
The authenticity of host 'github.com (20.205.243.166)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 285 bytes | 285.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:SunnyProdefi/Git_House.git
   6c7096f..337247c  master -> master
```

IDEA 集成 Git

IDEA 集成 Git

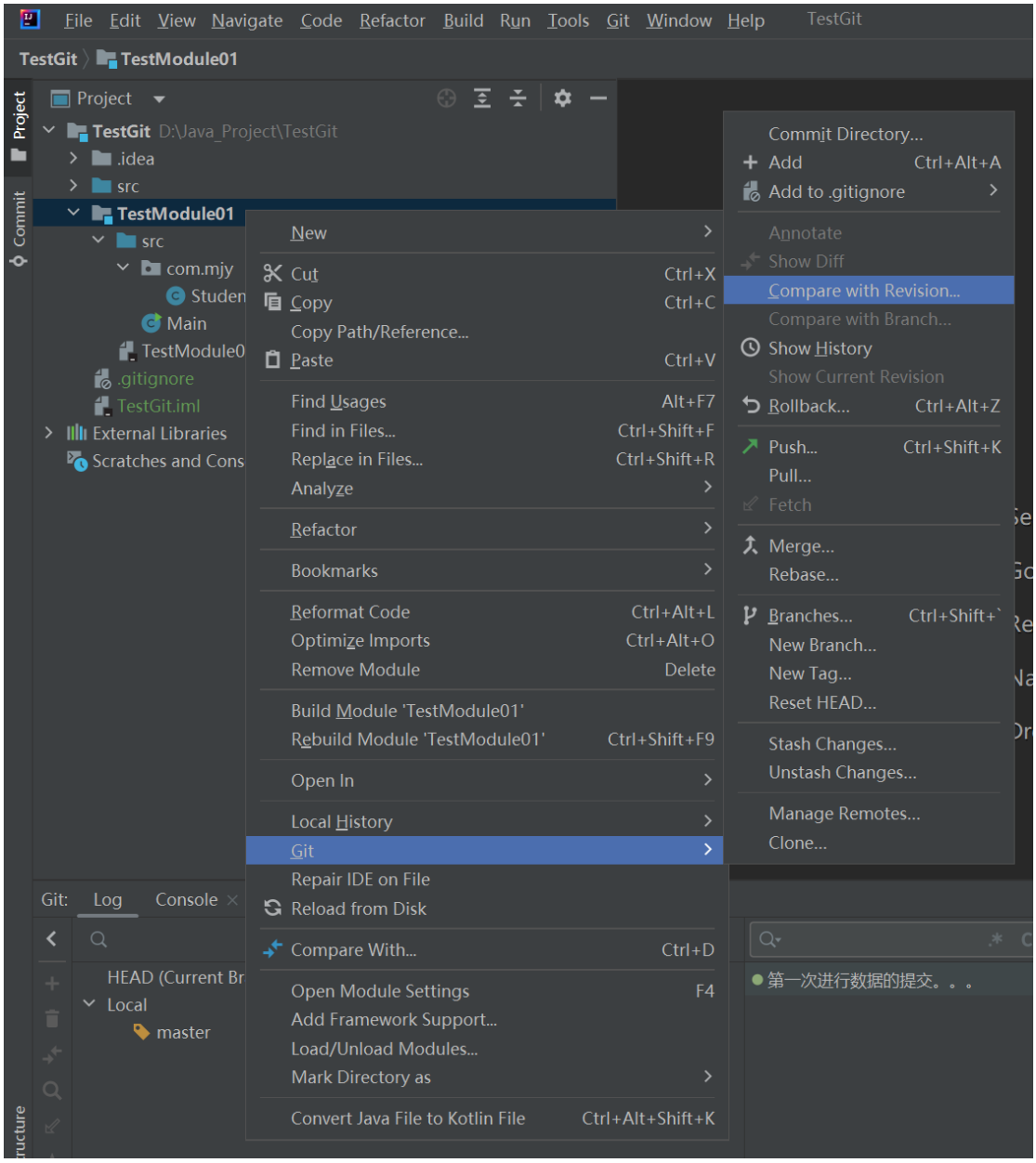


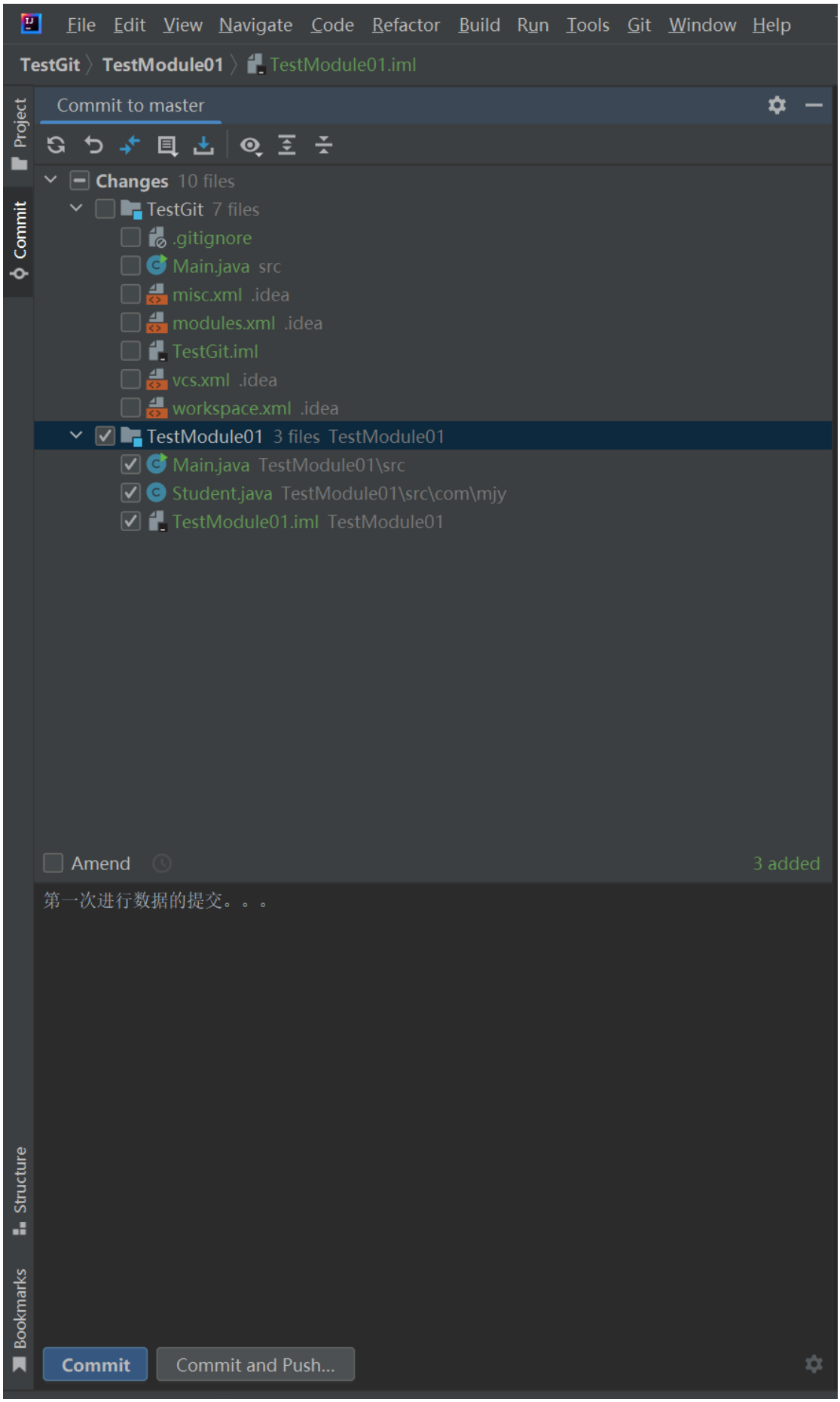
本地库的初始化操作：



本地库初始化完成了，生成了.git 目录

添加到暂存区，再提交到本地库操作；add+commit




File Edit View Navigate Code Refactor Build Run Tools Git Window Help
TestGit 〉 TestModule01 〉 TestModule01.iml
Project
Commit
Commit to master
Changes 10 files
TestGit 7 files
.gitignore
Main.java src
misc.xml .idea
modules.xml .idea
TestGit.iml
vcs.xml .idea
workspace.xml .idea
TestModule01 3 files TestModule01
Main.java TestModule01\src
Student.java TestModule01\src\com\mjy
TestModule01.iml TestModule01
Amend
3 added
第一次进行数据的提交。。。
Structure
Bookmarks
Commit
Commit and Push...

当你更改内容以后，前面更本地库内容不一致的地方会显示绿色；

本地库与远程库的交互

Pull 拉取

