

解决冲突

人生不如意之事十之八九，合并分支往往也不是一帆风顺的。

准备新的`feature1`分支，继续我们的新分支开发：

```
$ git checkout -b feature1
Switched to a new branch 'feature1'
```

修改`readme.txt`最后一行，改为：

```
Creating a new branch is quick AND simple.
```

在`feature1`分支上提交：

```
$ git add readme.txt
$ git commit -m "AND simple"
[feature1 75a857c] AND simple
1 file changed, 1 insertion(+), 1 deletion(-)
```

切换到`master`分支：

```
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 1 commit.
```

Git还会自动提示我们当前`master`分支比远程的`master`分支要超前1个提交。

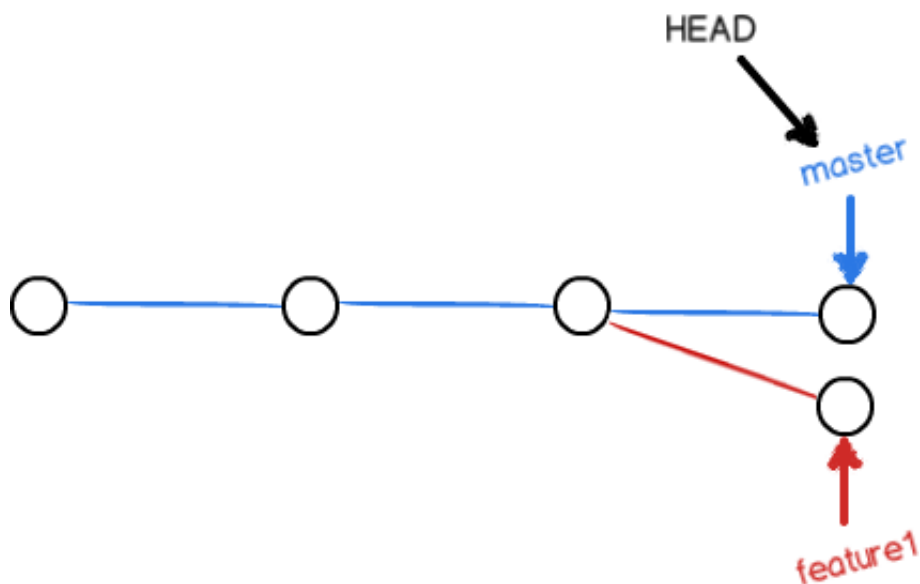
在`master`分支上把`readme.txt`文件的最后一行改为：

```
Creating a new branch is quick & simple.
```

提交：

```
$ git add readme.txt
$ git commit -m "& simple"
[master 400b400] & simple
1 file changed, 1 insertion(+), 1 deletion(-)
```

现在，`master`分支和`feature1`分支各自都分别有新的提交，变成了这样：



这种情况下，Git无法执行“快速合并”，只能试图把各自的修改合并起来，但这种合并就可能会有冲突，我们试试看：

```
$ git merge feature1
Auto-merging readme.txt
CONFLICT (content): Merge conflict in readme.txt
Automatic merge failed; fix conflicts and then commit the result.
```

果然冲突了！Git告诉我们，readme.txt文件存在冲突，必须手动解决冲突后再提交。`git status`也可以告诉我们冲突的文件：

```
$ git status
# On branch master
# Your branch is ahead of 'origin/master' by 2 commits.
#
# Unmerged paths:
#   (use "git add/rm <file>..." as appropriate to mark resolution)
#
#       both modified:      readme.txt
#
no changes added to commit (use "git add" and/or "git commit -a")
```

我们可以直接查看readme.txt的内容：

```
Git is a distributed version control system.
Git is free software distributed under the GPL.
Git has a mutable index called stage.
Git tracks changes of files.
<<<<<< HEAD
Creating a new branch is quick & simple.
=====
```

```
Creating a new branch is quick AND simple.
```

```
>>>>>> feature1
```

