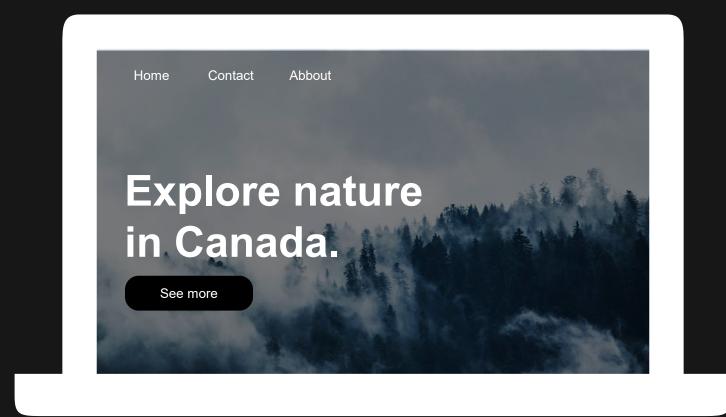
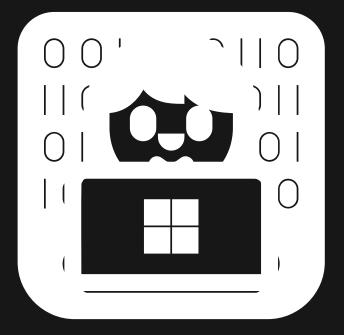