```
error: Your local changes to the following files would be overwritten by merge:
```

> 意思是我台式机上新修改的代码的文件，将会被git服务器上的代码覆盖；我当然不想刚刚写的代码被覆盖掉，看了git的手册，发现可以这样解决：
>
> 方法1：如果你想保留刚才本地修改的代码，并把git服务器上的代码pull到本地（本地刚才修改的代码将会被暂时封存起来）

```
git stash
git pull origin master
git stash pop
```

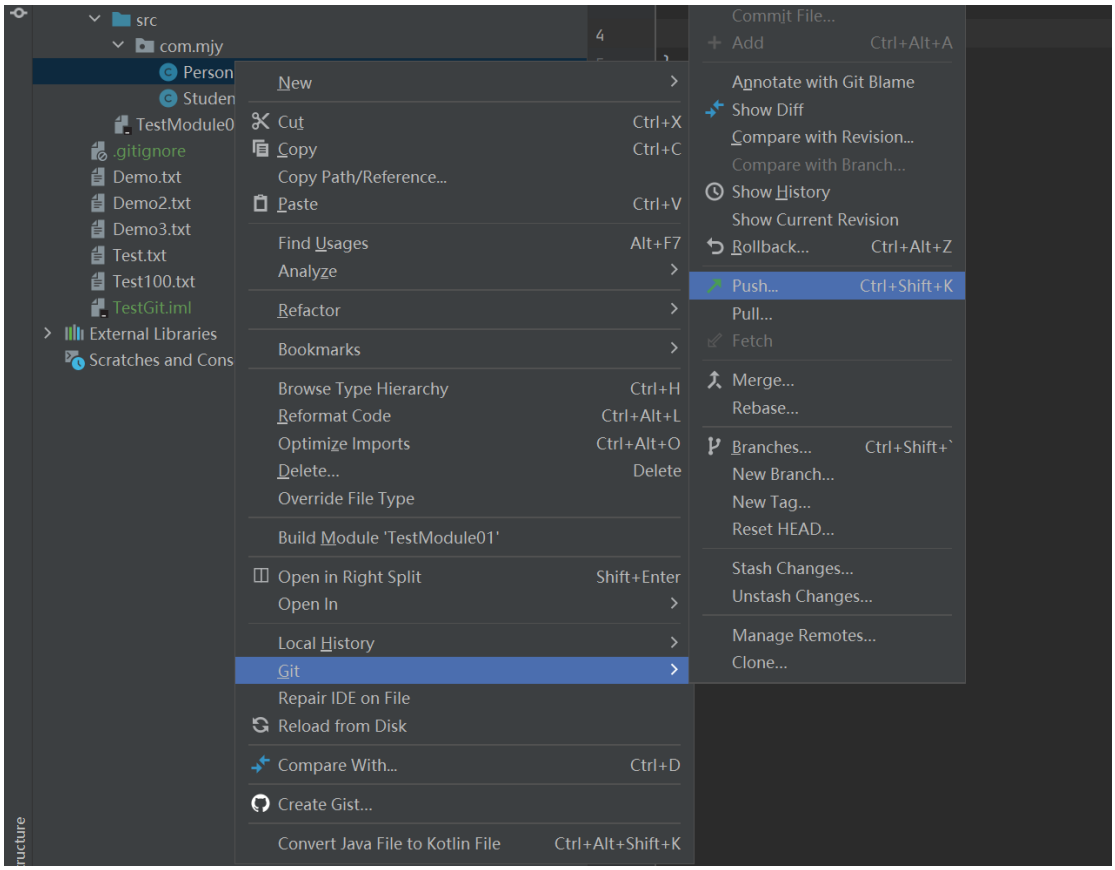
```
10501@littlesix MINGW64 /d/Java_Project/TestGit (master)
$ git pull git@github.com:SunnyProdefi/Git_House.git master --allow-unrelated-histories
From github.com:SunnyProdefi/Git_House
 * branch            master     -> FETCH_HEAD
```

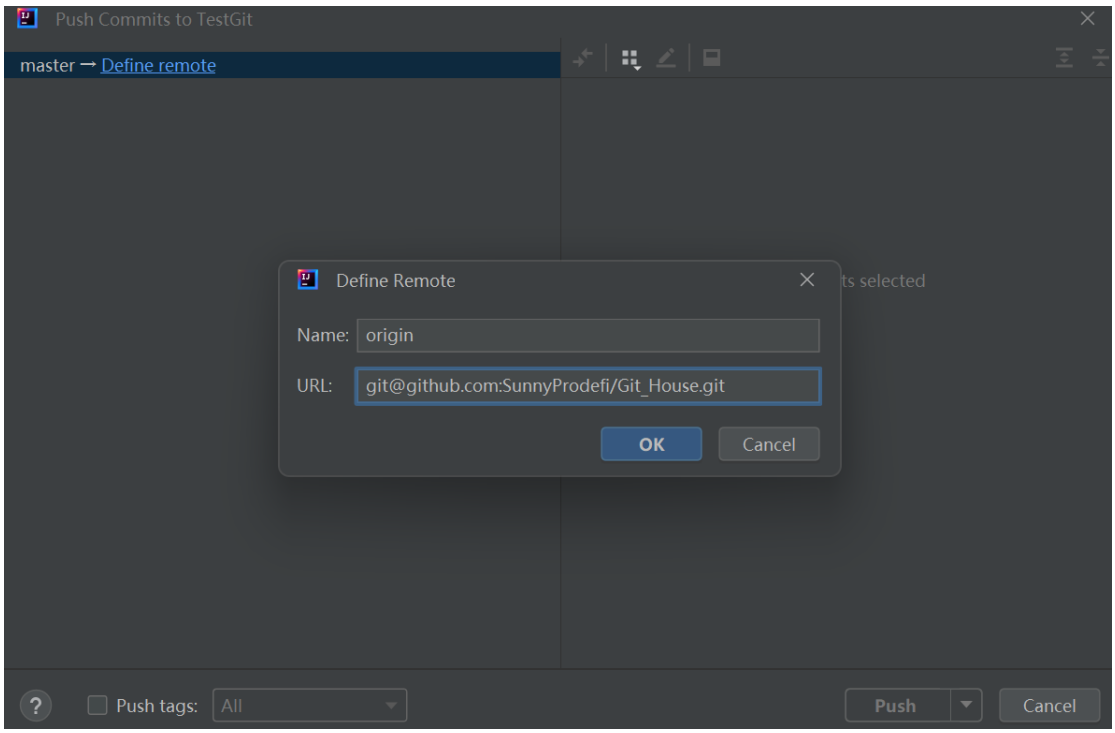
Push 推送