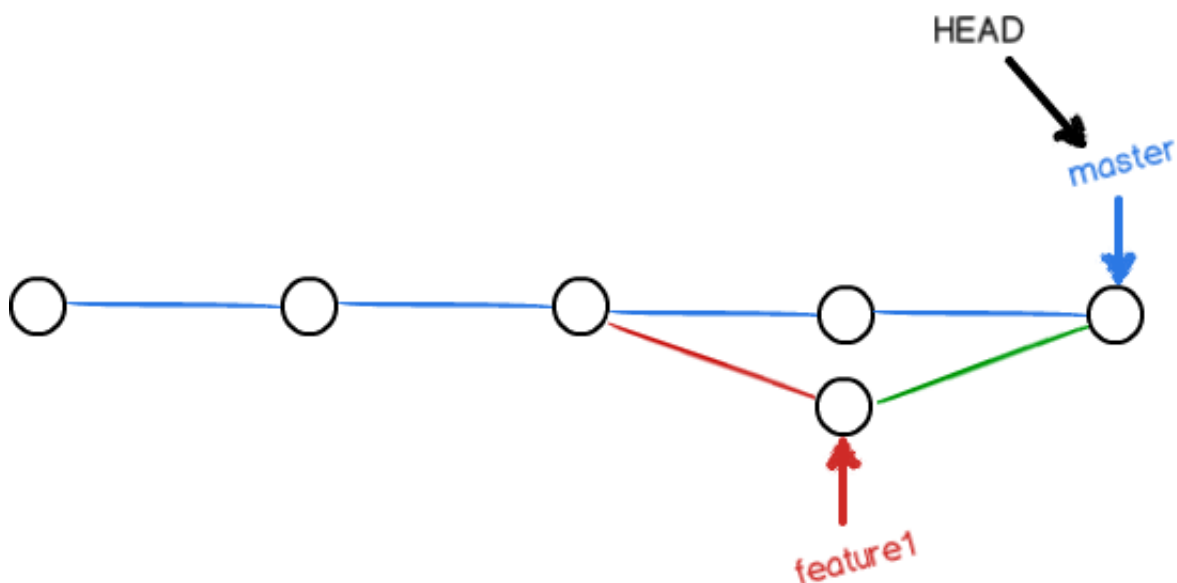
Git用<<<<<<, =====, >>>>>>标记出不同分支的内容，我们修改如下后保存：

```
Creating a new branch is quick and simple.
```

再提交：

```
$ git add readme.txt
$ git commit -m "conflict fixed"
[master 59bc1cb] conflict fixed
```

现在，`master`分支和`feature1`分支变成了下图所示：



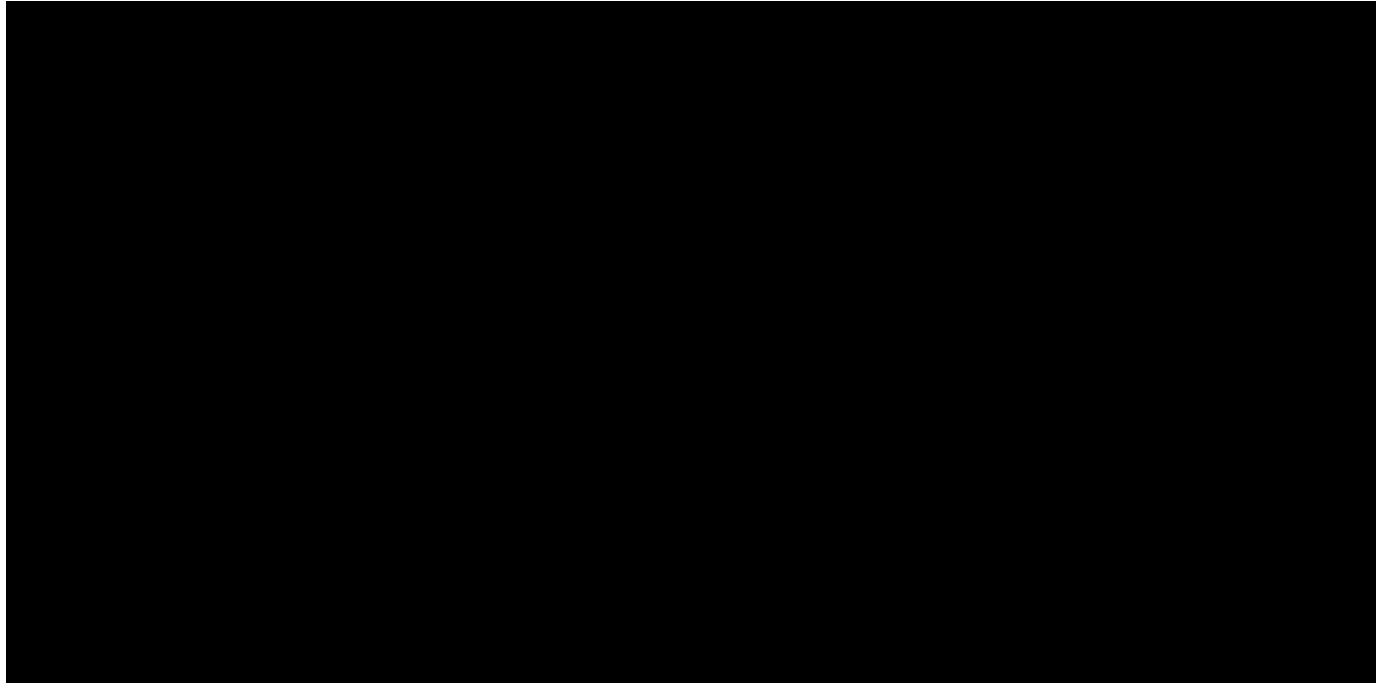
用带参数的`git log`也可以看到分支的合并情况：

```
$ git log --graph --pretty=oneline --abbrev-commit
* 59bc1cb conflict fixed
|\
| * 75a857c AND simple
* | 400b400 & simple
|/
* fec145a branch test
...
```

最后，删除`feature1`分支：

```
$ git branch -d feature1
Deleted branch feature1 (was 75a857c).
```

工作完成。



小结

当Git无法自动合并分支时，就必须首先解决冲突。解决冲突后，再提交，合并完成。

用`git log --graph`命令可以看到分支合并图。