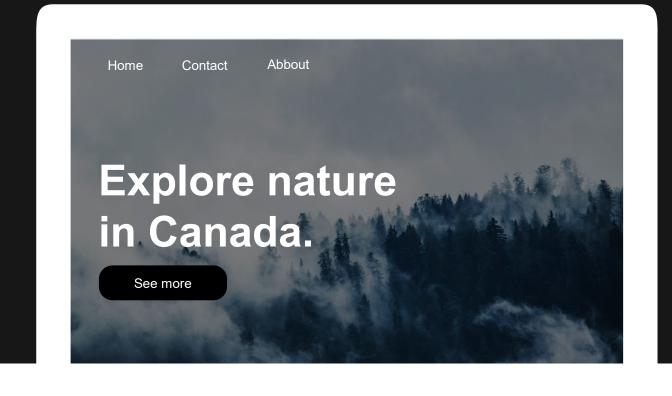
Git



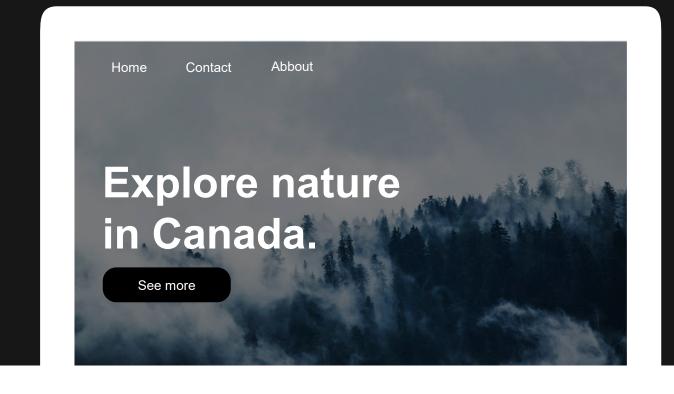


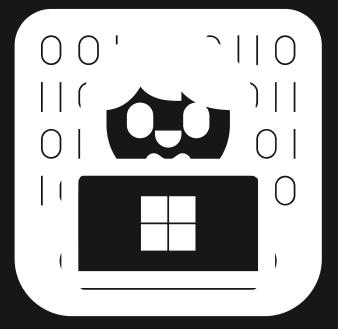




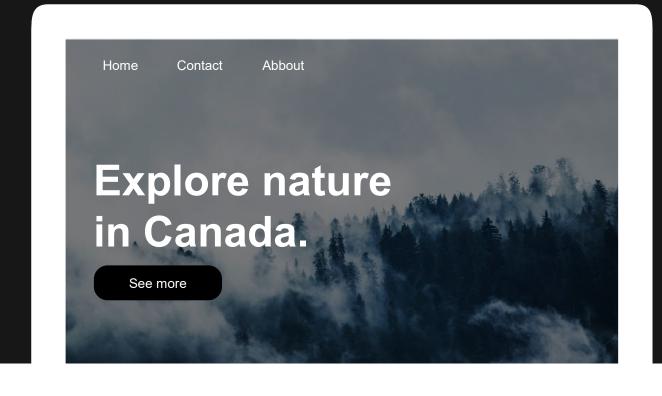


local

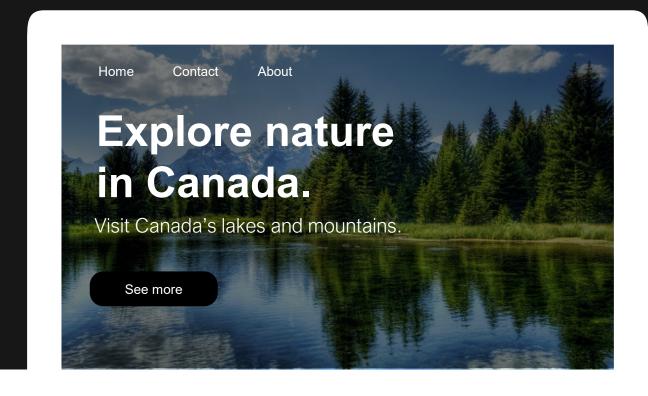


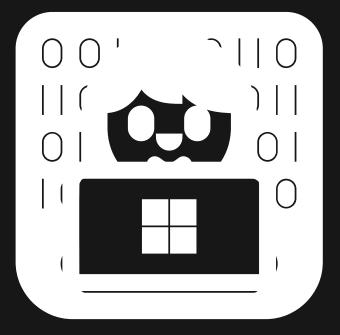




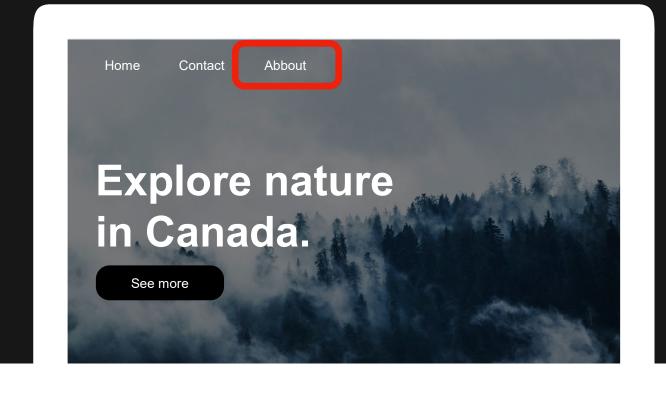


local

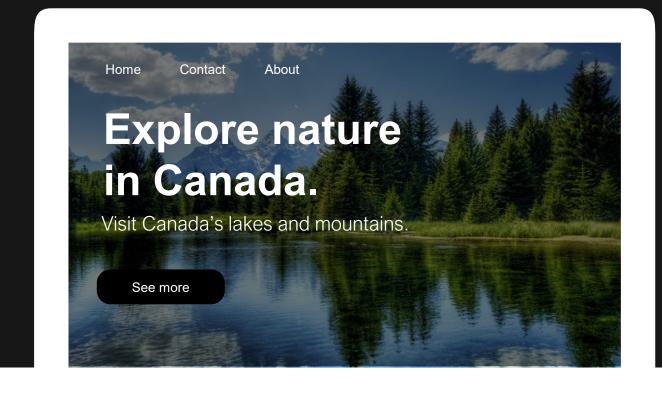


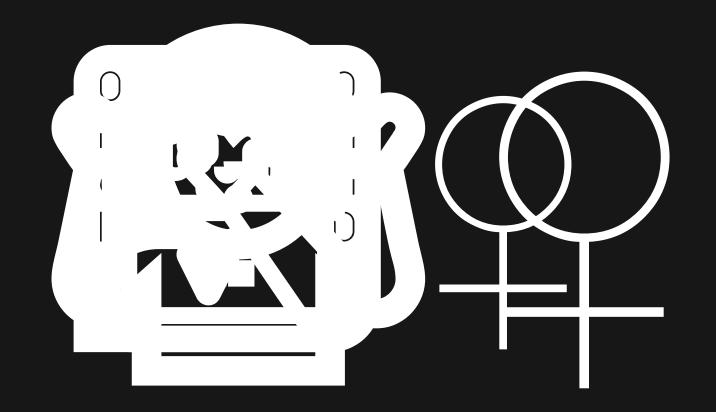






local









Git





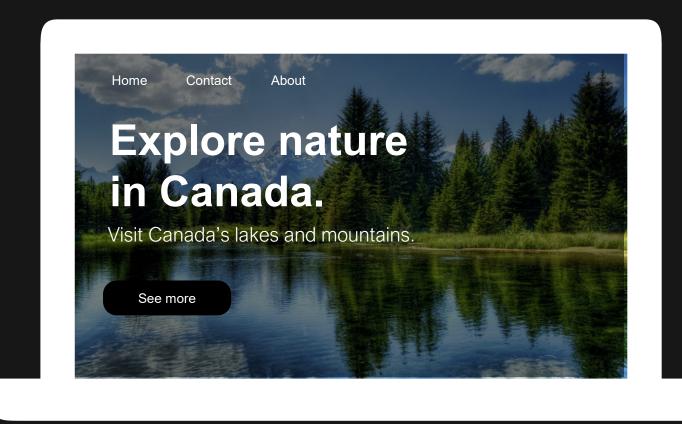


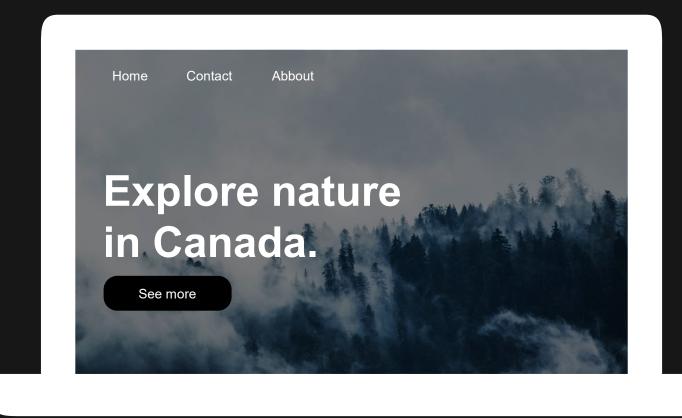
Git

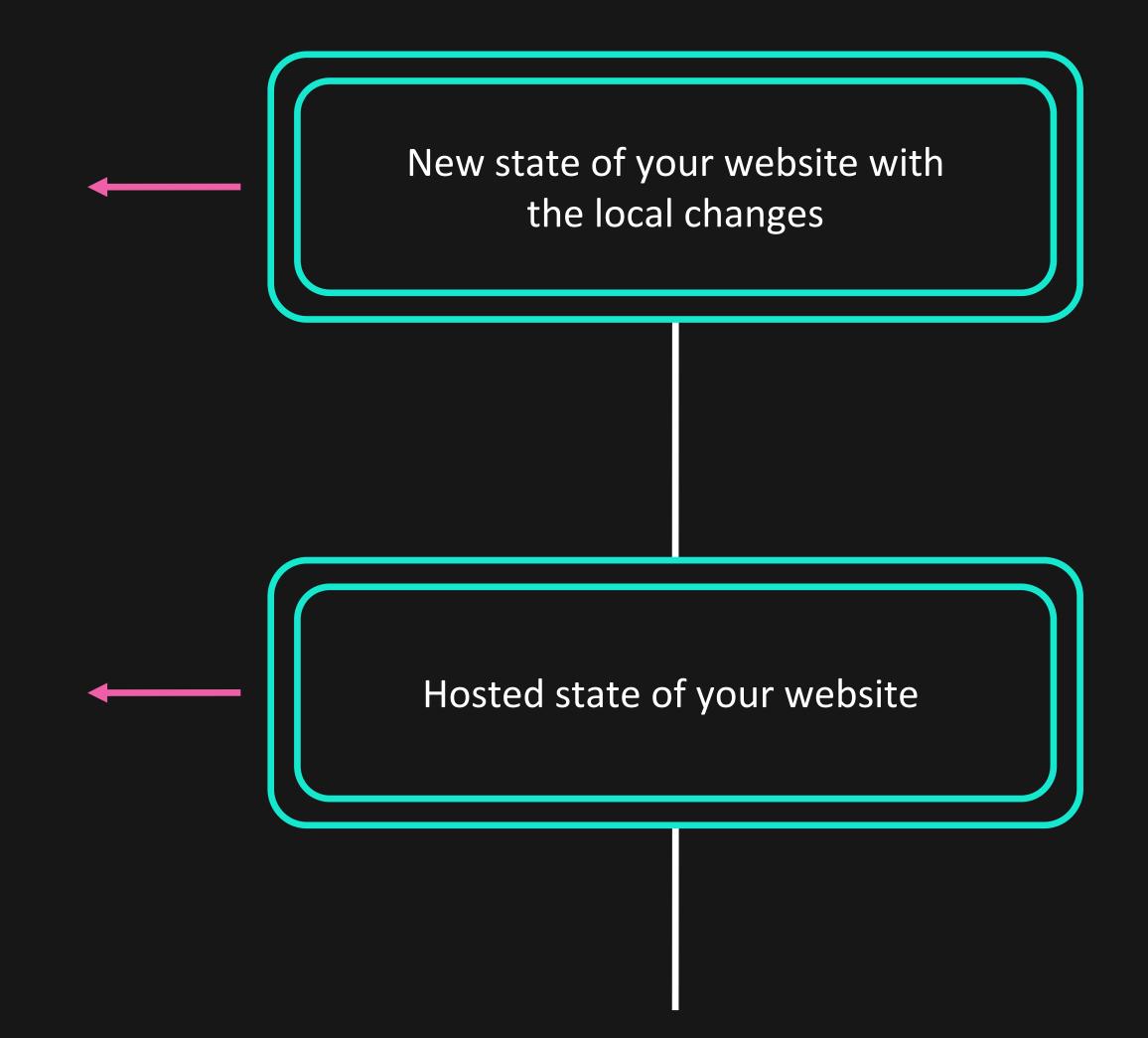
Content tracker

Distributed Version Control System

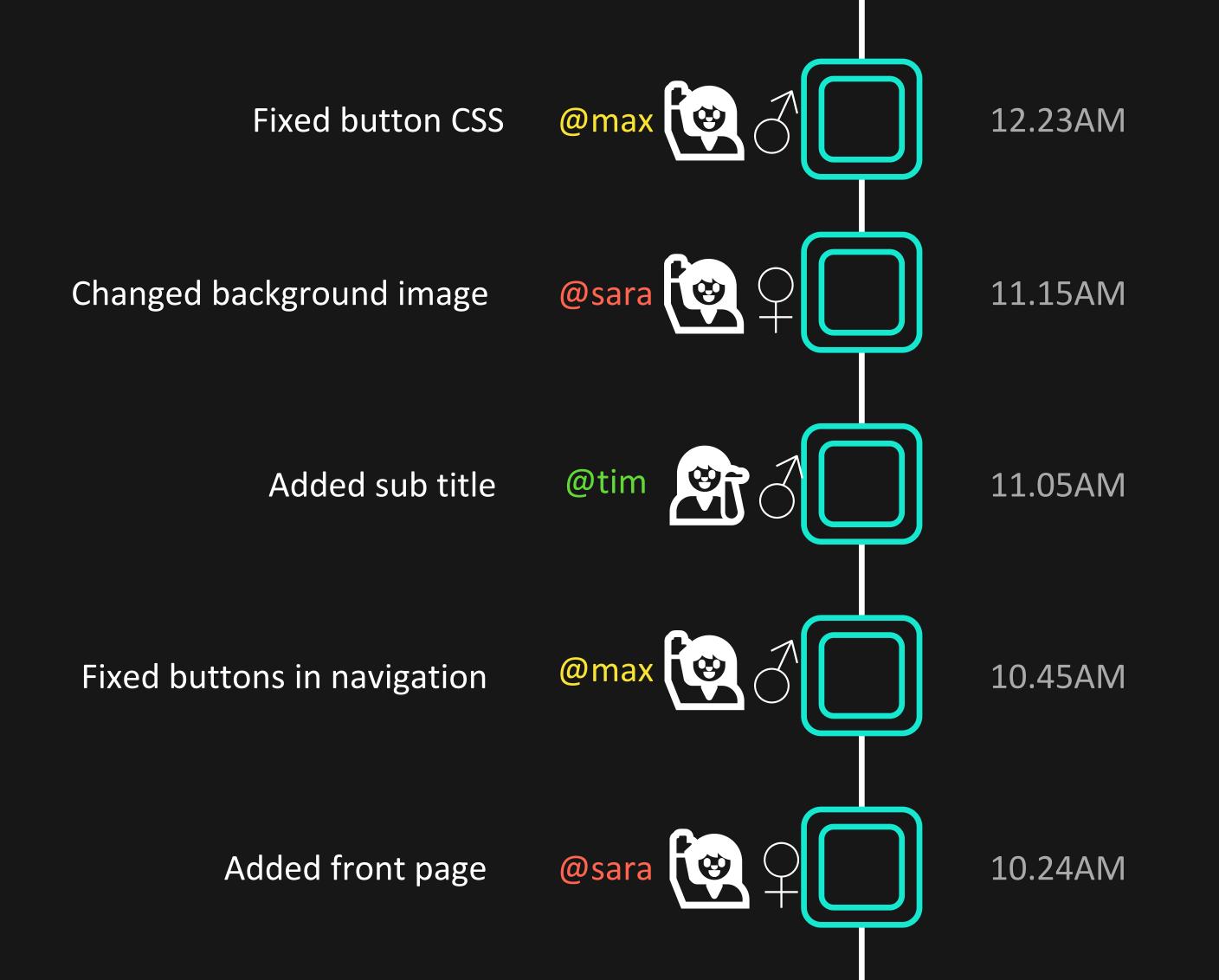










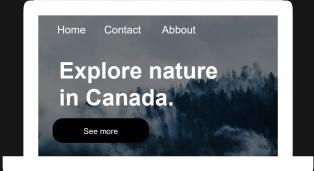




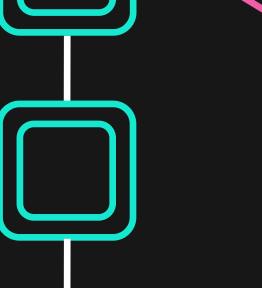


Change background





Added front page

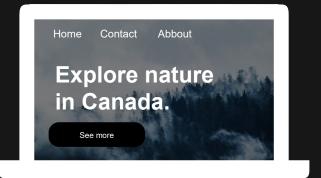






Change background





Added front page

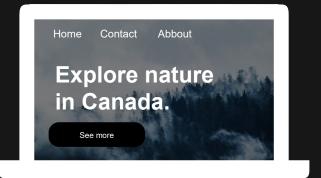






Change background

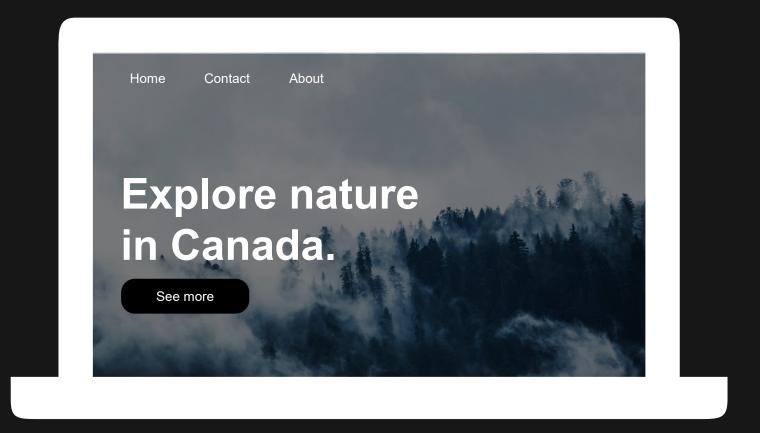


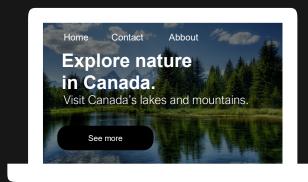


Added front page

