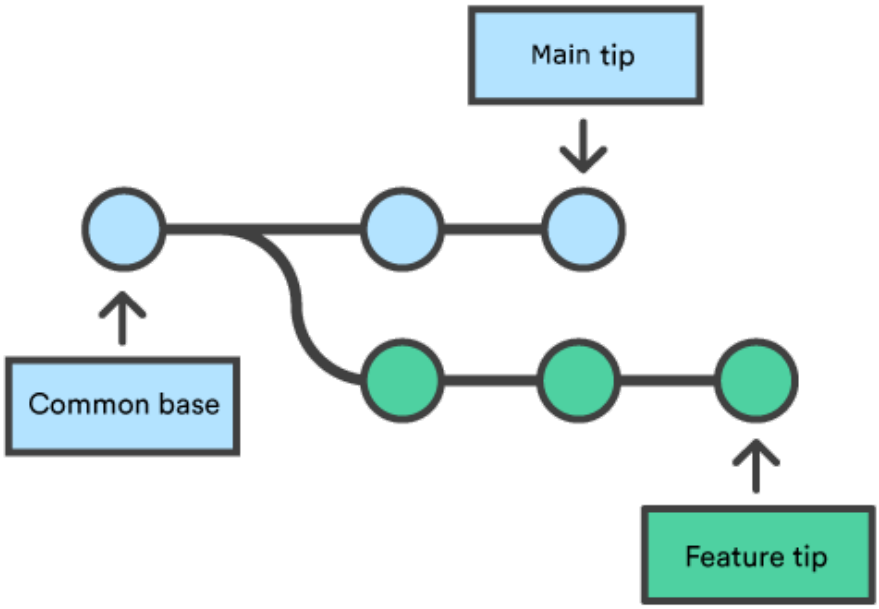
Merging In Github

Merging is Git's way of putting a forked history back together again. The git merge *command lets you take the independent lines of development created by the git* branch *and integrate them into a single branch.*

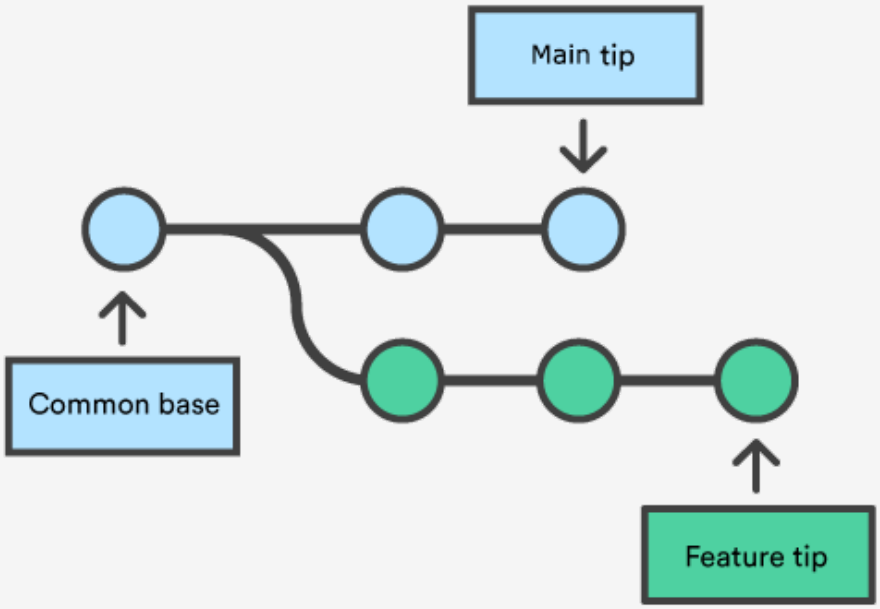
Note that all of the commands presented below merge into the current branch. The current branch will be updated to reflect the merge, but the target branch will be completely unaffected. Again, this means that git merge *is often used in conjunction with* git checkout *for selecting the current branch and* git branch -d *for deleting the obsolete target branch*



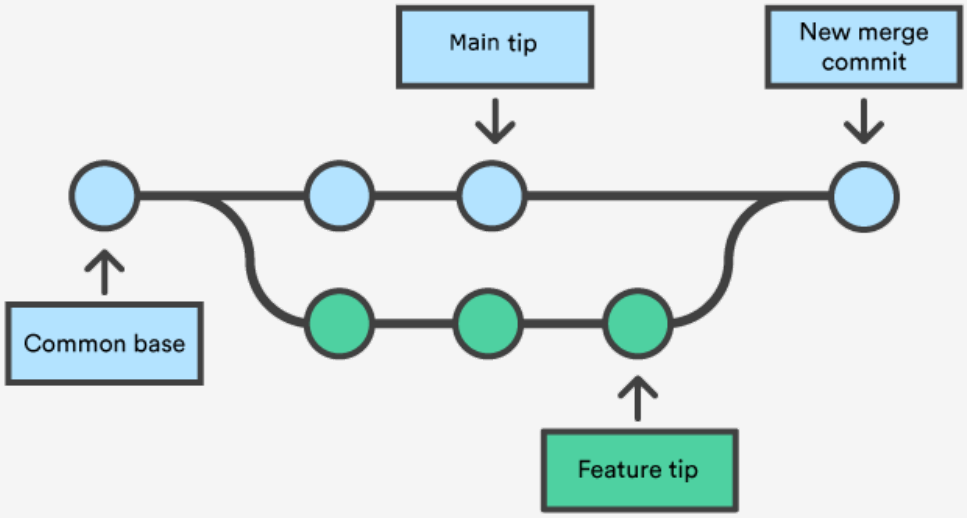
How it works….

Git merge will combine multiple sequences of commits into one unified history. In the most frequent use cases, git merge is used to combine two branches. The following examples in this document will focus on this branch merging pattern. In these scenarios, git merge takes two commit pointers, usually the branch tips, and will find a common base commit between them. Once Git finds a common base commit it will create a new "merge commit" that combines the changes of each queued merge commit sequence.

Say we have a new branch feature that is based on the main branch. We now want to merge this feature branch into main.



Invoking this command will merge the specified branch feature into the current branch, we'll assume main. Git will determine the merge algorithm automatically (discussed below).



Merge commits are unique against other commits in the fact that they have two parent commits. When creating a merge commit Git will attempt to auto magically merge the separate histories for you. If Git encounters a piece of data that is changed in both histories it will be unable to automatically combine them. This scenario is a version control conflict and Git will need user intervention to continue.

Fork in Git

About forks

A fork is a copy of a repository that you manage. Forks let you make changes to a project without affecting the original repository. You can fetch updates from or submit changes to the original repository with pull requests.