

Setting p4merge as diff/merge tool for git

Agustín Valencia

Marcos Mourao

The merge issue

About merge conflicts

Merge conflicts happen when you merge branches that have competing commits, and Git needs your help to decide which changes to incorporate in the final merge.

Source : <https://help.github.com/en/articles/about-merge-conflicts>

Git way to solve merge conflicts

- Open the conflicting file in a text editor.

- Conflict markers:

```
Here are lines that are either unchanged from the common
ancestor, or cleanly resolved because only one side changed.
<<<<<< yours:sample.txt
Conflict resolution is hard;
let's go shopping.
=====
Git makes conflict resolution easy.
>>>>>> theirs:sample.txt
And here is another line that is cleanly resolved or unmodified.
```

- Manually delete the conflict markers and choose which version (or both) to maintain in your file.

Source: <https://git-scm.com/docs/git-merge>

```
let's create a conflict
Hey this is Agustin's second line
Agustin : Edit this line please <---
Thank you
```

```
let's create a conflict
Hey this is Agustin's second line
Agustin : Better no, I changed my mind
Thank you
```

```
let's create a conflict
Hey this is Agustin's second line
Marcos: I deleted your line and replaced it with a better one ;) <---
Thank you
|
```

Agustín: commit

Marcos: commit & push

Try to push



CONFLICT !

Trying to push an outdated file

```
[158] agustinvalencia : ~/Documents/732A94 - Advanced R Programming/Repo
[09:34] -> git push
To https://github.com/agustinvalencia/732A94_Group_6_Work.git
! [rejected]        master -> master (fetch first)
error: failed to push some refs to 'https://github.com/agustinvalencia/7
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pus
hint: to the same ref. You may want to first integrate the remote change
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for detail

[159] agustinvalencia : ~/Documents/732A94 - Advanced R Programming/Repo
[09:35] -> git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0
Unpacking objects: 100% (3/3), done.
From https://github.com/agustinvalencia/732A94_Group_6_Work
   8847c54..15216e5  master    -> origin/master
Auto-merging conflict_test
CONFLICT (content): Merge conflict in conflict_test
Automatic merge failed; fix conflicts and then commit the result.
```



Git diff

```
[(09:35) -> git diff
diff --cc conflict_test
index 394c7d3,01e91e3..0000000
--- a/conflict_test
+++ b/conflict_test
@@@ -1,7 -1,7 +1,11 @@@
    let's create a conflict
    Hey this is Agustin's second line

++<<<<<< HEAD
    +Agustin : Better no, I changed my mind
++=====
+ Marcos: I deleted your line and replaced it with a better one ;) <-----
++>>>>>> 15216e5aa1bdc6a699f9400315f200f7e212574e

    Thank you
```

How the file looks now

```
let's create a conflict
Hey this is Agustin's second line

<<<<<< HEAD
Agustin : Better no, I changed my mind
=====
Marcos: I deleted your line and replaced it with a better one ;) <-----
>>>>>> 15216e5aa1bdc6a699f9400315f200f7e212574e

Thank you
█
```

How we did it

```
[162] agustinvalencia : ~/
(09:42) -> git mergetool
```


conflict_test

1 diffs (Ignore line ending differences) | Tab spacing: 4 | File format (Encoding: UTF-8 Line endings: Mac OS X)

Base: conflict_test_BASE_77670
Left: conflict_test_REMOTE_77670 Differences from base: 0
Right: conflict_test_LOCAL_77670 Differences from base: 0
Merge: conflict_test Conflicts: 1

apo_Collab/732A94_Group_6_Work/./conflict_test_REMOTE_77670	1g/Repo_Collab/732A94_Group_6_Work/./conflict_test_BASE_77670	/Repo_Collab/732A94_Group_6_Work/./conflict_test_LOCAL_77670
1 let's create a conflict 2 Hey this is Agustin's second line 3 4 Marcos: I deleted your line and replaced it wit 5 6 Thank you 7 8	1 let's create a conflict 2 Hey this is Agustin's second line 3 4 Agustin : Edit this line please <--- 5 6 Thank you 7 8	1 let's create a conflict 2 Hey this is Agustin's second line 3 4 Agustin : Better no, I changed my mind 5 6 Thank you 7 8

conflict_test

let's create a conflict
Hey this is Agustin's second line

Agustin : Edit this line please <---
Marcos: I deleted your line and replaced it with a better one ;) <-----
Agustin : Better no, I changed my mind

Thank you

How to setup git to use p4merge

```
■ This is Git's per-user configuration file.
[user]
    name = agustINVALencia
# Please adapt and uncomment the following lines:
#     name = Agustín Valencia
#     email = valencia.ag@gmail.com

[merge]
    keepBackup = false
    tool = p4merge
[mergetool "p4merge"]
    cmd = /Applications/p4merge.app/Contents/Resources/launchp4merge
"$PWD/$BASE\" \"$PWD/$REMOTE\" \"$PWD/$LOCAL\" \"$PWD/$MERGED\"
    keepTemporaries = false
    trustExitCode = false
    keepBackup = false
[diff]
    tool = p4merge
[difftool "p4merge"]
    cmd = /Applications/p4merge.app/Contents/Resources/launchp4merge
"$REMOTE\" \"$LOCAL\"
```

.gitconfig file

Source : <https://gist.github.com/SeanSSDing/d56d8b8aa4c79a05939b9ad3a6a63c8f>