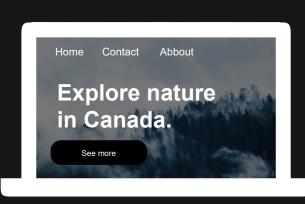




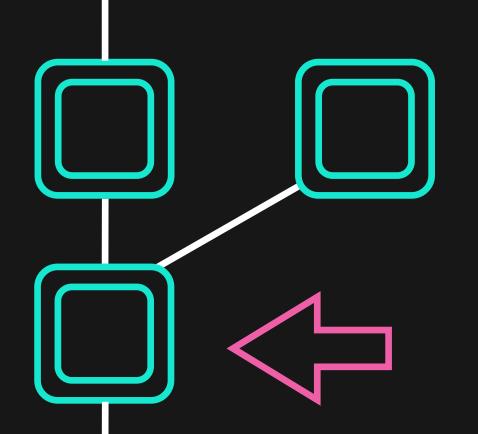




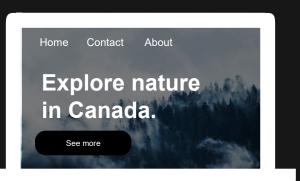
Change background



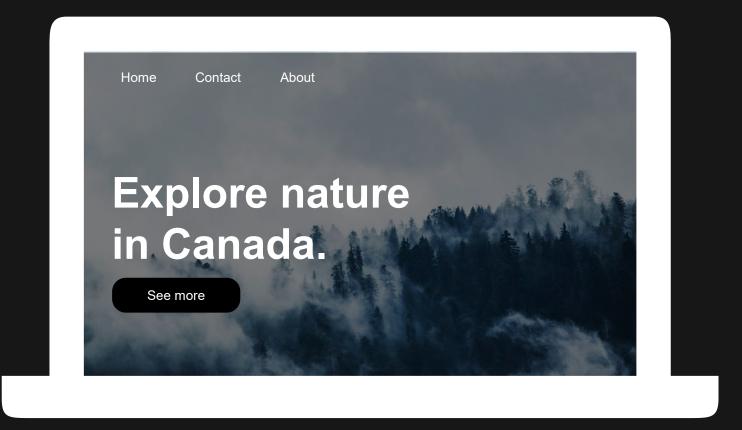
Added front page

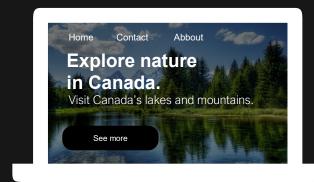


Fixed button typo

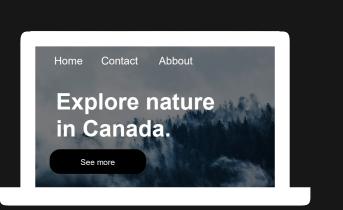




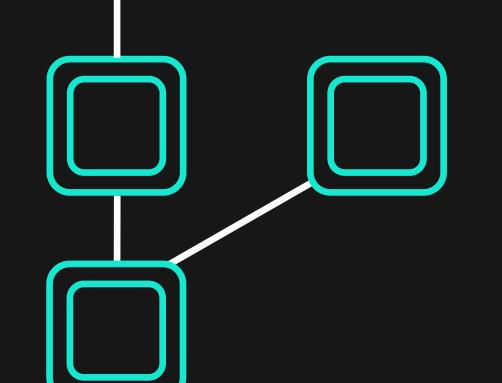




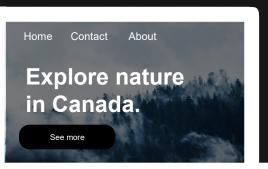
Change background

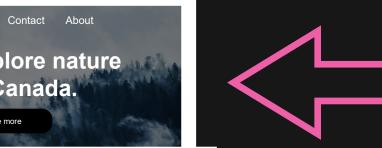


Added front page



Fixed button typo









Local Repository

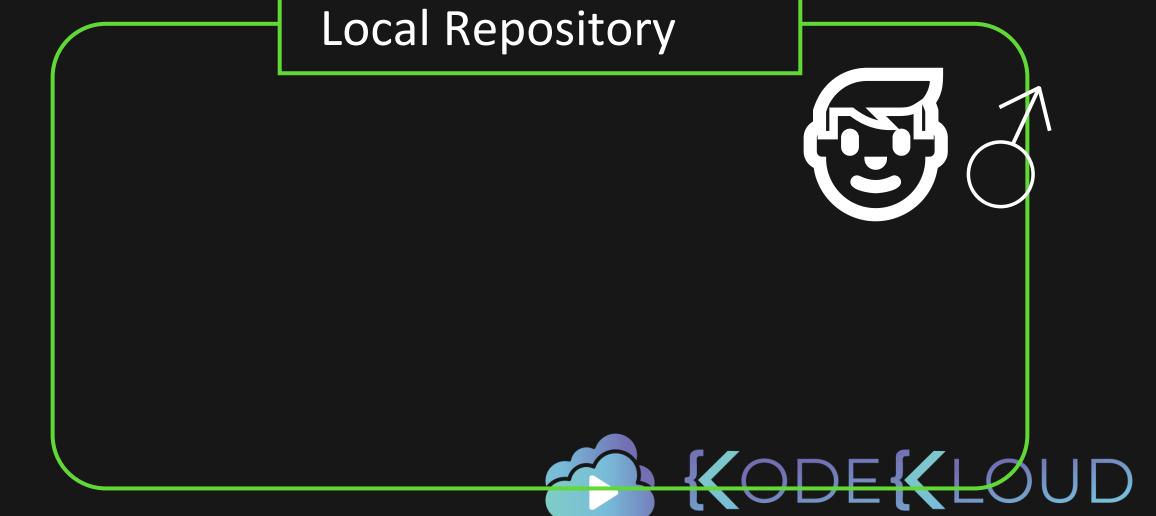




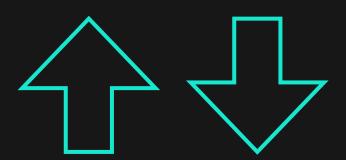




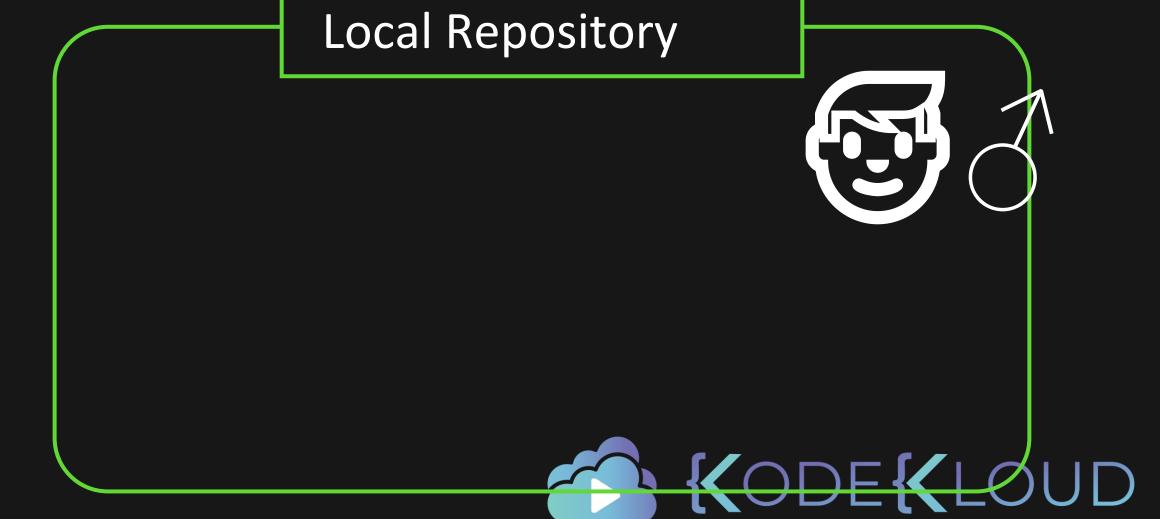




```
<html>
<body>
<h1>My Website!</h1>
</body>
</html>
```



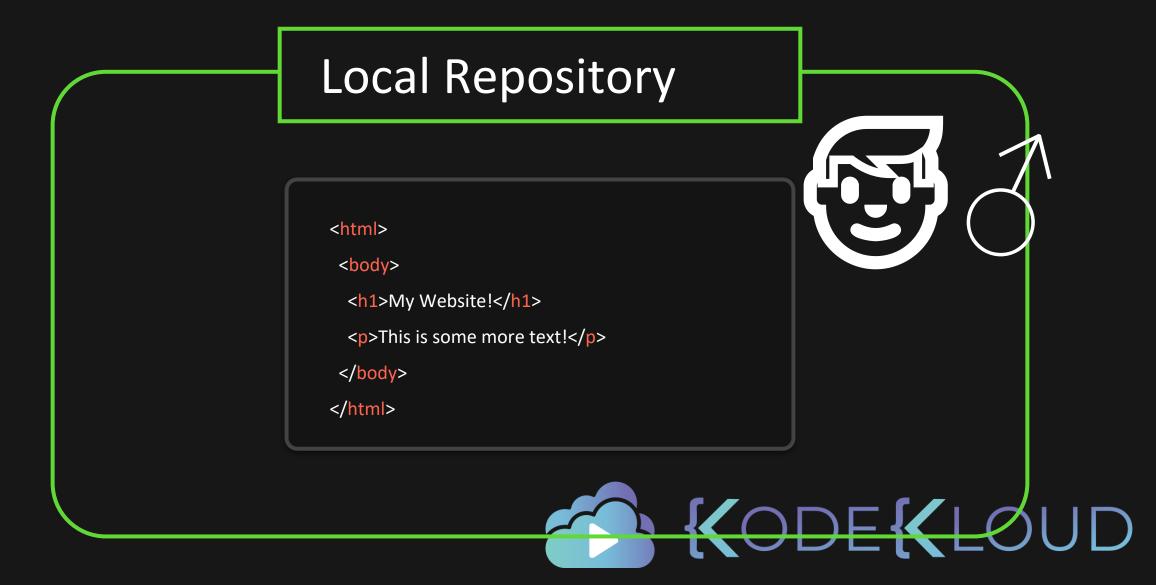




```
<html>
<body>
<h1>My Website!</h1>
</body>
</html>
```



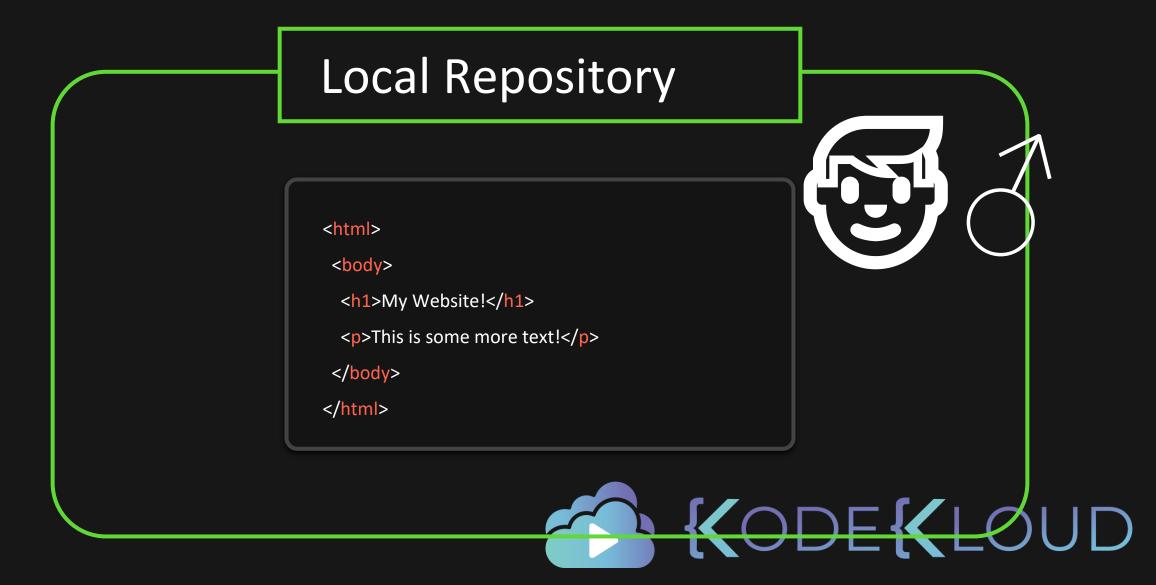




```
<html>
<body>
<h1>My Website!</h1>
</body>
</html>
```







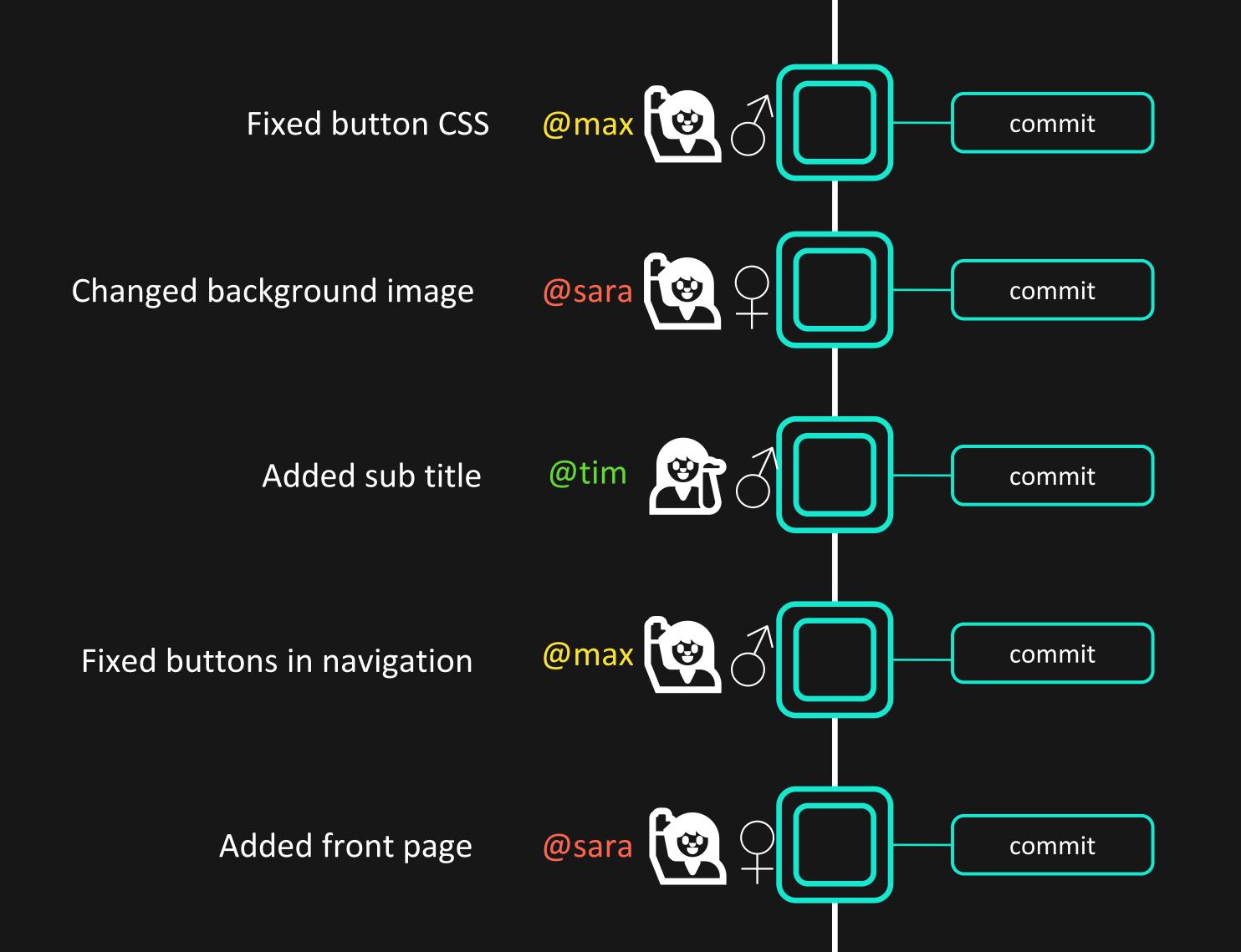
```
<html>
<body>
<h1>My Website!</h1>
This is some more text!
</body>
</html>
```





