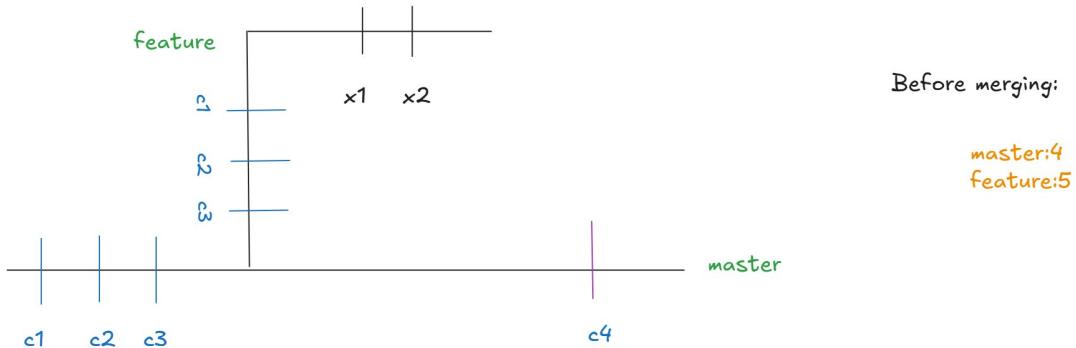


## Three-way Merging / ORT Strategy

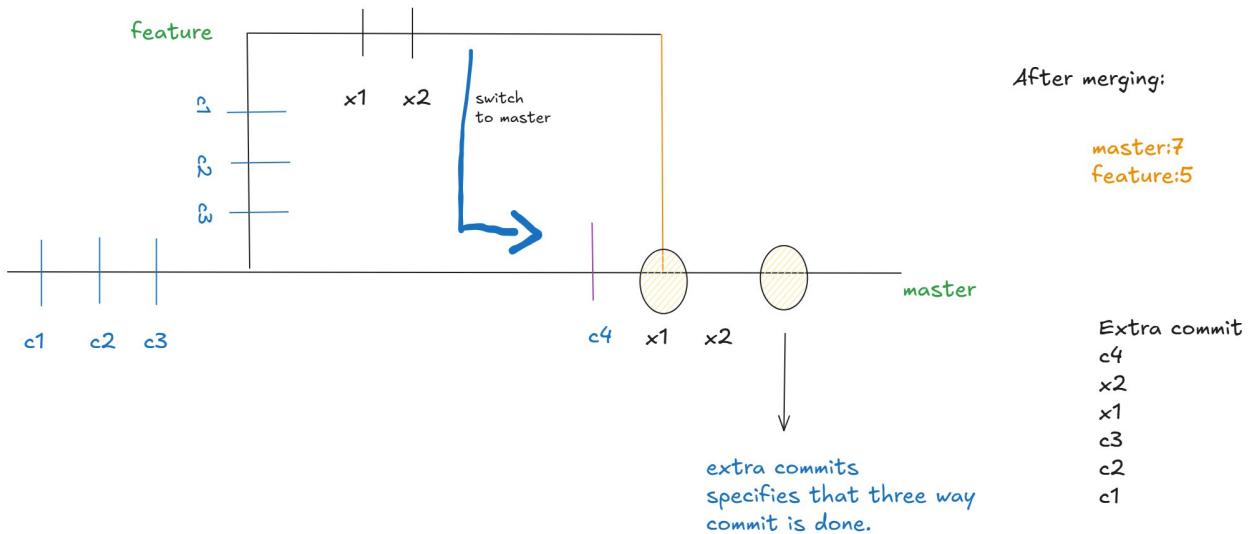
>> If target(parent) branch has new commits since the source(child) branch was created & if we merge, then it is called as 'Three-way Merging' OR 'ORT-Strategy' .



>> Before merging, again new commits are done in the parent branch, which child branch has no idea about.

-> git merge feature

> An editor will open where we have to specify a commit msg for that extra commit.

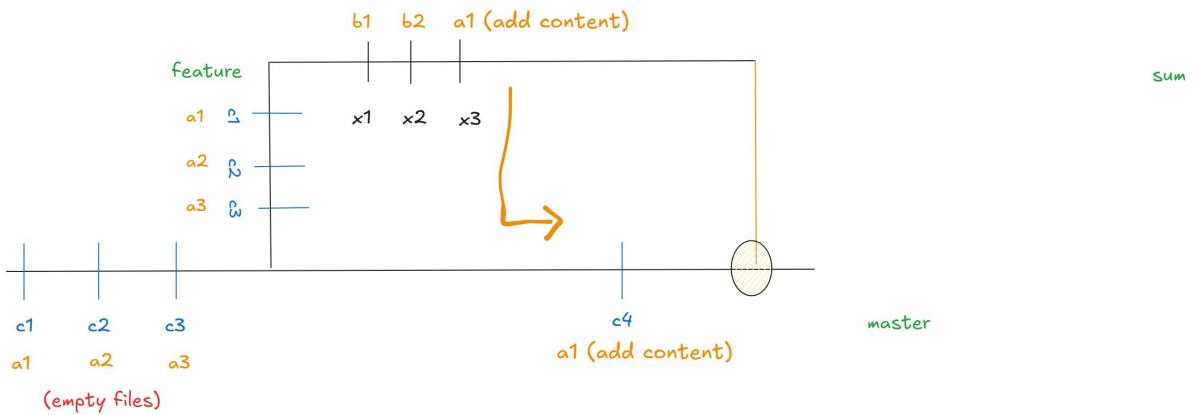


>> After merging we will get an extra commit which specifies that three-way merging has been done.

# MERGE CONFLICT

>> Conflict: not agreeing on something.

>> Merge conflict: It is a phenomenon that will happen when we are modifying and committing the same file in different branches, and if we merge the branches, we will face a Merge Conflict.



- >> We are modifying & committing the same file 'a1' in both branches.
- >> Now, if we try to merge the branches, GIT will get confused, from which branch to take the changes.
- >> This will arise a 'Merge Conflict'.
- >> Until & unless we solve the merge conflict, branches will not be merged.

---> Steps to solve the merge conflict:

1. GIT will let us know which is conflicting file.
2. Open the conflicting file with an editor (nano).
3. Contents present inside the markers are the conflicting parts.

<<<<< HEAD → conflicting part of the current branch

===== → separators

>>>>> → conflicting part of the other branch  
branch

4. To resolve the merge conflict:

i. to keep both the changes

- > Open the file
- > Delete the markers (<<<<, =====, >>>) and HEAD with the branch name.
- > Just save & exit the file.
- > git status (both modified)

ii. to keep one change only:

-> git merge branch-name

-> git checkout --ours file-name (git checkout --ours a1)  
> You want the changes of the current branch only.

-> git checkout --theirs file-name (git checkout --theirs a1)  
> You want the changes of the other branch only.

5. Add the changes to the staging area  
6. Commit it (git commit -m "Merge Conflict Resolved")

>> This will resolved the merge conflict and we will be out of the merging state.  
>> Now, branches has been merged, check the commit history.