```
10501@littlesix MINGW64 /d/Java_Project/TestGit (master)
$ git push -u git@github.com:SunnyProdefi/Git_House.git master -f
Enumerating objects: 19, done.
Counting objects: 100% (19/19), done.
Delta compression using up to 16 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (18/18), 1.77 KiB | 452.00 KiB/s, done.
Total 18 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:SunnyProdefi/Git_House.git
   337247c..7aaea30  master -> master
branch 'master' set up to track 'git@github.com:SunnyProdefi/Git_House.git/master'.
```

到这里，远程库和本地库就可以进行交互了。

在 IDEA 进行推送

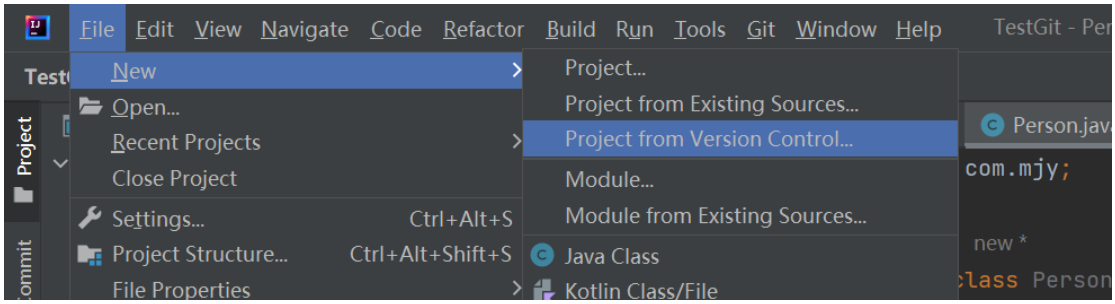


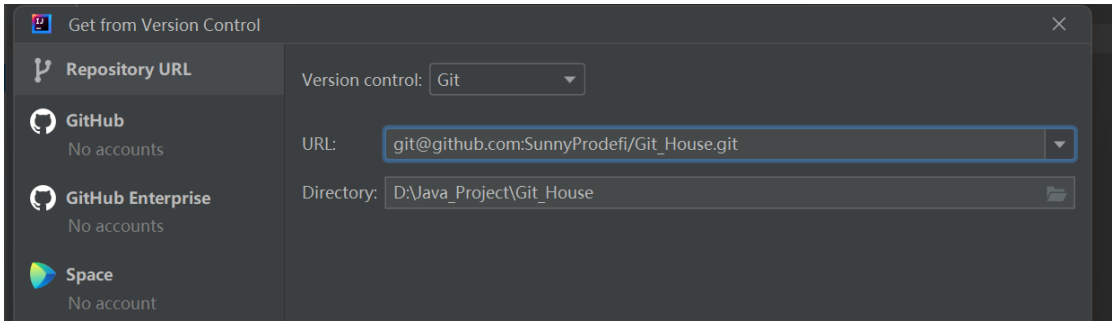


一般在开发中先 pull 操作，再 push 操作，不会直接进行 push 操作

使用 IDEA 克隆远程库到本地

利用 IDEA 进行克隆项目：





克隆到本地后：

这个目录即变成了一个本地仓库，又变成了工作空间。

解决冲突

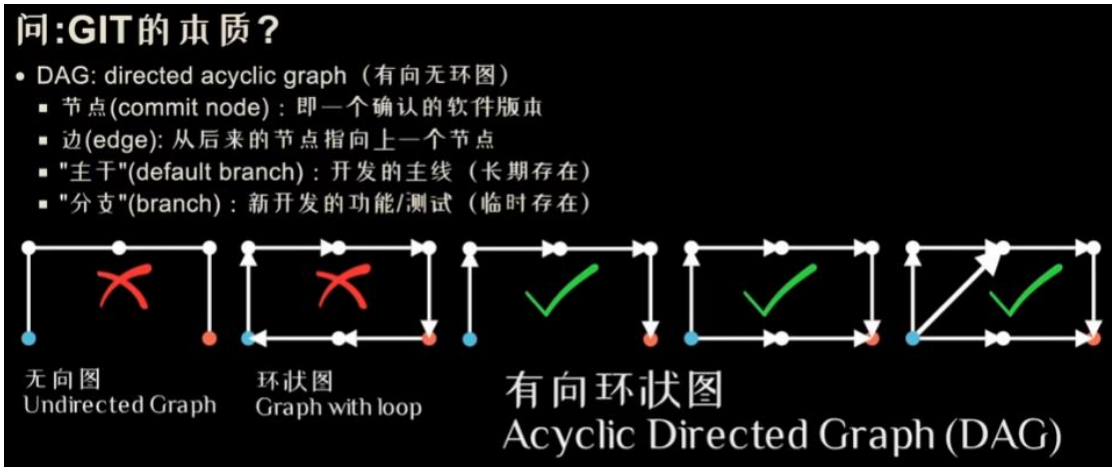
【1】在你 push 以后，有冲突的时候提示合并操作：

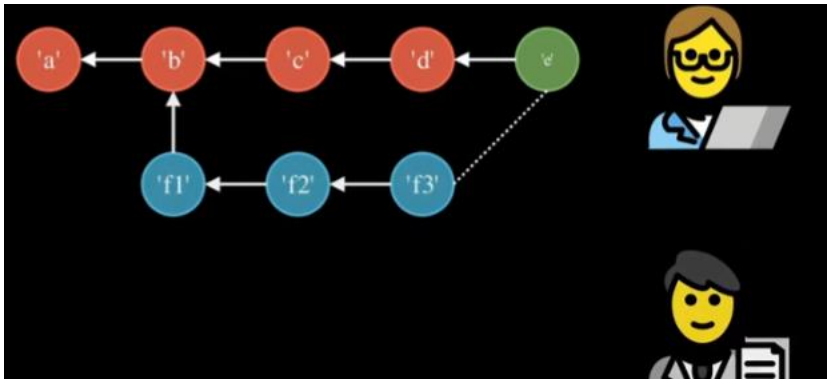
如何避免冲突

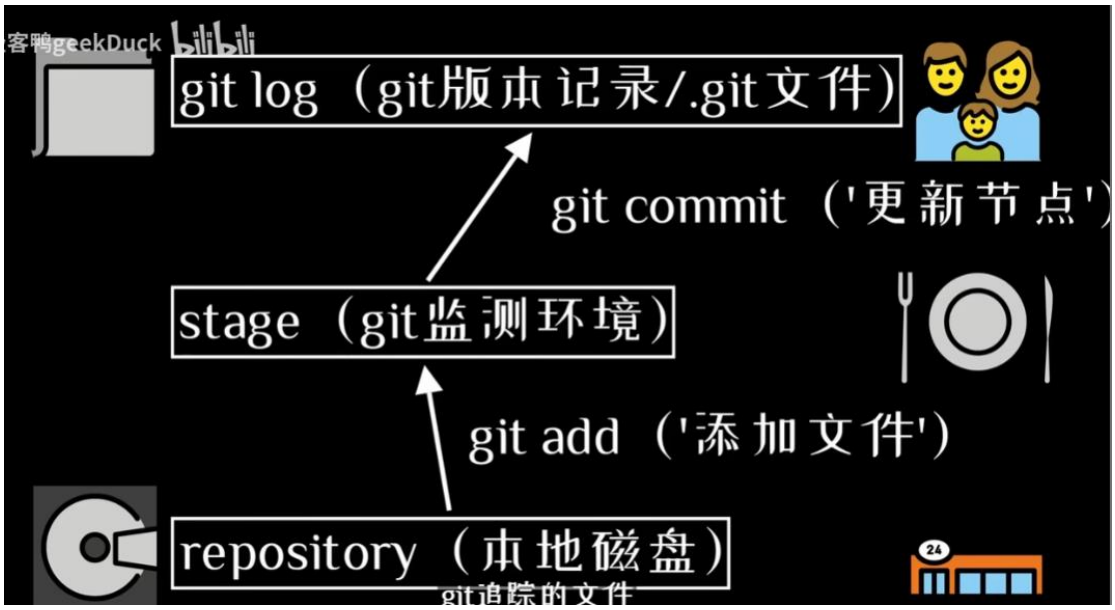
【1】团队开发的时候避免在一个文件中改代码
【2】在修改一个文件前，在 push 之前，先 pull 操作

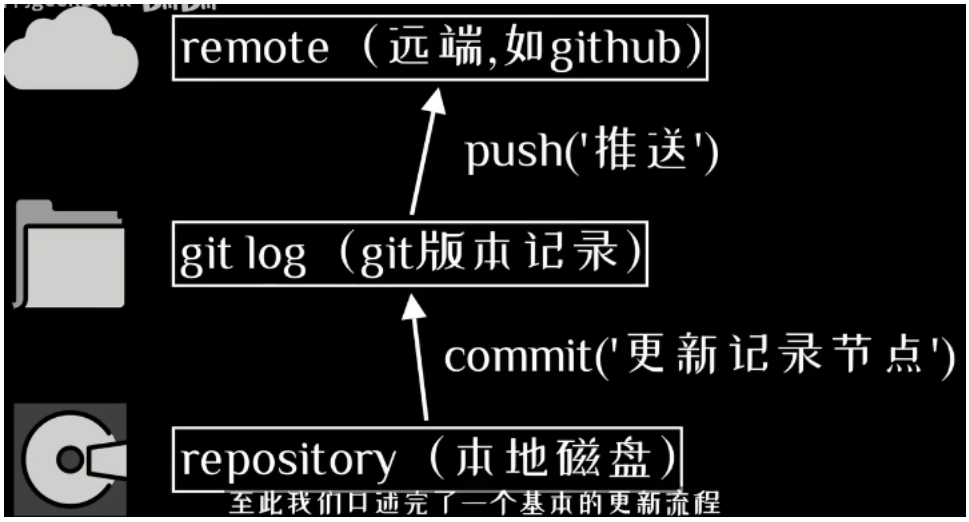
2022GitHub 操作

介绍（坑!）



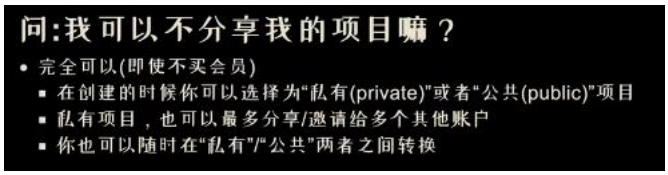



客鸭geekDuck
bilibili
git log（git版本记录/.git文件）
git commit（'更新节点'）
stage（git监测环境）
git add（'添加文件'）
repository（本地磁盘）
git追踪的文件


remote（远端,如github）
push('推送')
git log（git版本记录）
commit('更新记录节点')
repository（本地磁盘）
至此我们口述完了一个基本的更新流程


问:GITHUB这两年的一些“坑”?
• “主干”(default branch)默认名称更改:
▪ 建议使用main而不是master
• 验证方式更改:
▪ 使用ssh密钥验证
▪ 不再接受账户密码的验证方式推送
• 文件大小限制: 超过50MB文件不再被服务器接受
▪ 使用git Large File Storage
▪ 使用云盘+提供链接
▪ 将本地数据集中在一个文件夹内，使用.gitignore设置忽略该文件

(坑啊!!!)


问:我可以不分享我的项目嘛?
• 完全可以(即使不买会员)
▪ 在创建的时候你可以选择为“私有(private)”或者“公共(public)”项目
▪ 私有项目，也可以最多分享/邀请给多个其他账户
▪ 你也可以随时在“私有”/“公共”两者之间转换

第一次上传

Tips:

创建项目不要 readme 文件（可以之后添加）

it init 初始化本地库

更改到 main 分支