Local Repository Working Area Committed Files Staging Area







Local Repository Working Area Committed Files Staging Area story2.txt story1.txt

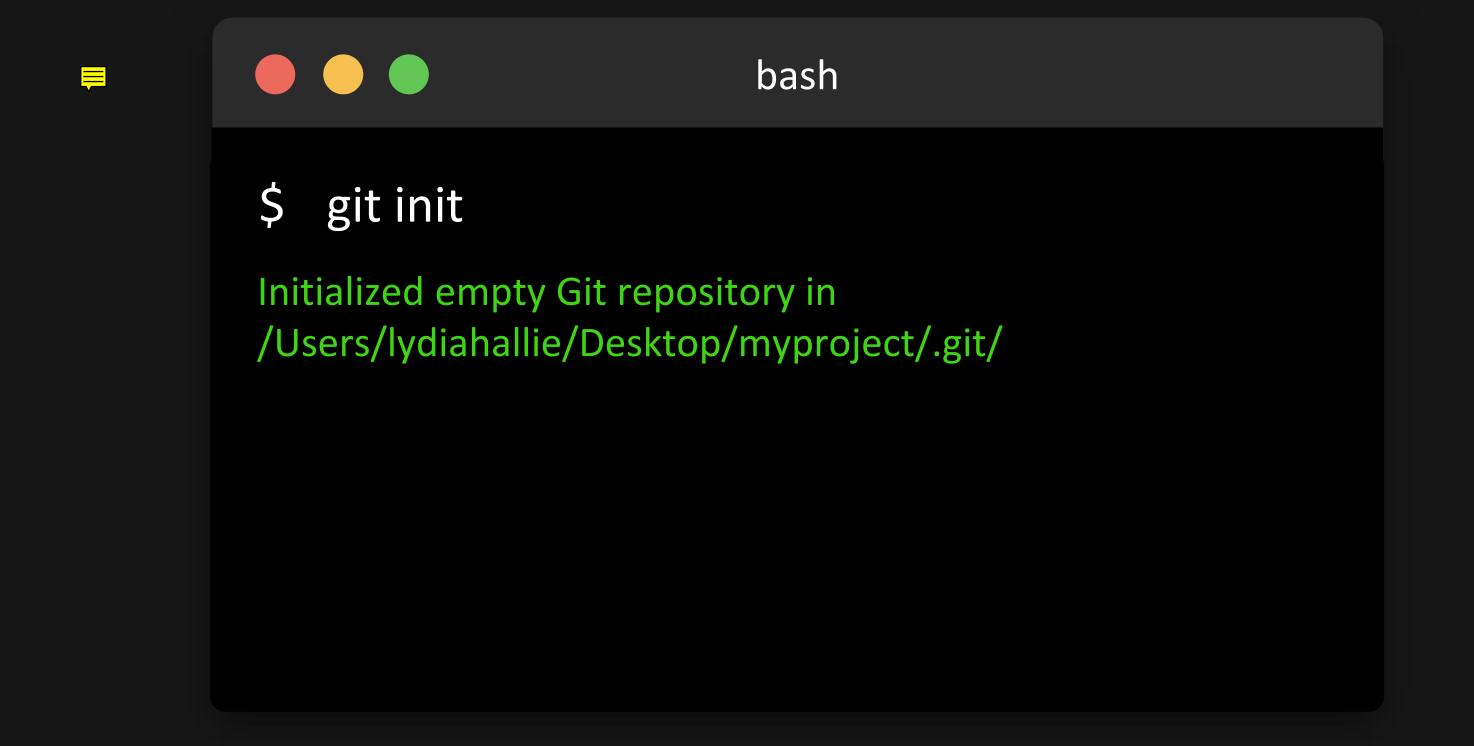




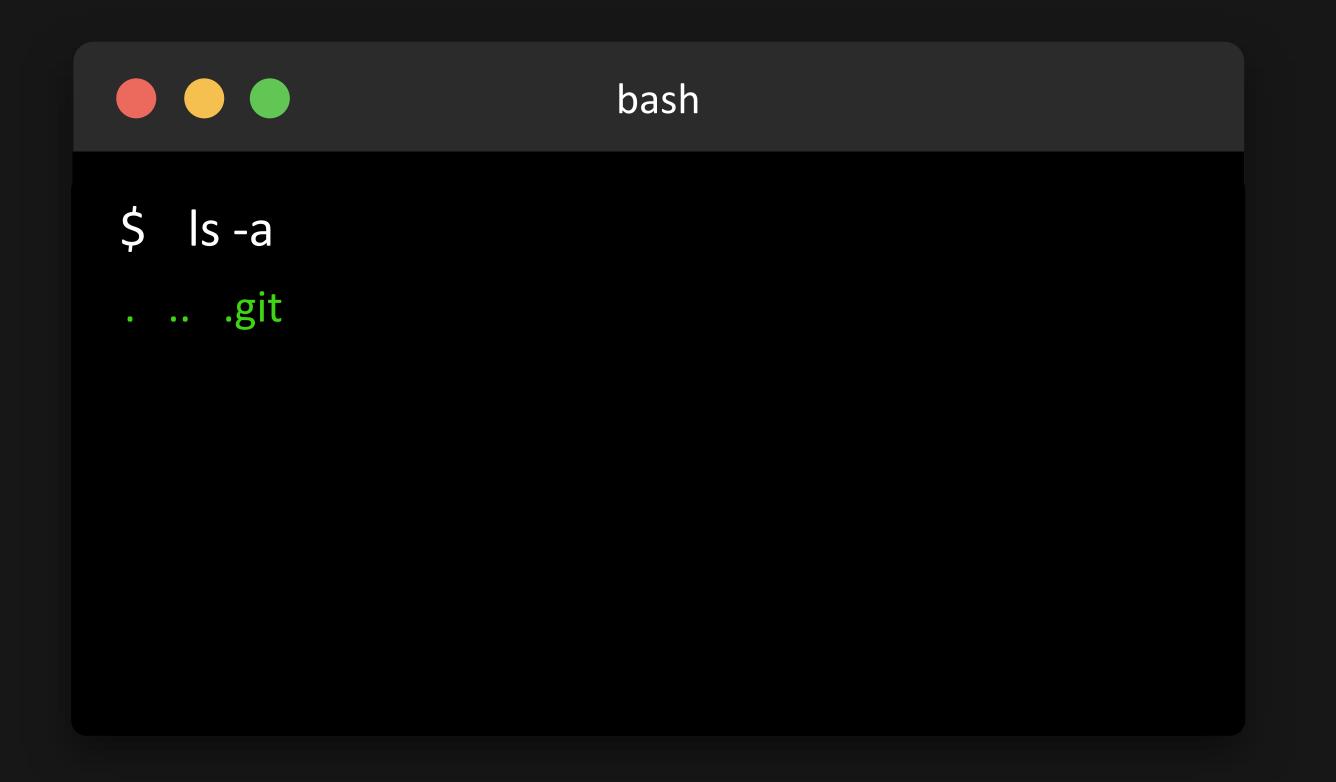


Initialize Git Repo

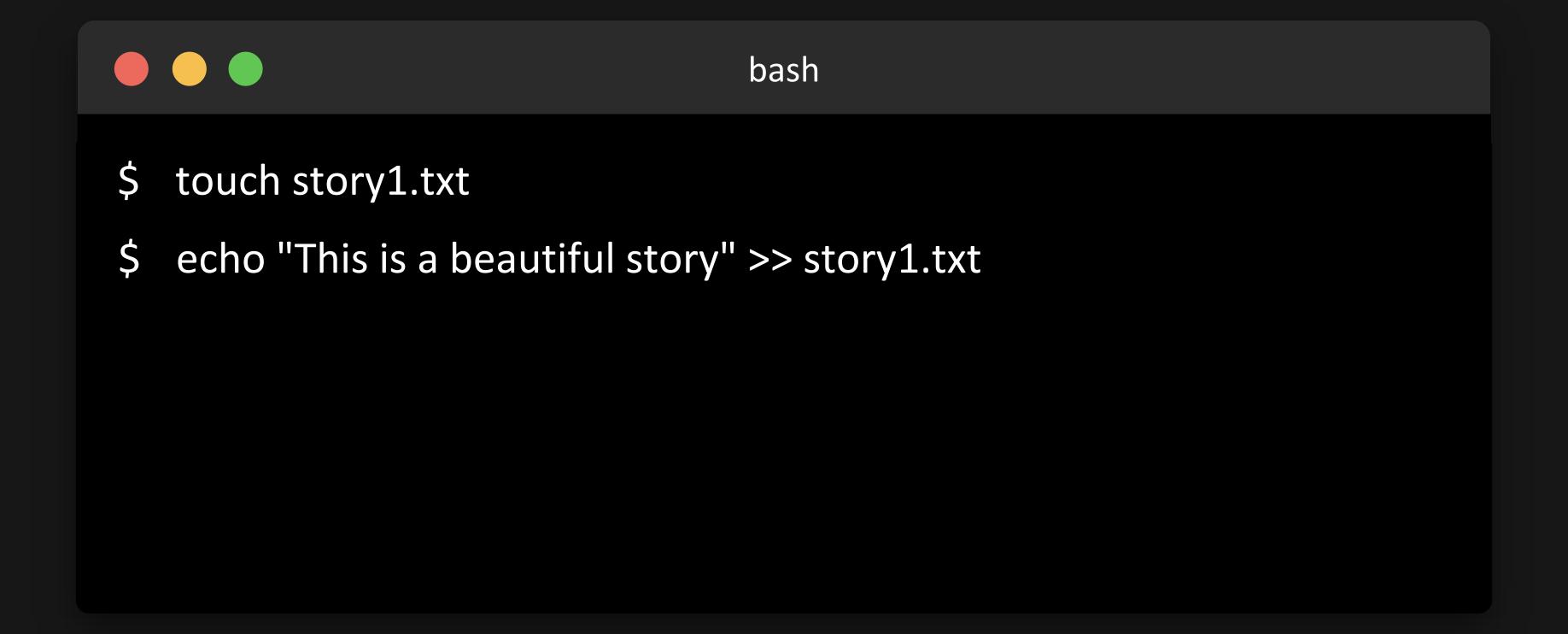




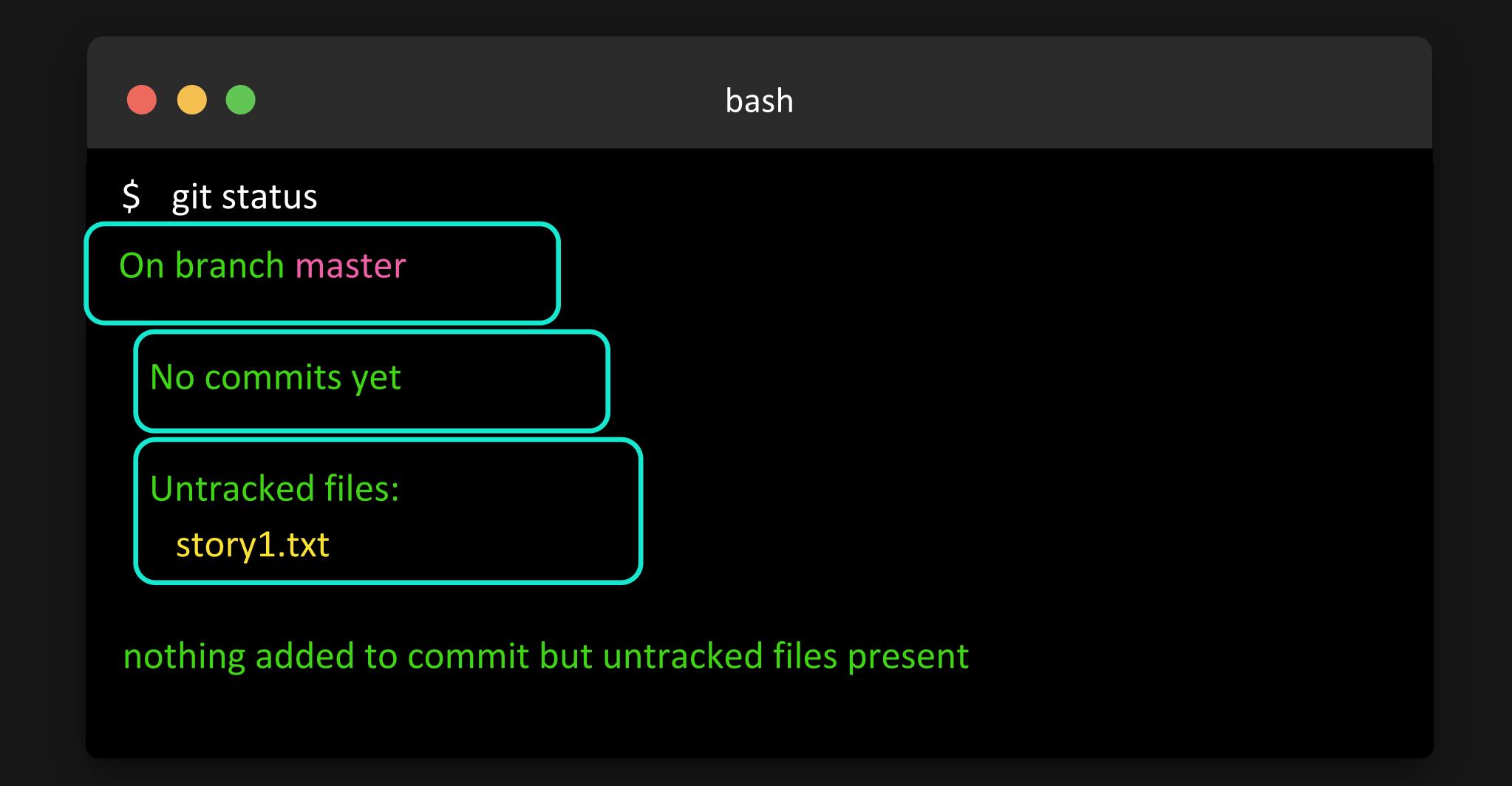




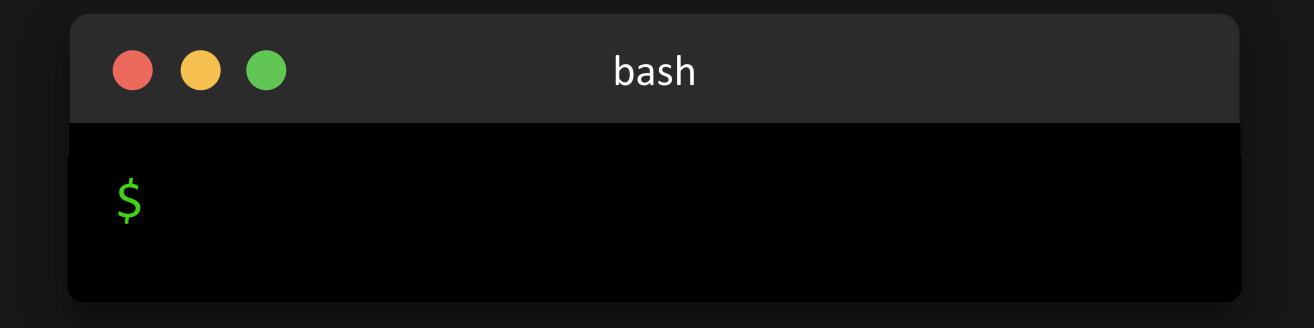






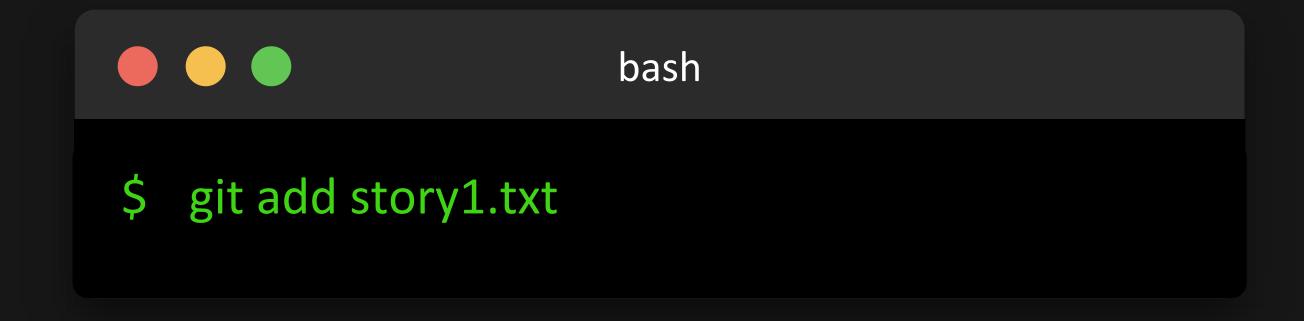






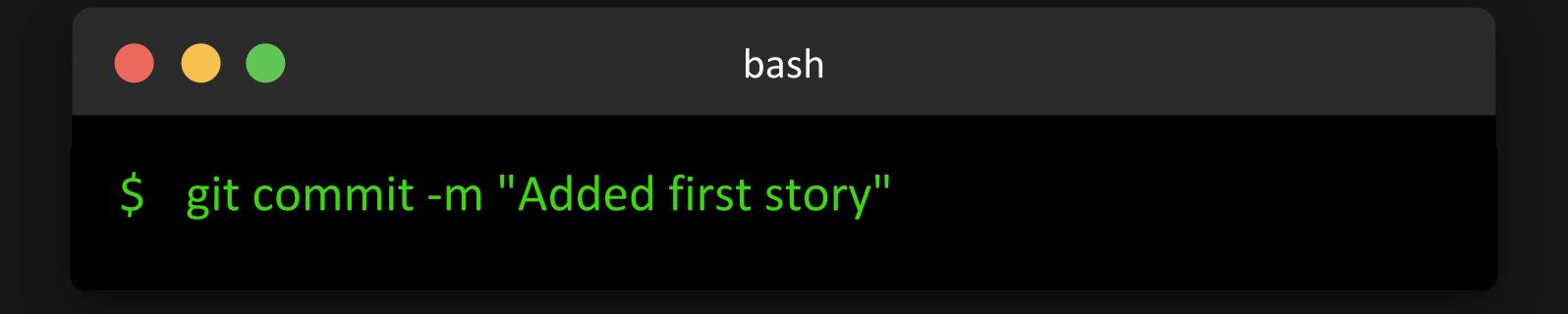
















Added first story @me

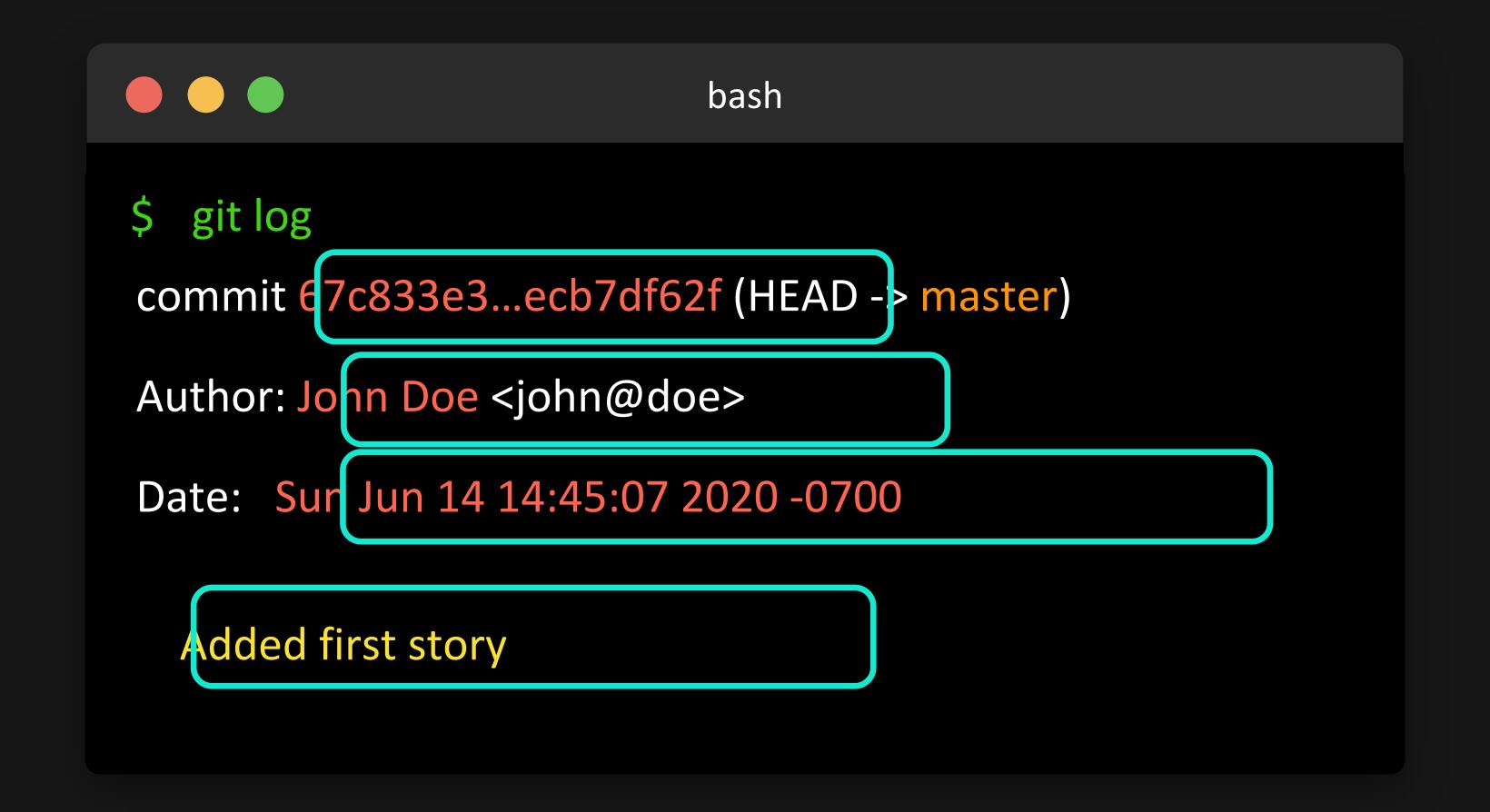




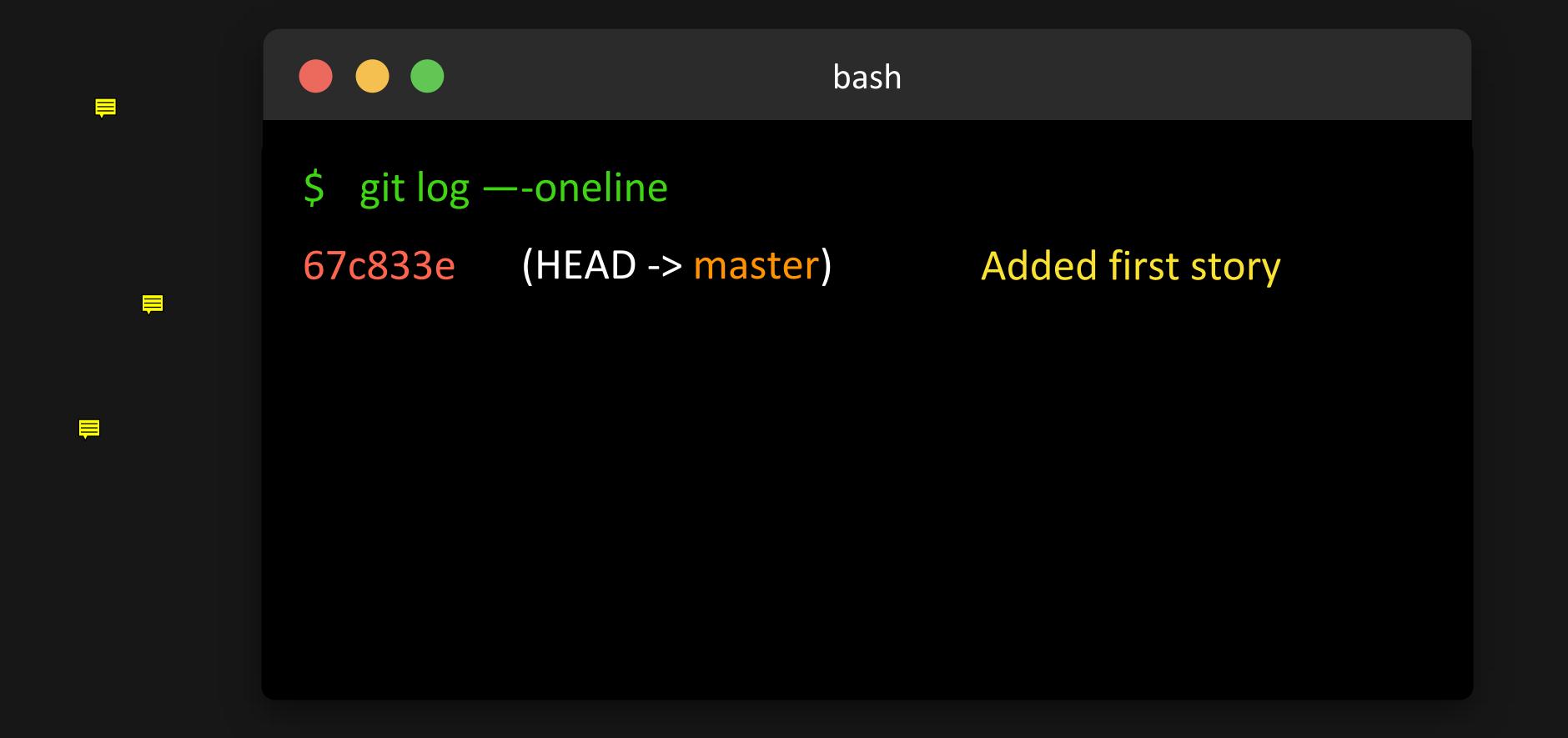


Gitlog















Initializing a remote repo













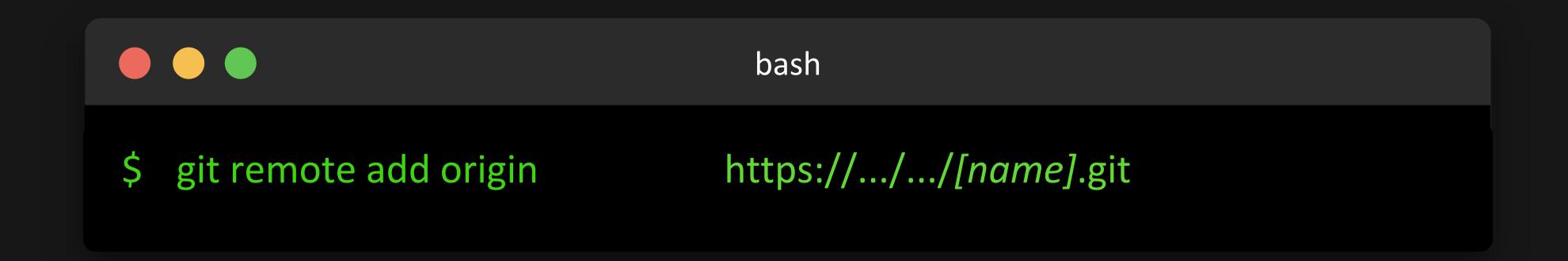


Bitbucket

Connection String

https://.../[name].git



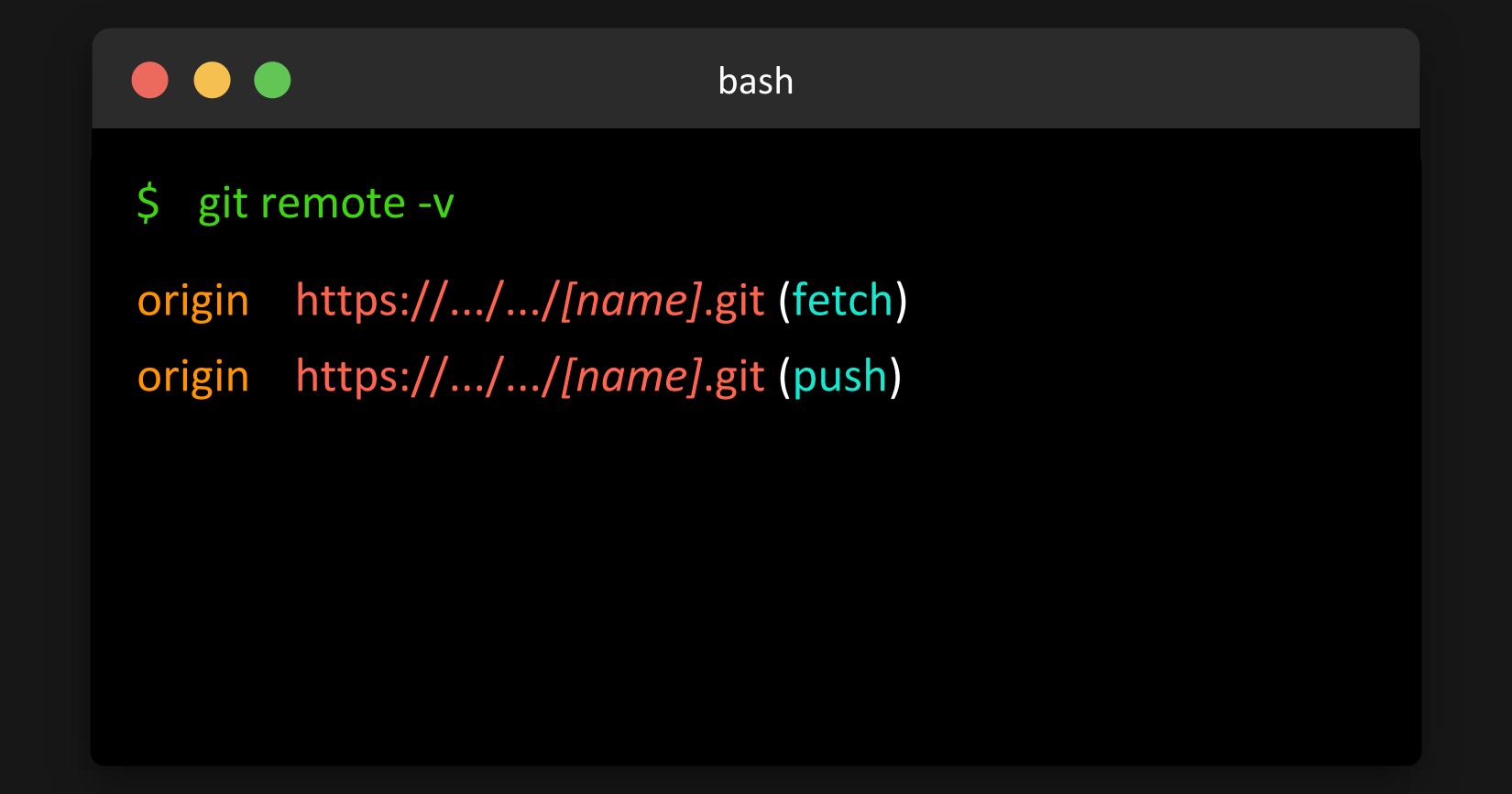




Local Repository Working Area Committed Files Staging Area



https://.../[name].git Remote Repository **Local Repository** Working Area Committed Files Staging Area ** ** (ODE **LOUD









