# Setting p4merge as diff/merge tool for git

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## 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.

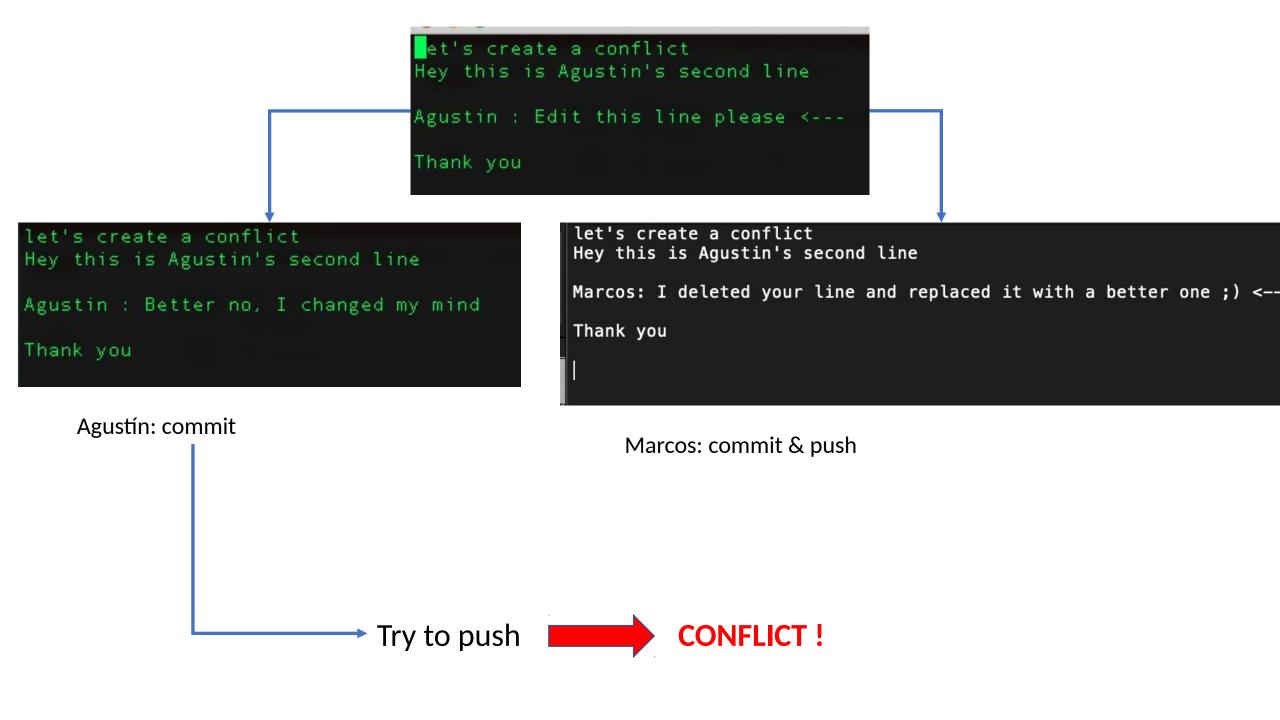
Source: <a href="https://help.github.com/en/articles/about-merge-conflicts">https://help.github.com/en/articles/about-merge-conflicts</a>

### Git way to solve merge conflicts

- Open the conflicting file in a text editor.
- Conflict markers:

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

Source: <a href="https://git-scm.com/docs/git-merge">https://git-scm.com/docs/git-merge</a>



#### Trying to push an outdated file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/]
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

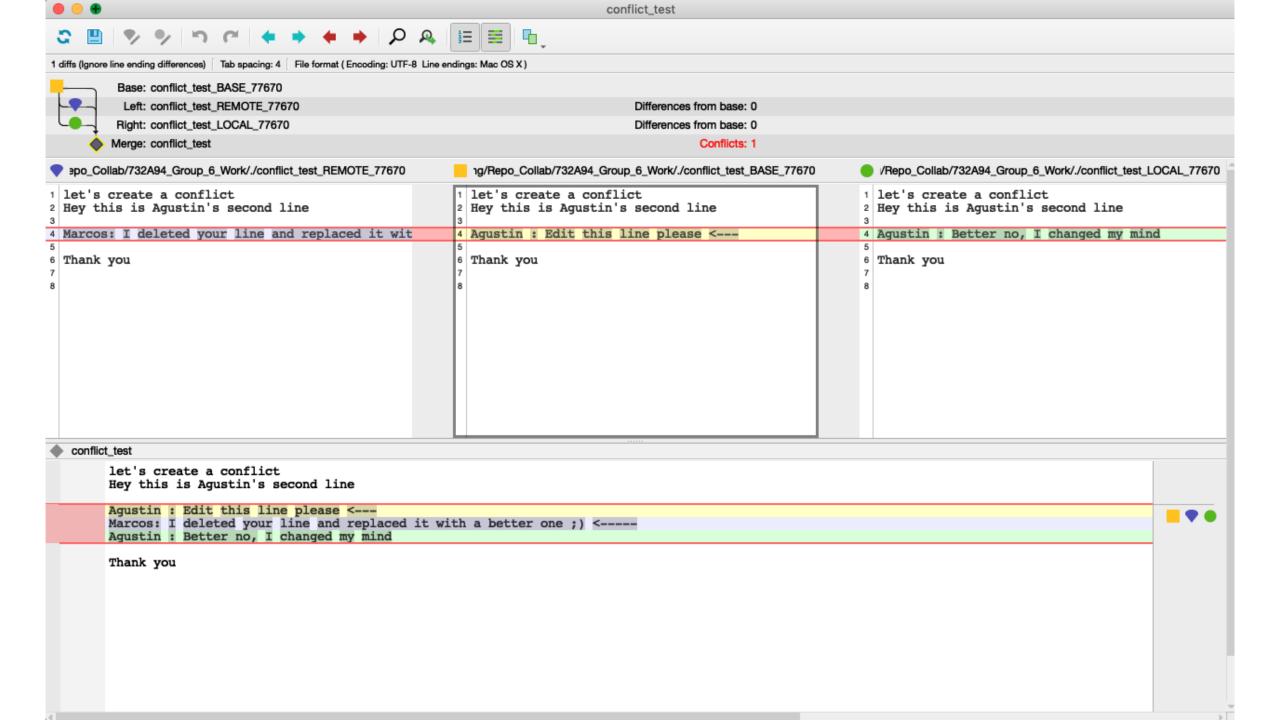
```
let's create a conflict
Hey this is Agustin's second line

<<<<< 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
```



## 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\""
```