```
10501@littlesix MINGW64 /e/Study_Document (master)
$ git branch -m main
```

git add -A

跟踪所有文件的改变

git commit -m “创建了文件”

git statu 查看状态

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   Matlab.docx
        new file:   Matlab.pdf
        new file:   VS.txt
```

git remote add origin git@github.com:SunnyProdefi/Study_Document.git

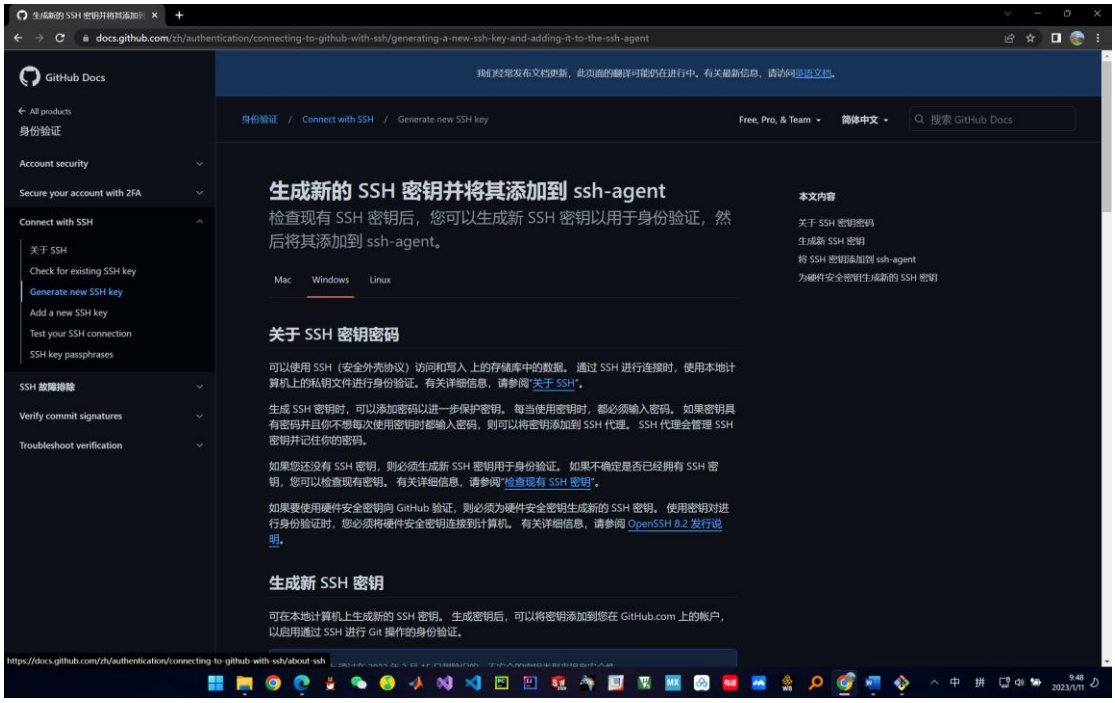
git push origin main

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git commit -m "2023/1/11第一次分享"
[main (root-commit) aa2be1c] 2023/1/11第一次分享
 3 files changed, 26 insertions(+)
 create mode 100644 Matlab.docx
 create mode 100644 Matlab.pdf
 create mode 100644 vs.txt
```

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
nothing to commit, working tree clean
```

SSH 验证信息设置

GitHub 教程



更新项目

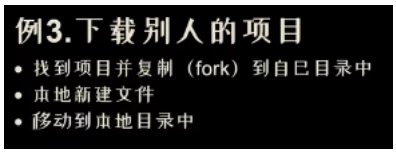
```
git add -A

git status

git commit -m “”

git push origin main
```

下载项目



Fork

下载

示例操作

```
10501@littlesix MINGW64 /e/Study_Document
$ git init
Initialized empty Git repository in E:/Study_Document/.git/

10501@littlesix MINGW64 /e/Study_Document (master)
$ git branch -m main

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Matlab.pdf
        VS.txt

nothing added to commit but untracked files present (use "git add" t
o track)

10501@littlesix MINGW64 /e/Study_Document (main)
$ git add -A

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   Matlab.pdf
        new file:   VS.txt
```

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git commit -m "2023/1/11第一次分享"
[main (root-commit) 97f4763] 2023/1/11第一次分享
 2 files changed, 26 insertions(+)
 create mode 100644 Matlab.pdf
 create mode 100644 VS.txt

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
nothing to commit, working tree clean

10501@littlesix MINGW64 /e/Study_Document (main)
$ git remote add origin git@github.com:SunnyProdefi/Study_Document.g
it

10501@littlesix MINGW64 /e/Study_Document (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 32.59 MiB | 1.65 MiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:SunnyProdefi/Study_Document.git