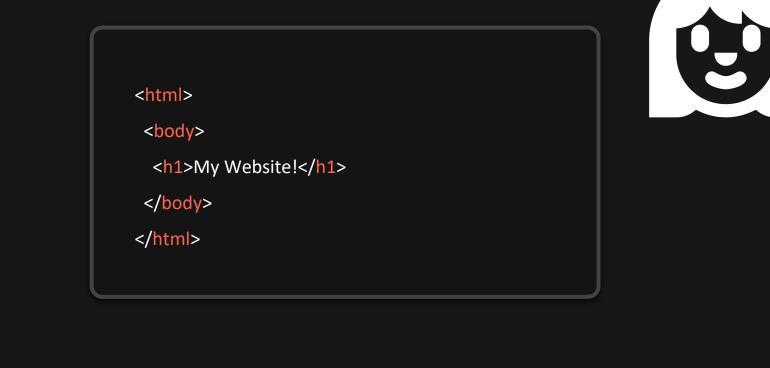
Pushing



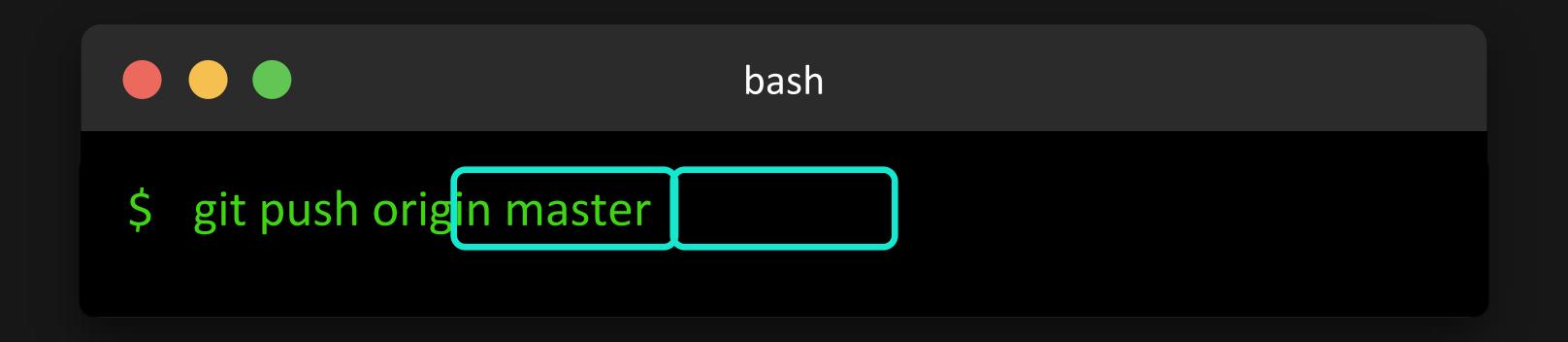
Remote Repository

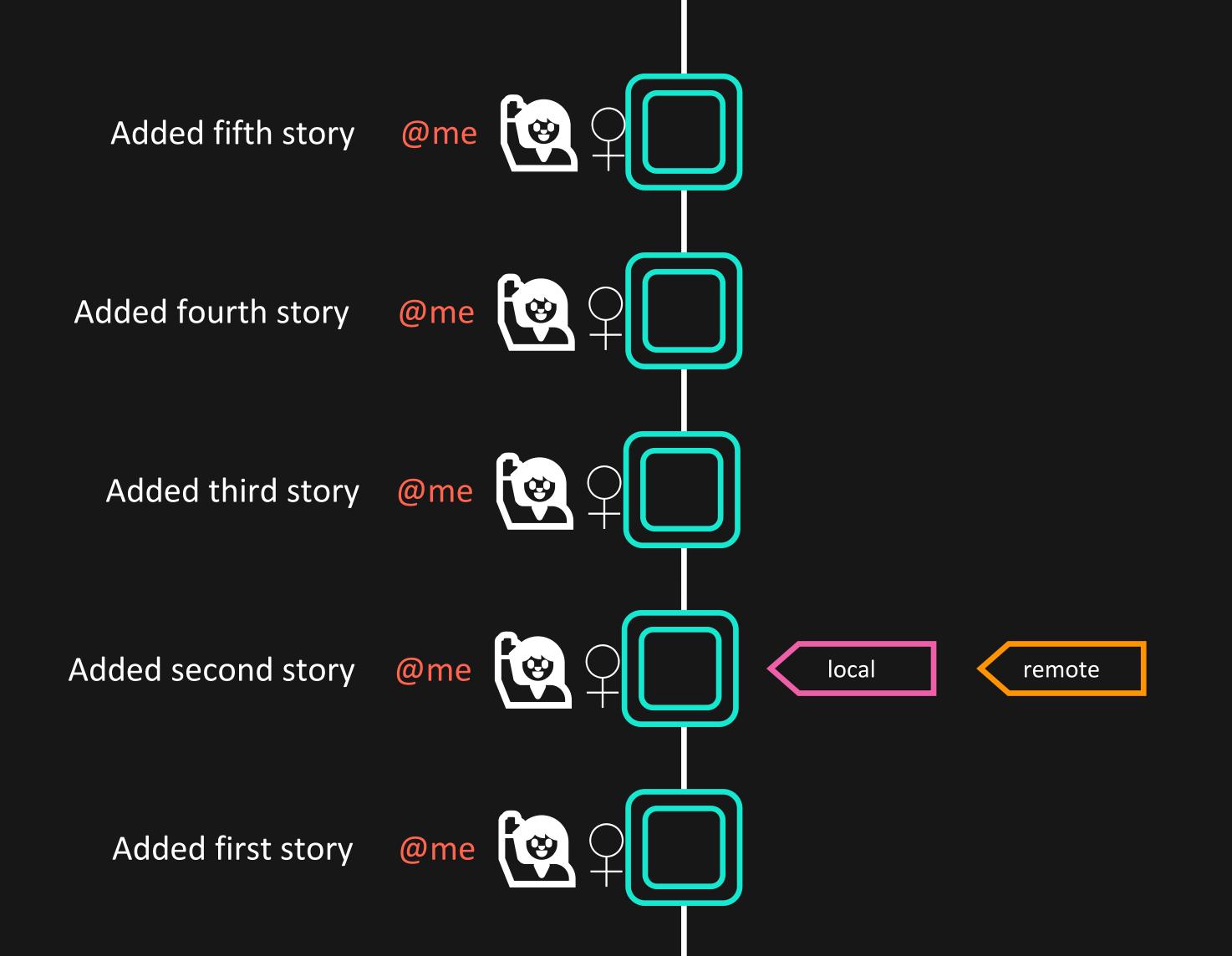


Local Repository









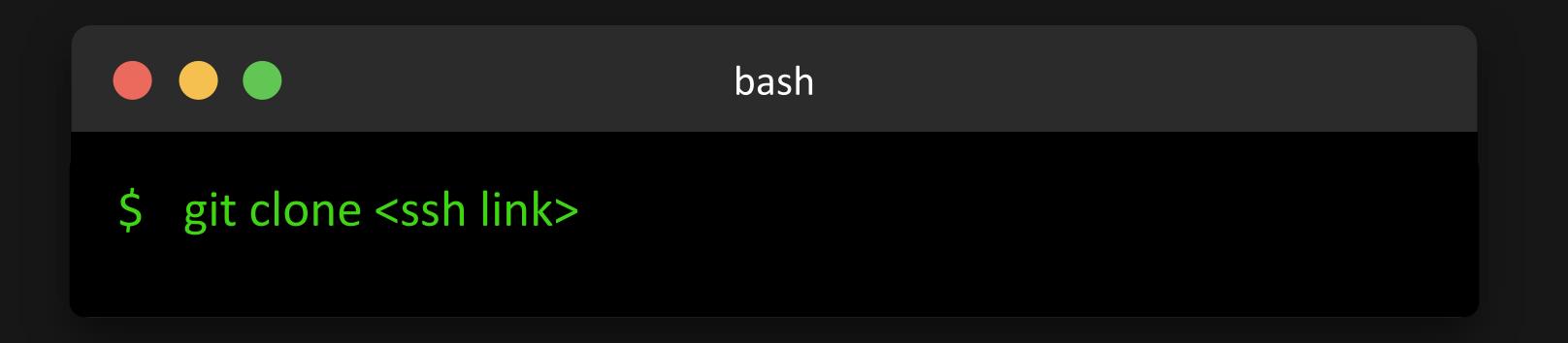




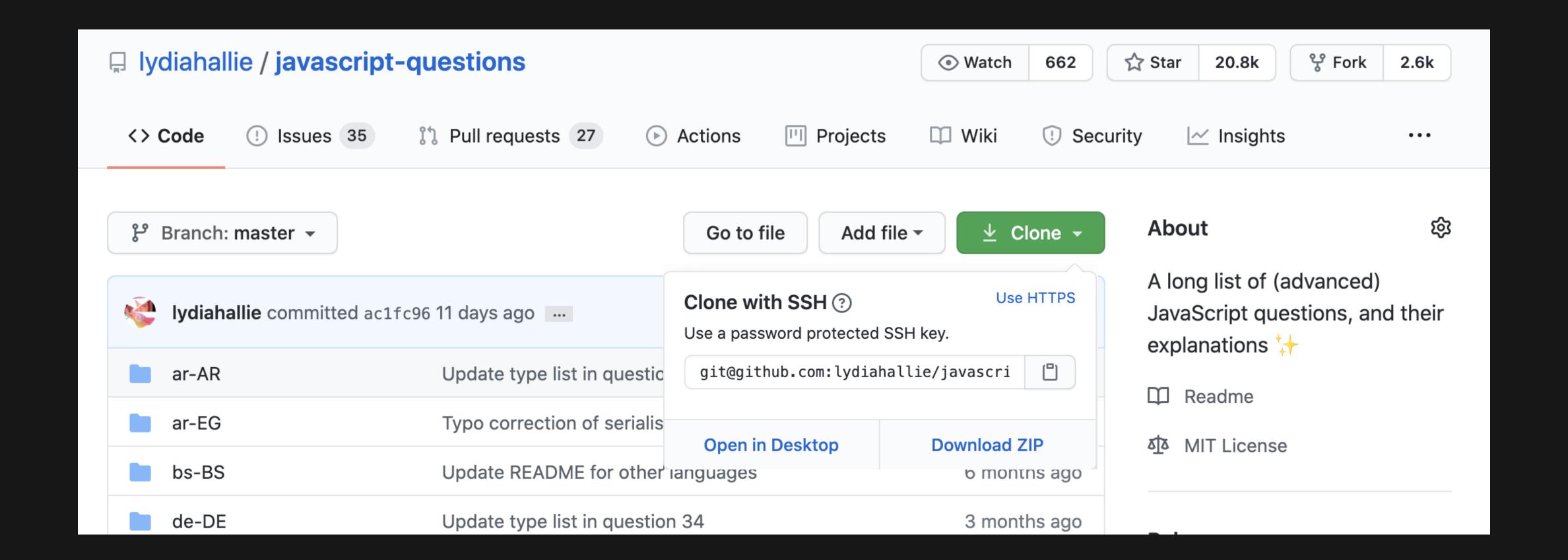


Cloning













bash

\$ git clone git@github.com:.....git

Cloning into 'remote-repo'...

remote: Enumerating objects: 59, done.

remote: Counting objects: 100% (59/59), done.

remote: Compressing objects: 100% (43/43), done.

remote: Total 2948 (delta 28), reused 18 (delta 6)

Receiving objects: 100% (2948/2948), 1.93 MiB | 2.53 MiB/s, done.

Resolving deltas: 100% (1526/1526), done.





bash

- \$ cd remote-repo
- \$ git log

commit 67c833e3...ecb7df62f (HEAD -> origin/master)

