当你从远程仓库克隆时，实际上Git自动把本地的master分支和远程的master分支对应起来了，并且，远程仓库的默认名称是origin。

要查看远程库的信息，用git remote：

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (master)

$ git remote

origin

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (master)

$ git remote -v

origin git@github.com:ZebinGao/bluetooth.git (fetch)

origin git@github.com:ZebinGao/bluetooth.git (push)

上面显示了可以抓取和推送的origin的地址。如果没有推送权限，就看不到push的地址。

推送分支，就是把该分支上的所有本地提交推送到远程库。推送时，要指定本地分支，这样，Git就会把该分支推送到远程库对应的远程分支上

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (master)

$ git push origin master

Everything up-to-date

如果要推送其他分支，比如dev，就改成

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (master)

$ git push origin dev

Total 0 (delta 0), reused 0 (delta 0)

To github.com:ZebinGao/bluetooth.git

2ee2e28..5ff1a19 dev -> dev

现在，模拟一个你的小伙伴，可以在另一台电脑（注意要把SSH Key添加到GitHub）或者同一台电脑的另一个目录下克隆：

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest

$ git clone git@github.com:ZebinGao/bluetooth.git

Cloning into 'bluetooth'...

remote: Enumerating objects: 83, done.

remote: Counting objects: 100% (76/76), done.

remote: Compressing objects: 100% (55/55), done.

remote: Total 83 (delta 29), reused 67 (delta 20), pack-reused 7 (from 1)

Receiving objects: 100% (83/83), 1.73 MiB | 106.00 KiB/s, done.

Resolving deltas: 100% (30/30), done.

当你的小伙伴从远程库clone时，默认情况下，你的小伙伴只能看到本地的master分支。不信可以用git branch命令看看：

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest

$ git branch

fatal: not a git repository (or any of the parent directories): .git

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest

$ ls

bluetooth/

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest

$ cd bluetooth

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest/bluetooth (master)

$ git branch

\* master

现在，你的小伙伴要在dev分支上开发，就必须创建远程origin的dev分支到本地，于是他用这个命令创建本地dev分支：

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest/bluetooth (master)

$ git checkout -b dev origin/dev

Switched to a new branch 'dev'

Branch 'dev' set up to track remote branch 'dev' from 'origin'.

现在，他就可以在dev上继续修改，然后，时不时地把dev分支push到远程：

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest/bluetooth (dev)

$ git add .

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest/bluetooth (dev)

$ git commit -m "add 001 chapter in dev branch"

[dev 359c2bb] add 001 chapter in dev branch

4 files changed, 0 insertions(+), 0 deletions(-)

admin@ZEBIN-GAO MINGW64 /d/BlueTryTest/bluetooth (dev)

$ git push origin dev

Enumerating objects: 7, done.

Counting objects: 100% (7/7), done.

Delta compression using up to 16 threads

Compressing objects: 100% (5/5), done.

Writing objects: 100% (5/5), 182.78 KiB | 763.00 KiB/s, done.

Total 5 (delta 2), reused 0 (delta 0)

remote: Resolving deltas: 100% (2/2), completed with 2 local objects.

To github.com:ZebinGao/bluetooth.git

5ff1a19..359c2bb dev -> dev

现在，他就可以在dev上继续修改，然后，时不时地把dev分支push到远程：

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git add .

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git commit -m "remove test.txt"

[dev 93ae214] remove test.txt

1 file changed, 0 insertions(+), 0 deletions(-)

delete mode 100644 test.txt

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git push origin dev

To github.com:ZebinGao/bluetooth.git

! [rejected] dev -> dev (fetch first)

error: failed to push some refs to 'git@github.com:ZebinGao/bluetooth.git'

hint: Updates were rejected because the remote contains work that you do

hint: not have locally. This is usually caused by another repository pushing

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.

推送失败，因为你的小伙伴的最新提交和你试图推送的提交有冲突，解决办法也很简单，Git已经提示我们，先用git pull把最新的提交从origin/dev抓下来，然后，在本地合并，解决冲突，再推送：

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git pull

remote: Enumerating objects: 7, done.

remote: Counting objects: 100% (7/7), done.

remote: Compressing objects: 100% (3/3), done.

remote: Total 5 (delta 2), reused 5 (delta 2), pack-reused 0 (from 0)

Unpacking objects: 100% (5/5), 182.76 KiB | 331.00 KiB/s, done.

From github.com:ZebinGao/bluetooth

5ff1a19..359c2bb dev -> origin/dev

There is no tracking information for the current branch.

Please specify which branch you want to merge with.

See git-pull(1) for details.

git pull <remote> <branch>

If you wish to set tracking information for this branch you can do so with:

git branch --set-upstream-to=origin/<branch> dev

git pull也失败了，原因是没有指定本地dev分支与远程origin/dev分支的链接，根据提示，设置dev和origin/dev的链接：

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git branch --set-upstream-to=origin/dev dev

Branch 'dev' set up to track remote branch 'dev' from 'origin'.

再pull

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git pull

Removing 重新开始未完成的工作/~WRL0003.tmp

Removing 重新开始未完成的工作/~$5-分支管理.docx

Merge branch 'dev' of github.com:ZebinGao/bluetooth into dev

# Please enter a commit message to explain why this merge is necessary,

# especially if it merges an updated upstream into a topic branch.

#

# Lines starting with '#' will be ignored, and an empty message aborts

# the commit.

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git commit -m "conflict fixed"

On branch dev

Your branch is ahead of 'origin/dev' by 2 commits.

(use "git push" to publish your local commits)

nothing to commit, working tree clean

admin@zebin MINGW64 /d/BlueTestTry/bluetooth (dev)

$ git push

Enumerating objects: 6, done.

Counting objects: 100% (6/6), done.

Delta compression using up to 8 threads

Compressing objects: 100% (4/4), done.

Writing objects: 100% (4/4), 482 bytes | 482.00 KiB/s, done.

Total 4 (delta 2), reused 0 (delta 0)

remote: Resolving deltas: 100% (2/2), completed with 1 local object.

To github.com:ZebinGao/bluetooth.git

359c2bb..eafec06 dev -> dev

因此，多人协作的工作模式通常是这样：

1. 首先，可以尝试用git push origin <branch-name>推送自己的修改；
2. 如果推送失败，则因为远程分支比你的本地更新，需要先用git pull试图合并；
3. 如果合并有冲突，则解决冲突，并在本地提交；
4. 没有冲突或者解决掉冲突后，再用git push origin <branch-name>推送就能成功！

如果git pull提示no tracking information，则说明本地分支和远程分支的链接关系没有创建，用命令git branch --set-upstream-to <branch-name> origin/<branch-name>。