 * [new branch]      main -> main
```

Lfs 示例操作

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git lfs install
Updated Git hooks.
Git LFS initialized.

10501@littlesix MINGW64 /e/Study_Document (main)
$ git lfs track "*.docx"
Tracking "*.docx"

10501@littlesix MINGW64 /e/Study_Document (main)
$ git add .gitattributes

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   .gitattributes

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Matlab.docx


10501@littlesix MINGW64 /e/Study_Document (main)
$ git commit -m "上传了属性文件"
[main 6eb4e16] 上传了属性文件
 1 file changed, 1 insertion(+)
 create mode 100644 .gitattributes

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Matlab.docx

nothing added to commit but untracked files present (use "git add" t
o track)
```

```
10501@littlesix MINGW64 /e/Study_Document (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 371 bytes | 371.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:SunnyProdefi/Study_Document.git
   97f4763..6eb4e16  main -> main

10501@littlesix MINGW64 /e/Study_Document (main)
$ git add Matlab.docx

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   Matlab.docx


10501@littlesix MINGW64 /e/Study_Document (main)
$ git commit -m "2023/1/11第一次分享(lfs)" Matlab.docx
[main 29a1fc4] 2023/1/11第一次分享(lfs)
 1 file changed, 3 insertions(+)
 create mode 100644 Matlab.docx

10501@littlesix MINGW64 /e/Study_Document (main)
$ git status
On branch main
nothing to commit, working tree clean

10501@littlesix MINGW64 /e/Study_Document (main)
$ git push origin main
Uploading LFS objects:   0% (0/1), 0 B | 0 B/s
Uploading LFS objects: 100% (1/1), 149 MB | 0 B/s
Uploading LFS objects: 100% (1/1), 149 MB | 0 B/s
Uploading LFS objects: 100% (1/1), 149 MB | 0 B/s, done.
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 398 bytes | 398.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:SunnyProdefi/Study_Document.git
   6eb4e16..29a1fc4  main -> main

10501@littlesix MINGW64 /e/Study_Document (main)
$
```