Author: John Doe <john@doe>

Date: Sun Jun 14 14:45:07 2020 -0700

Added first story

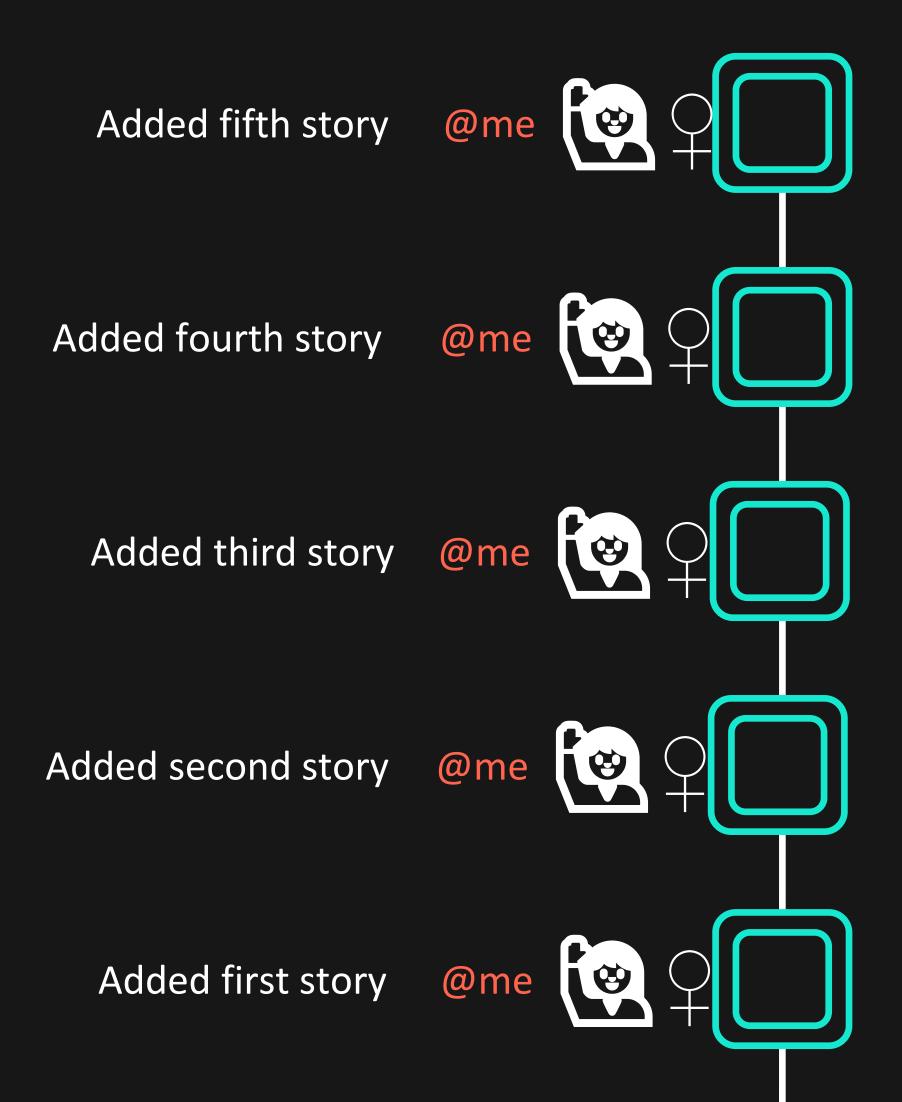




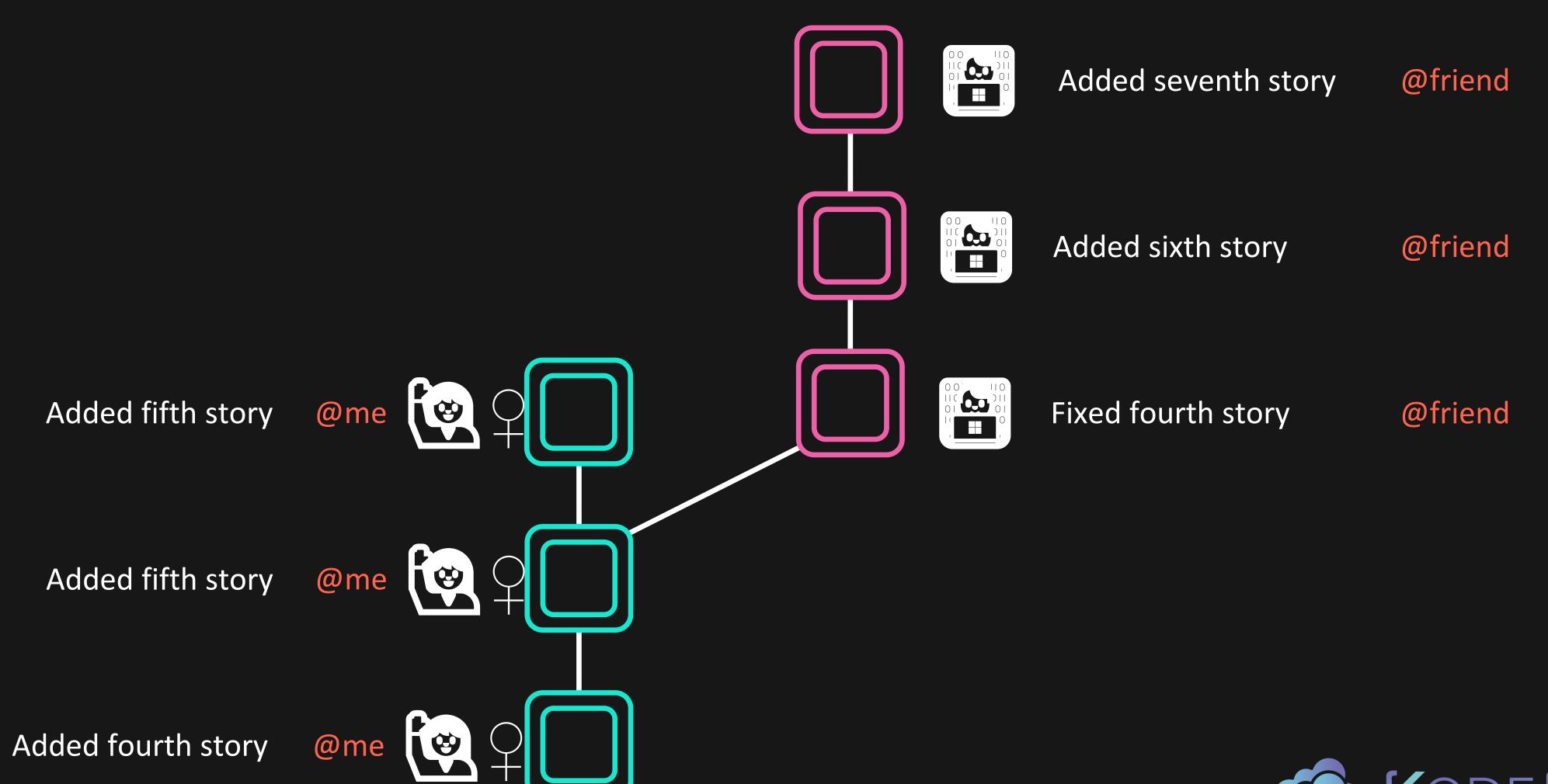


Branches

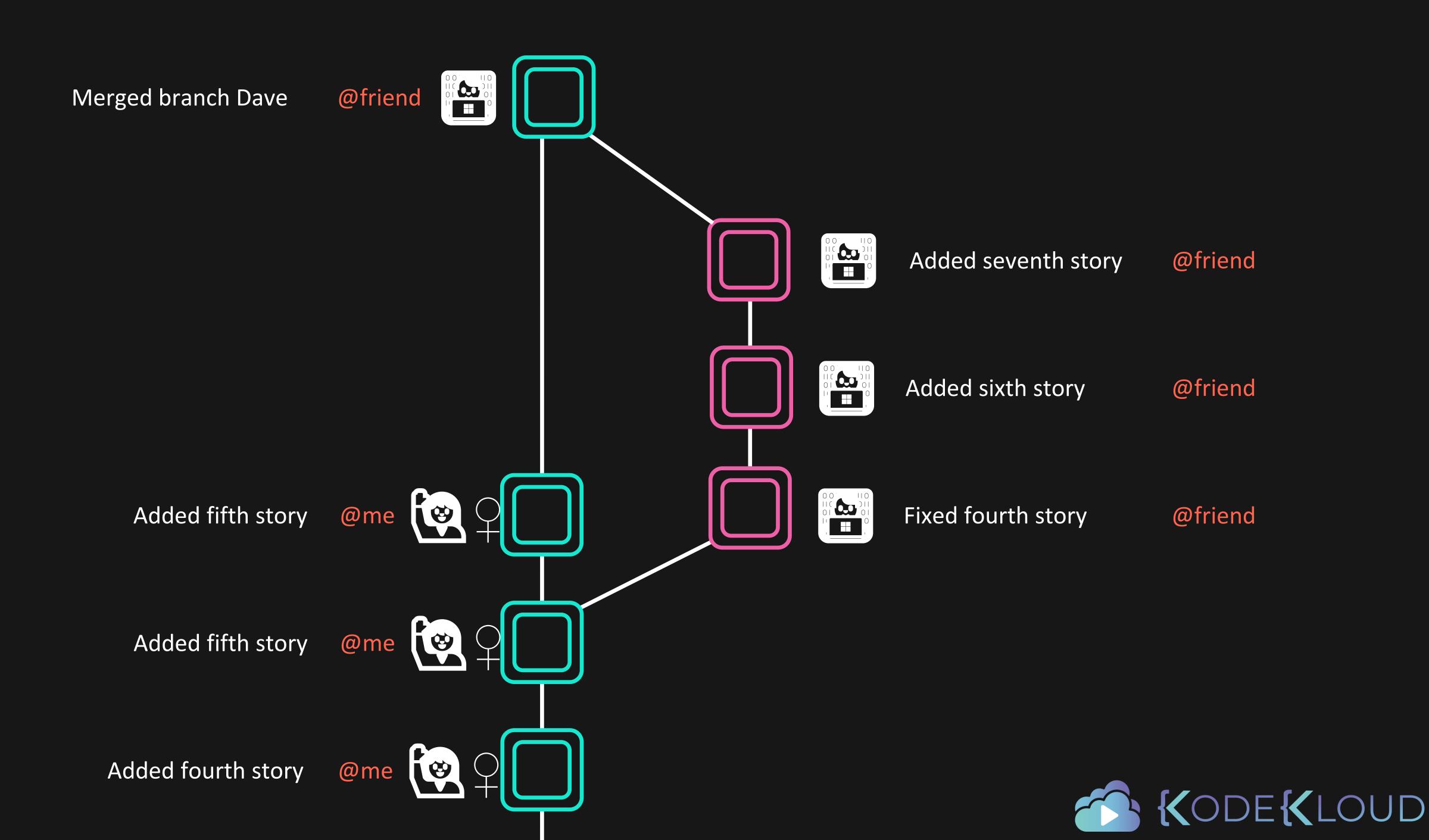


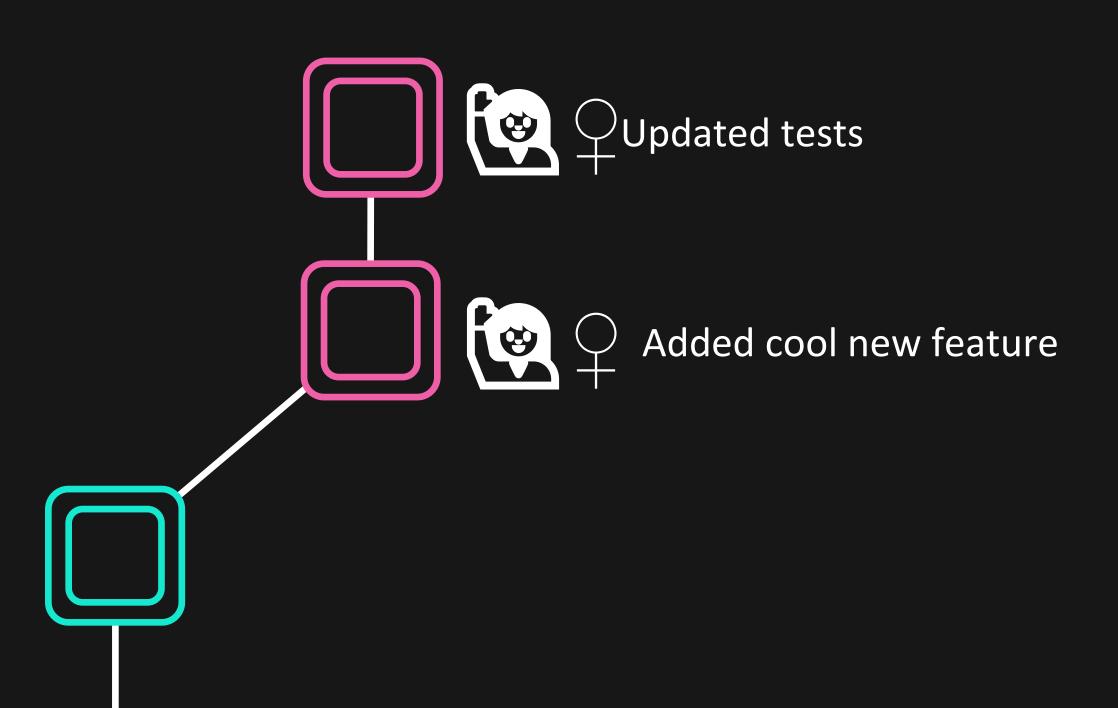




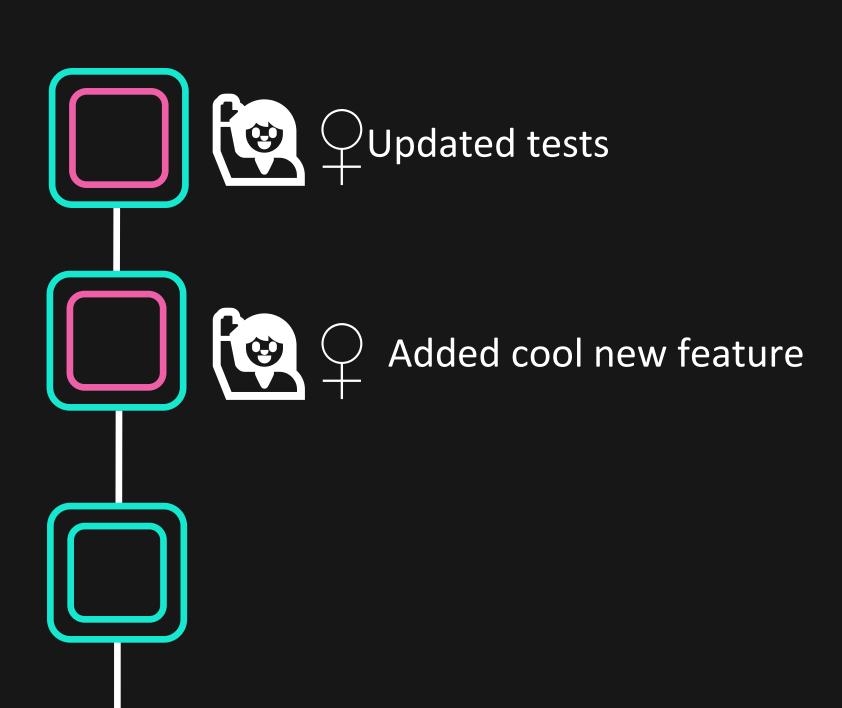


















bash

\$ git checkout -b sarah

Switched to a new branch 'sarah'

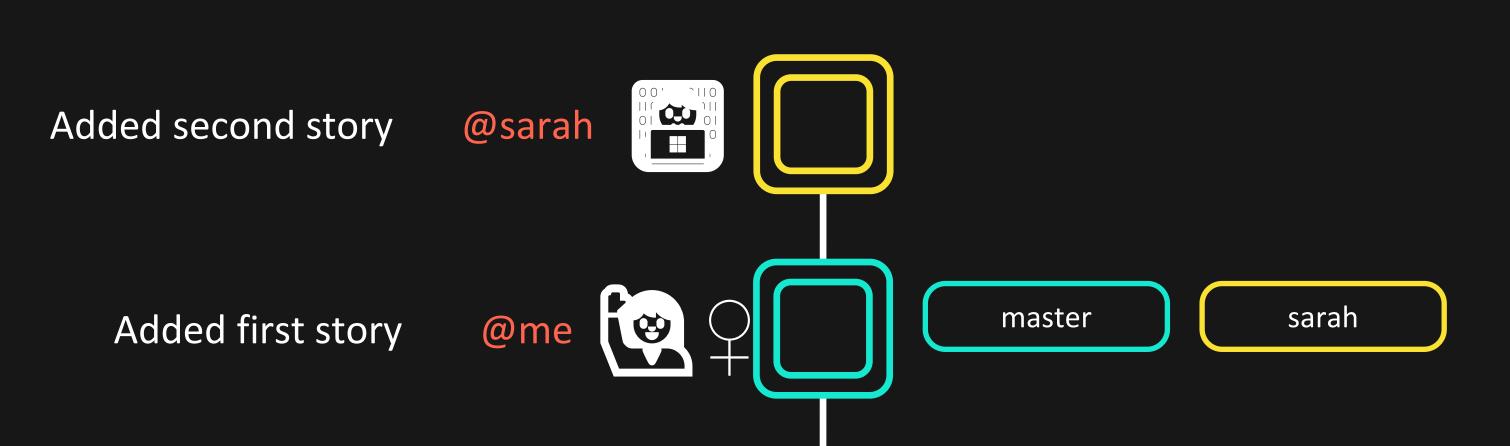
\$ git branch master

* sarah

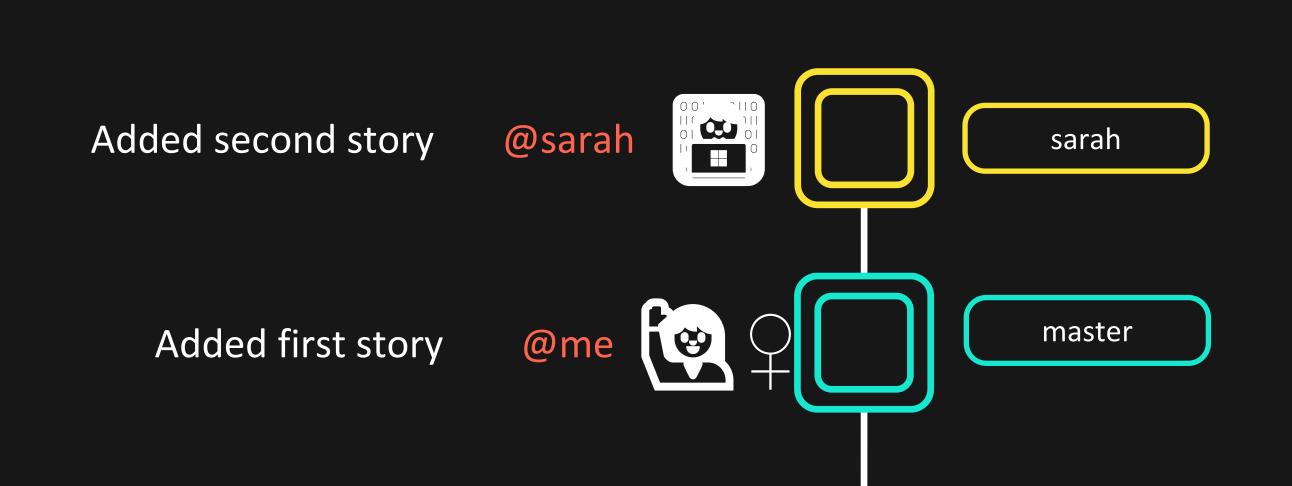




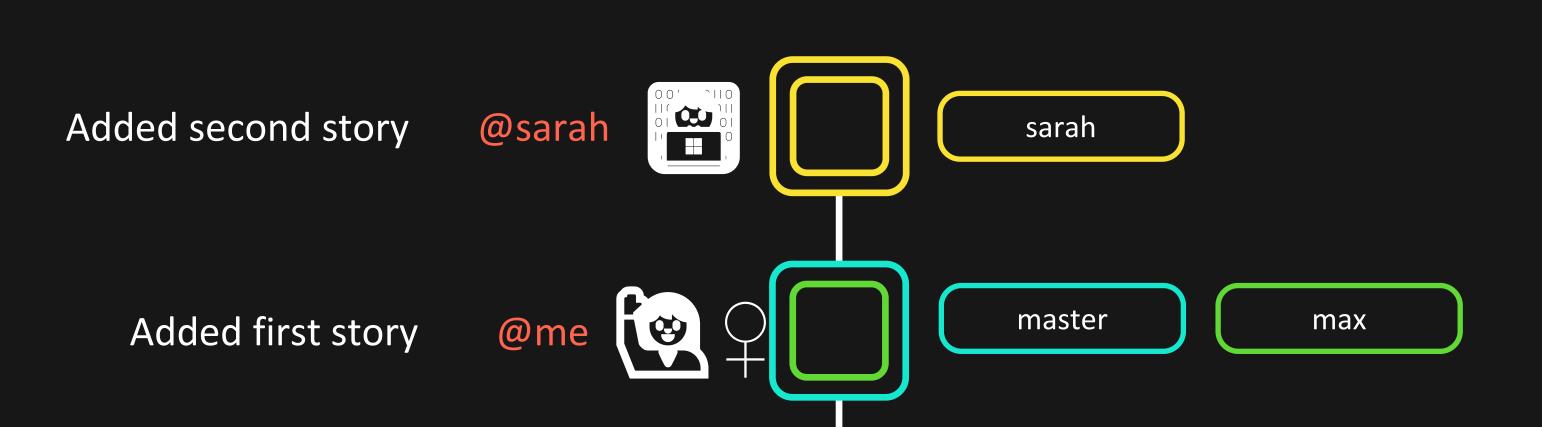




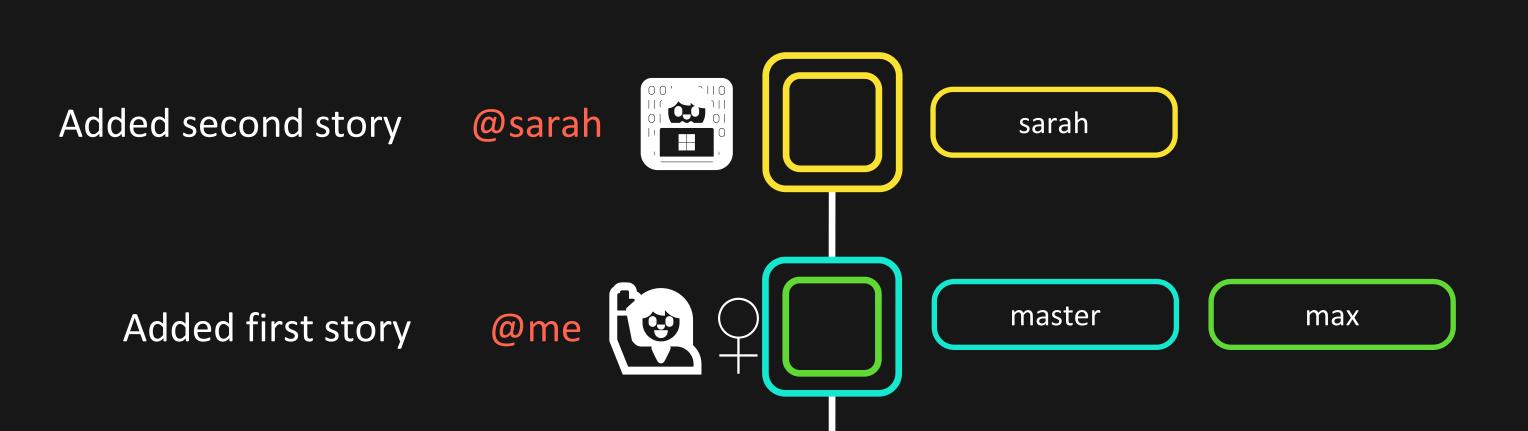




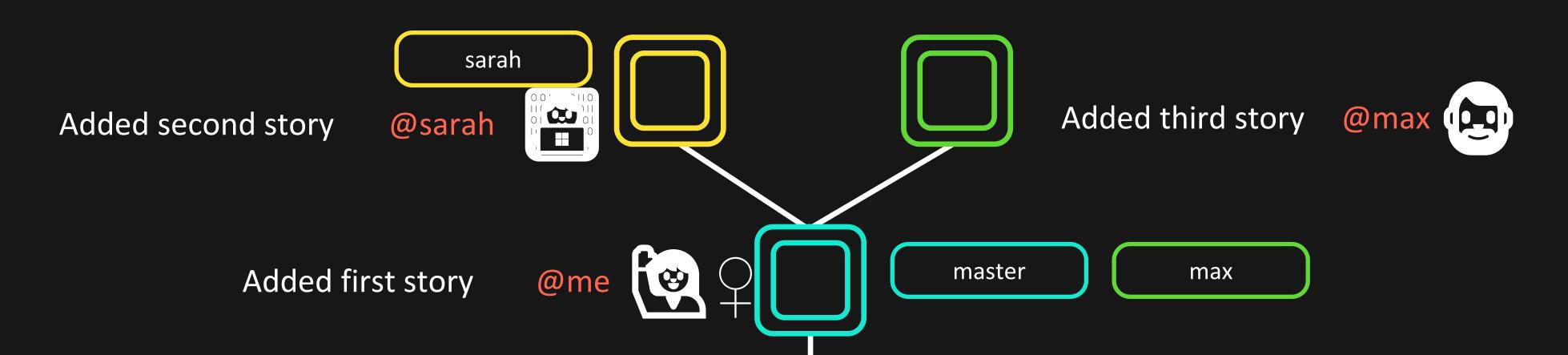












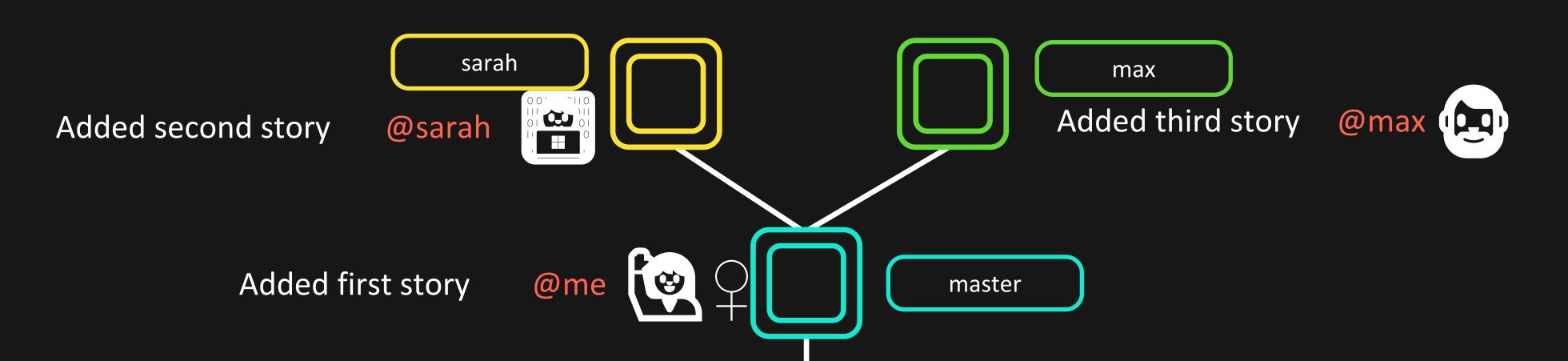




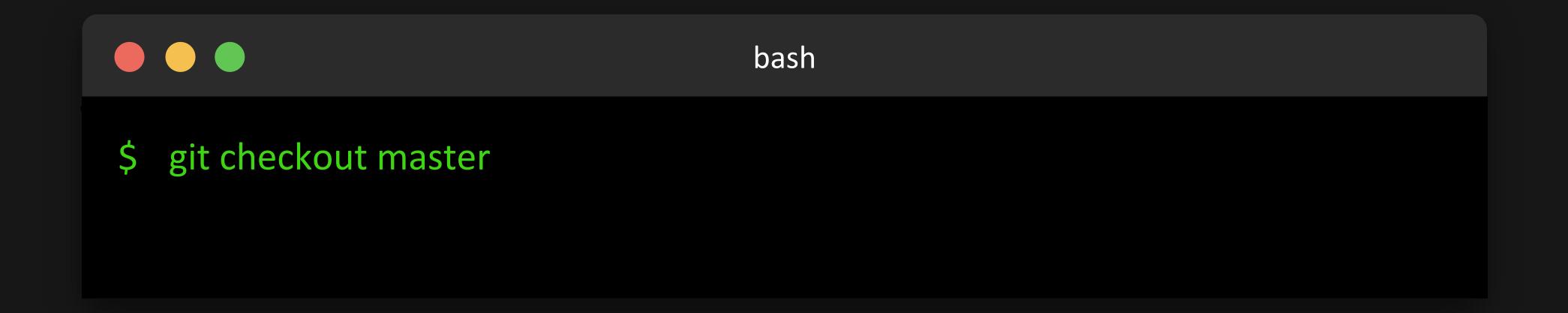


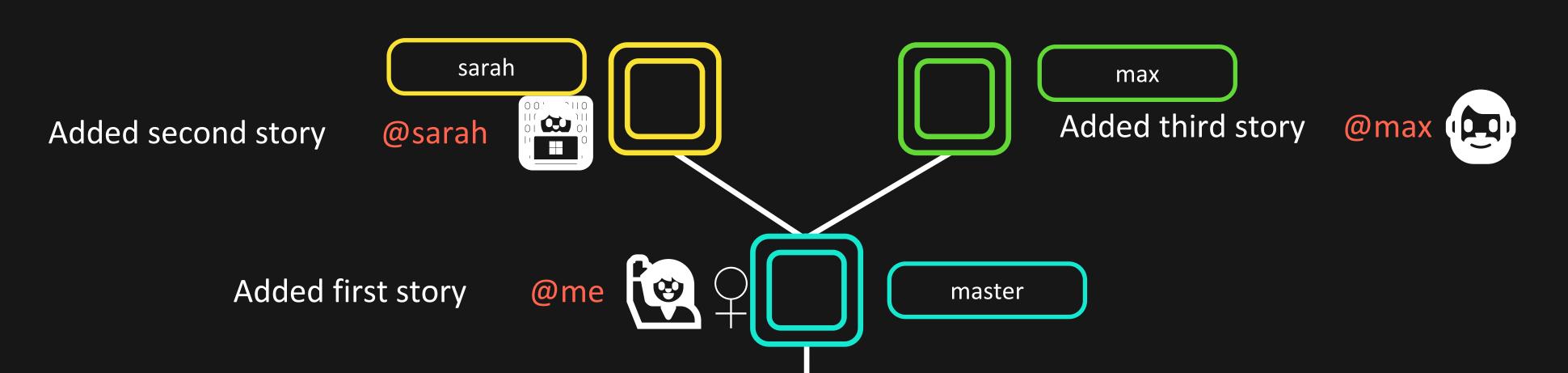
Merging



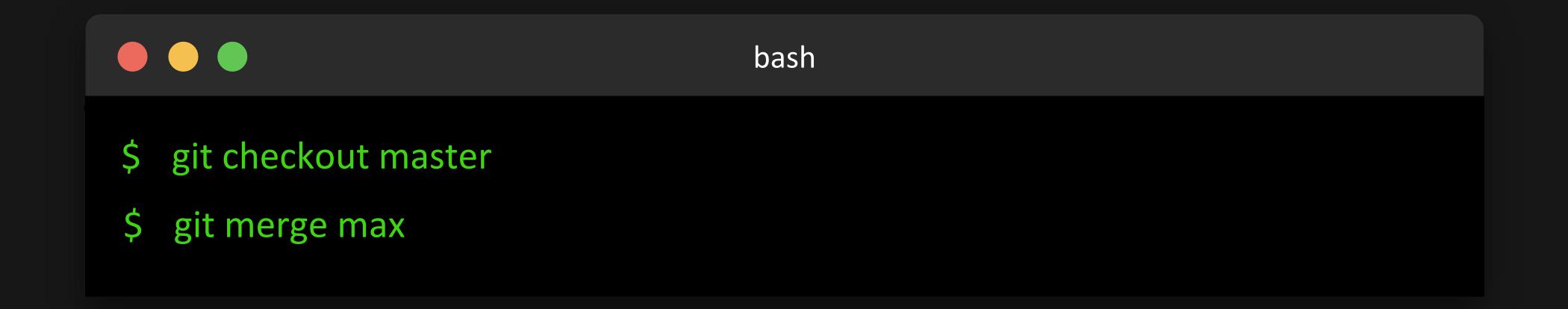


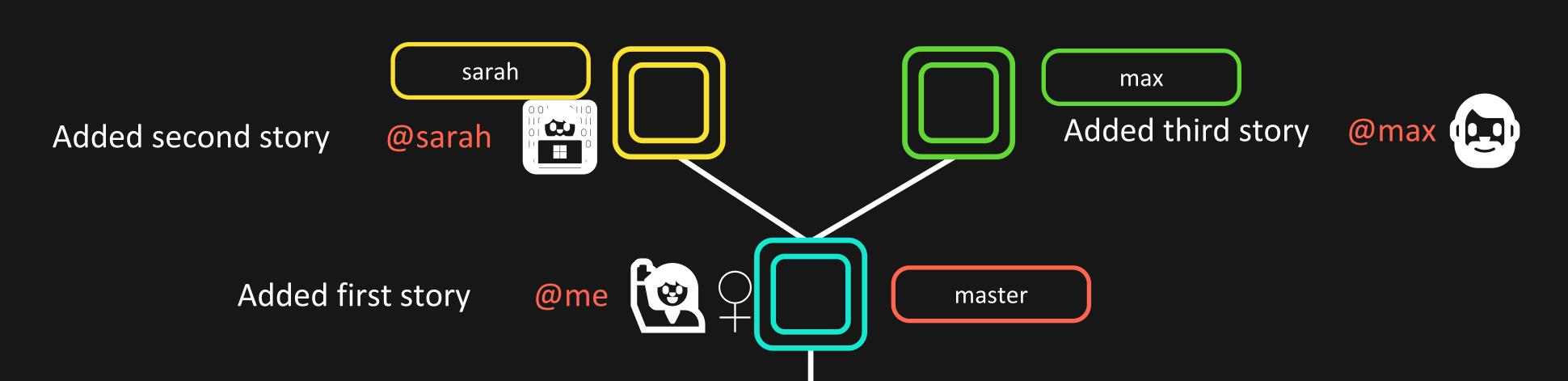




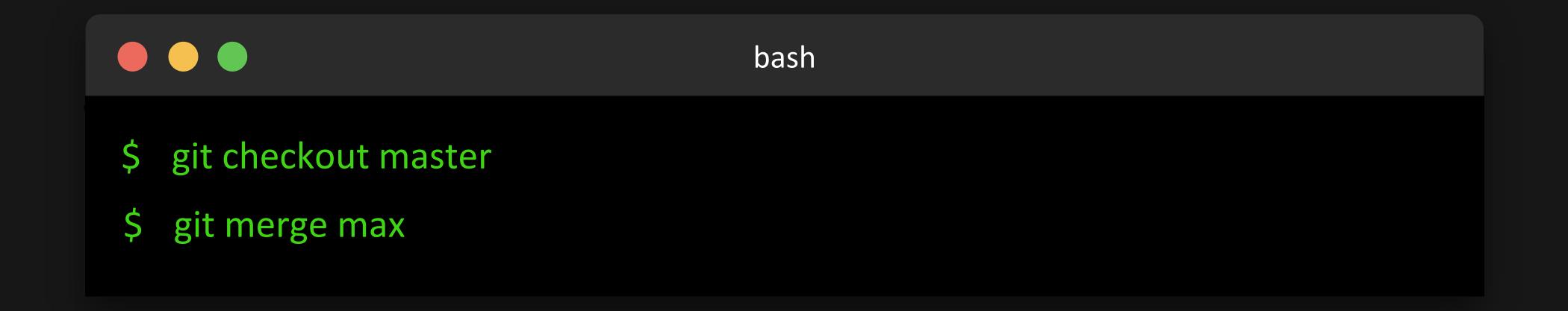


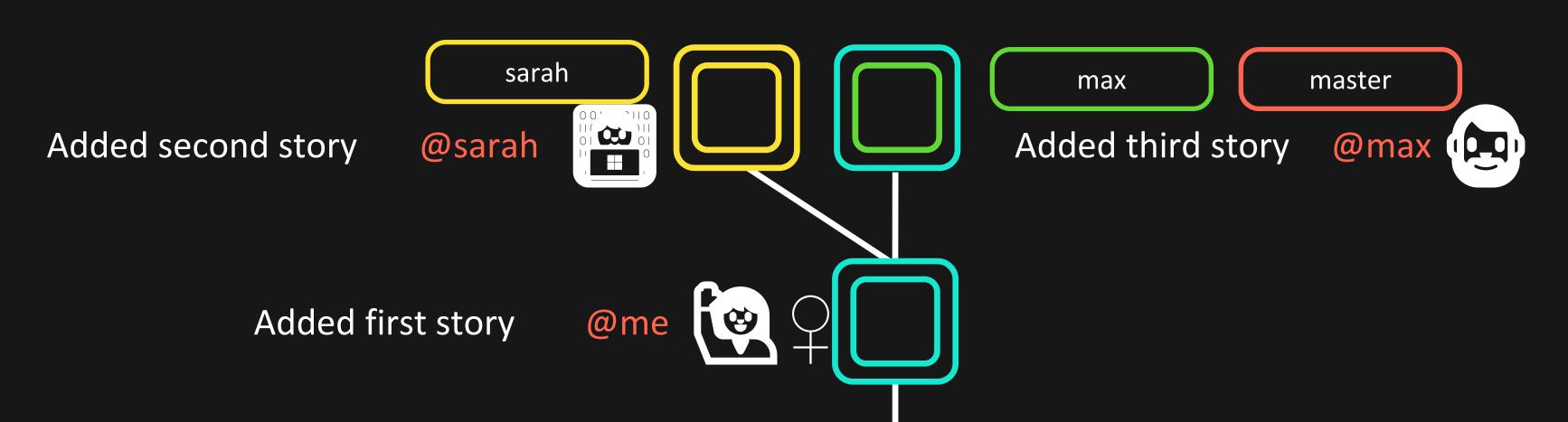




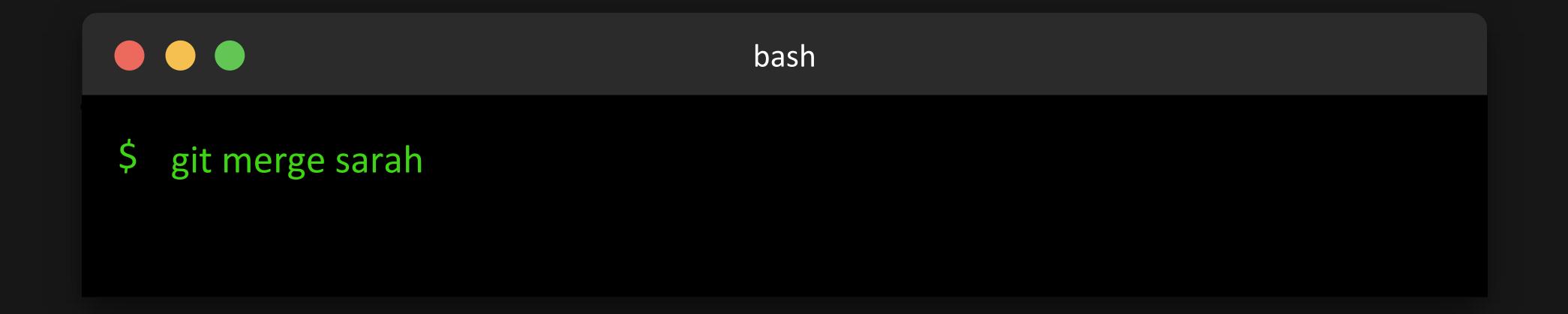


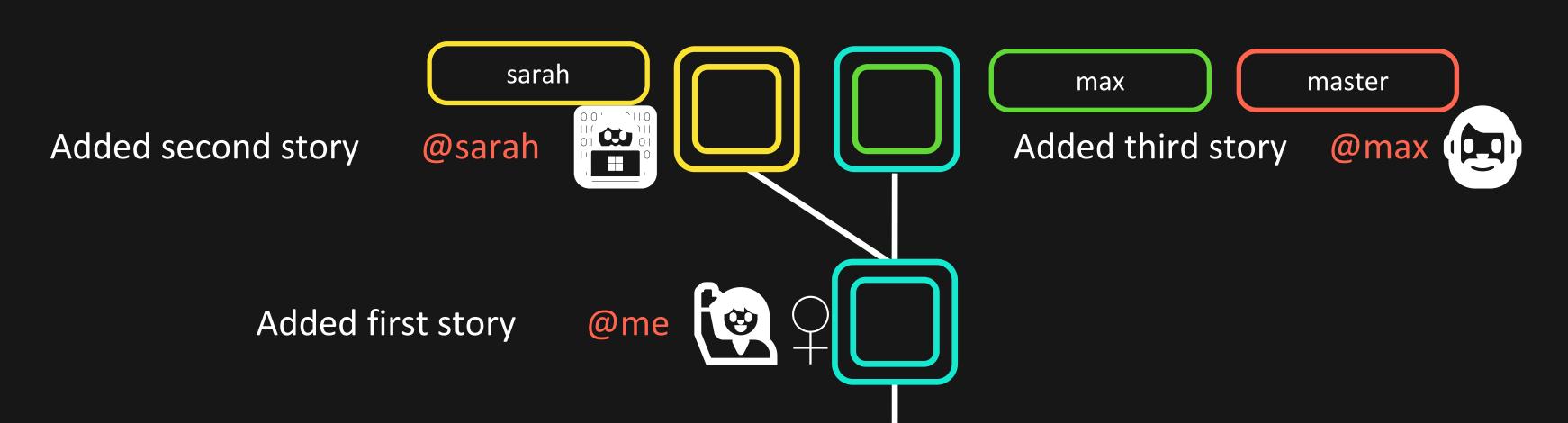




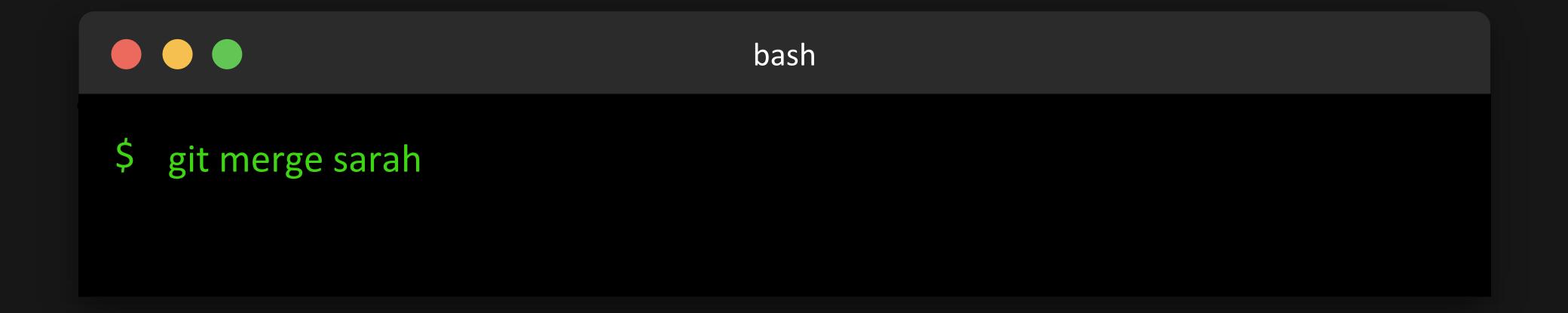


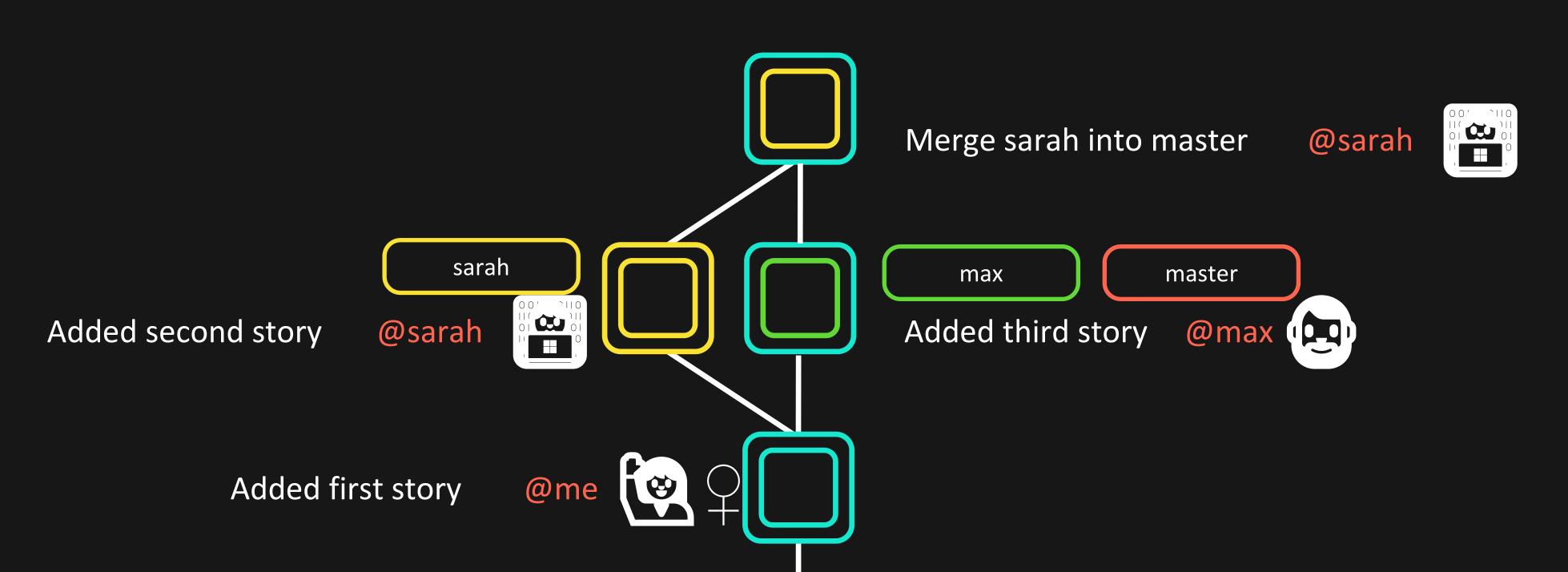




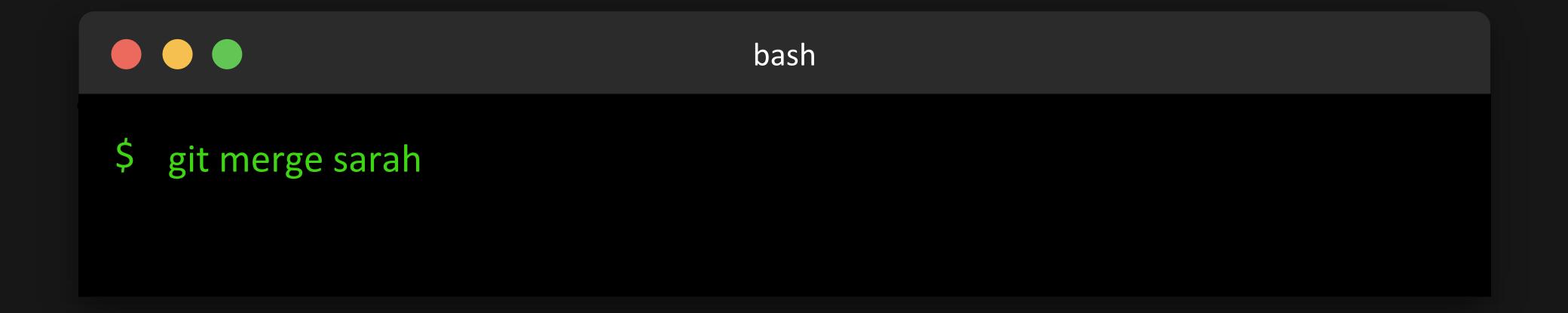


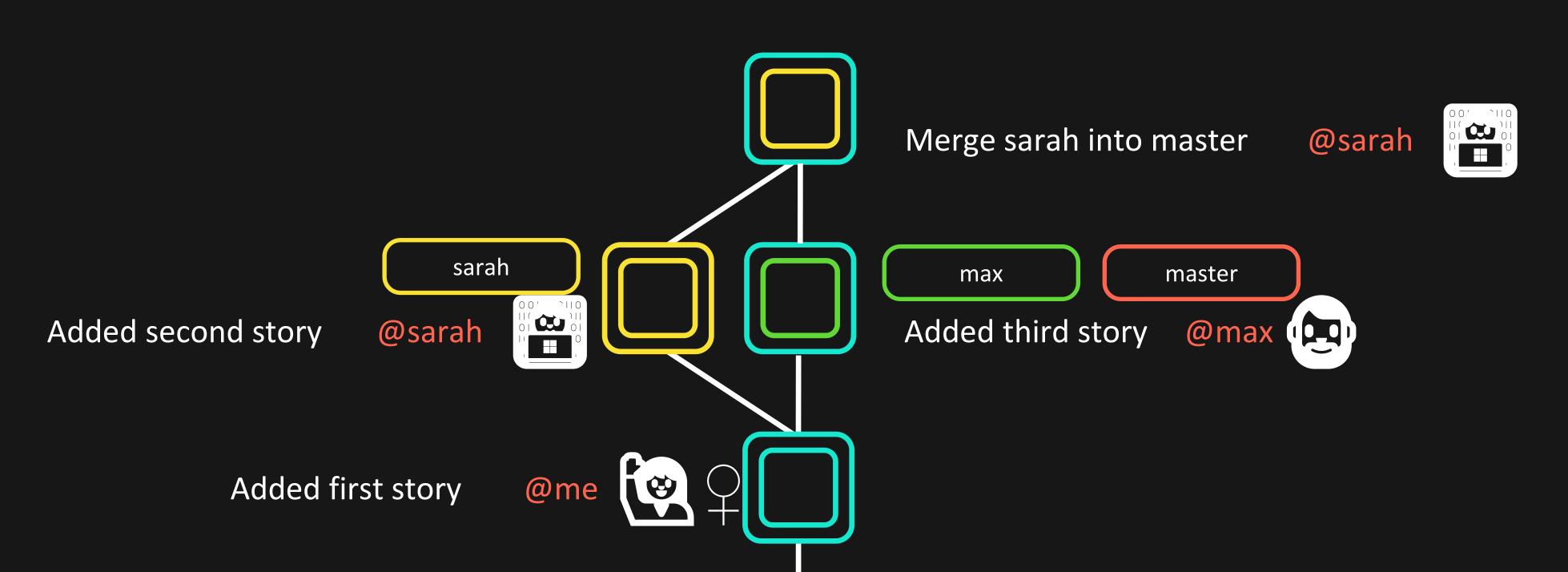












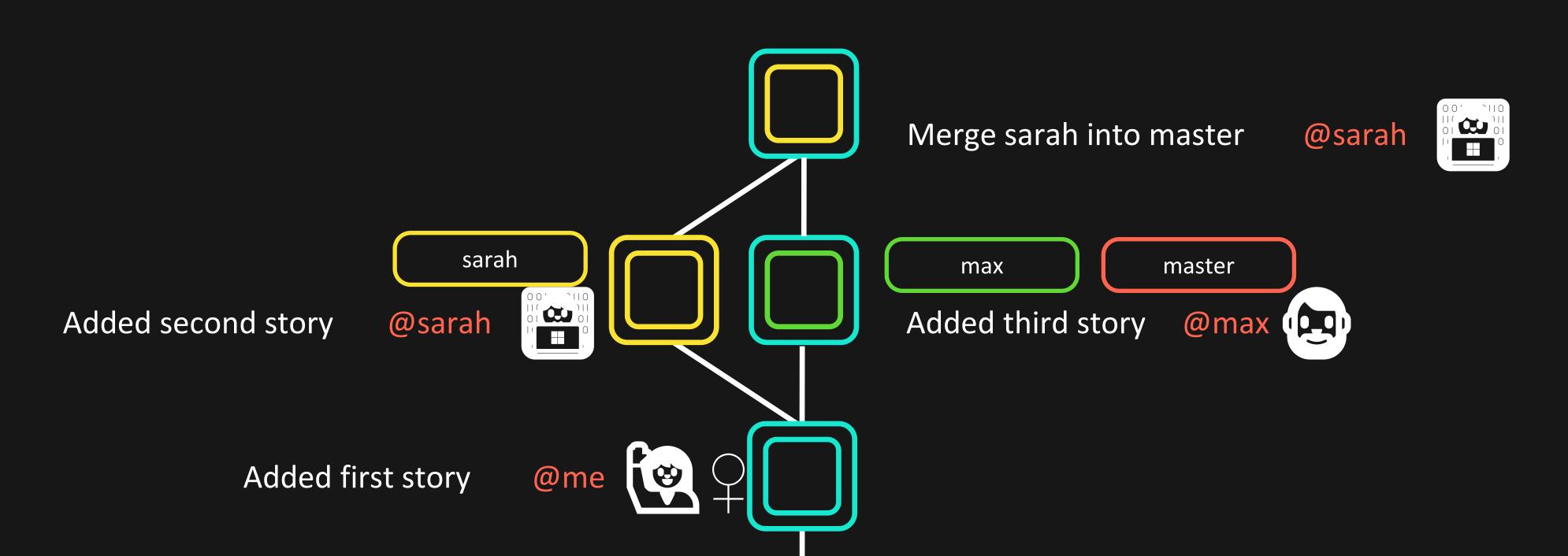




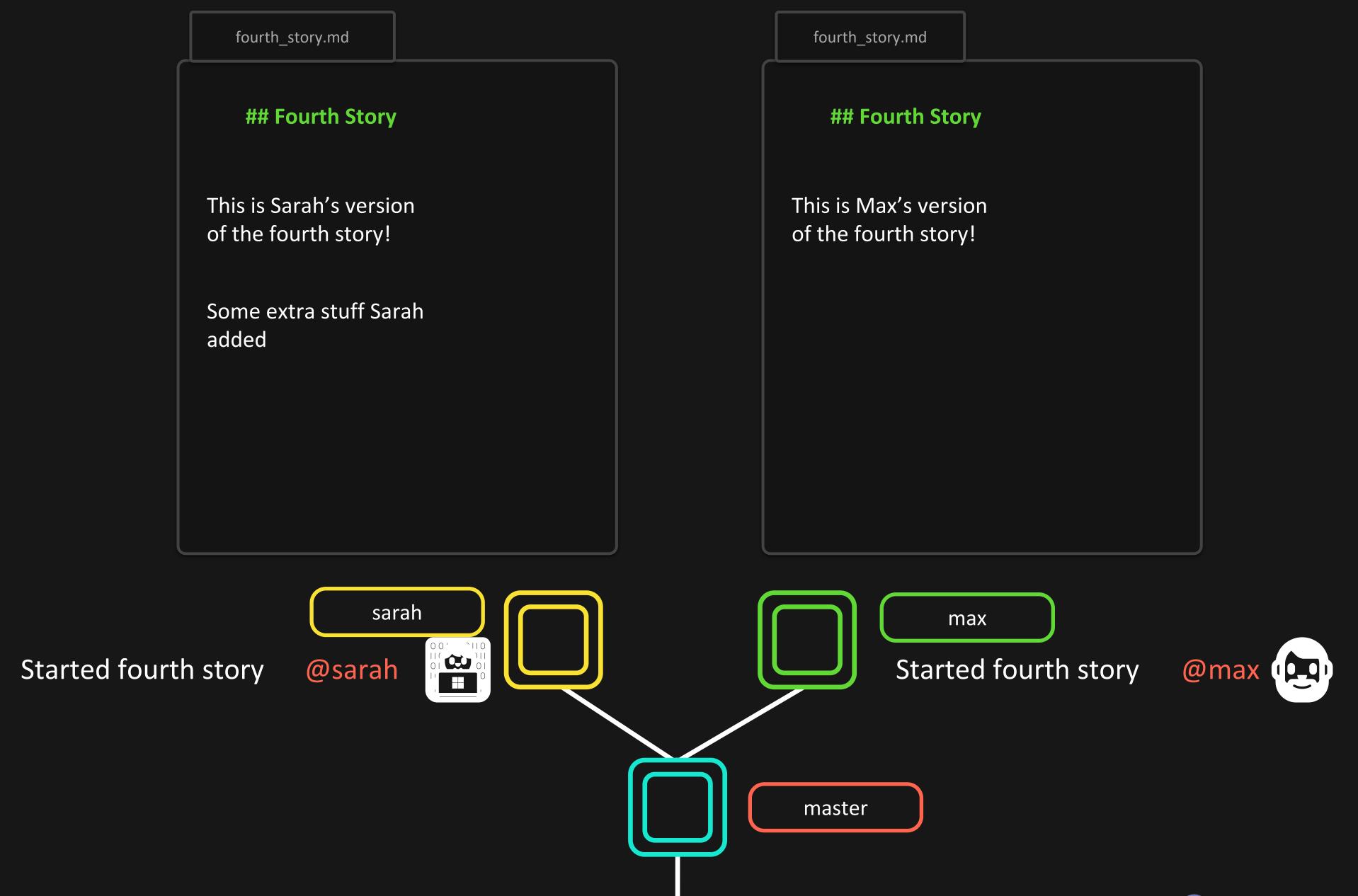


Merge Conflicts

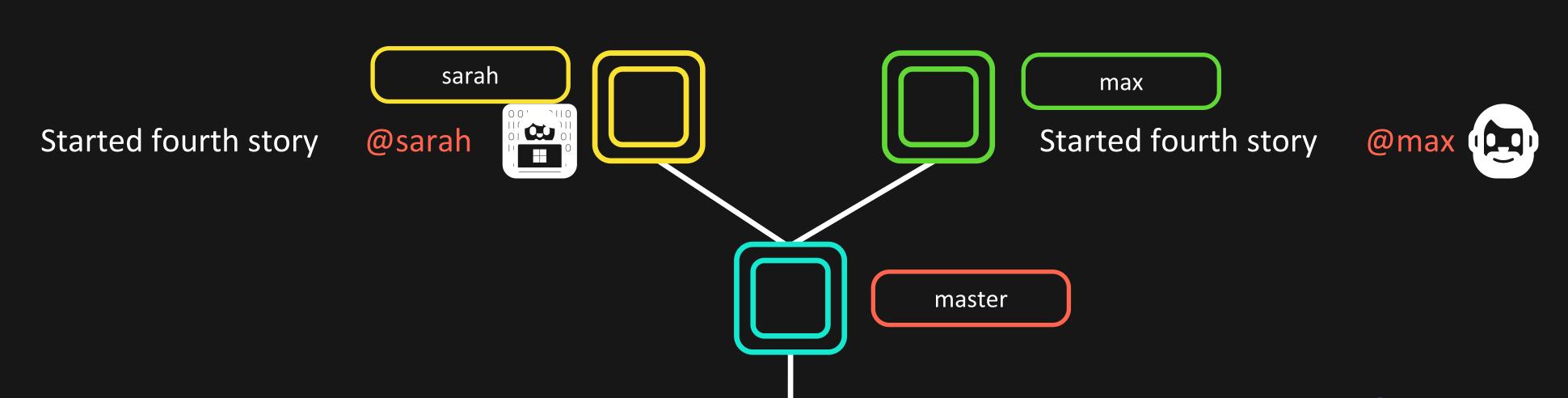




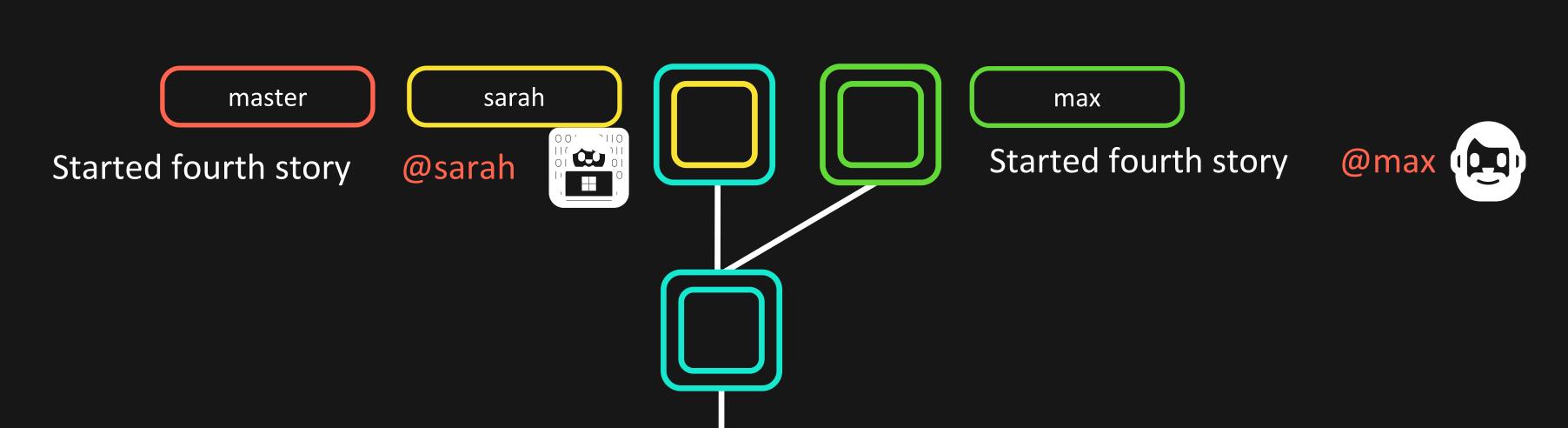




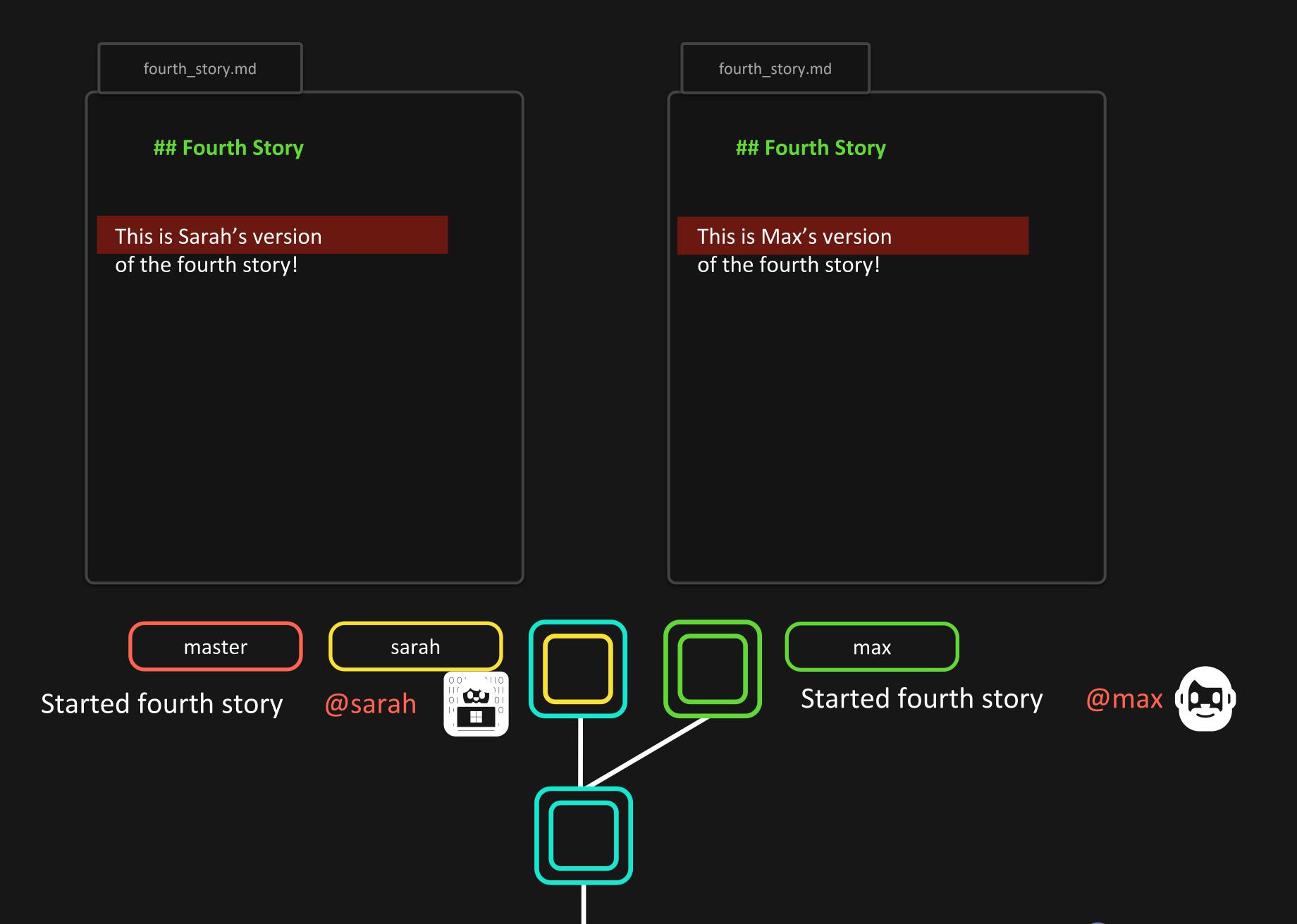














Fourth Story

<<<<< HEAD

This is Sarah's version

======

This is Max's version

>>>>> max

of the fourth story!

Some extra stuff Sarah added



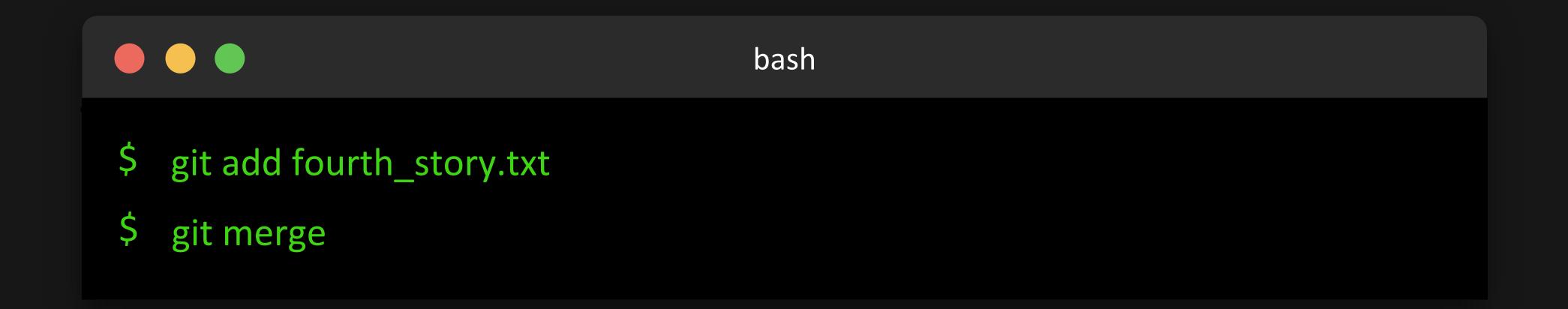
Fourth Story

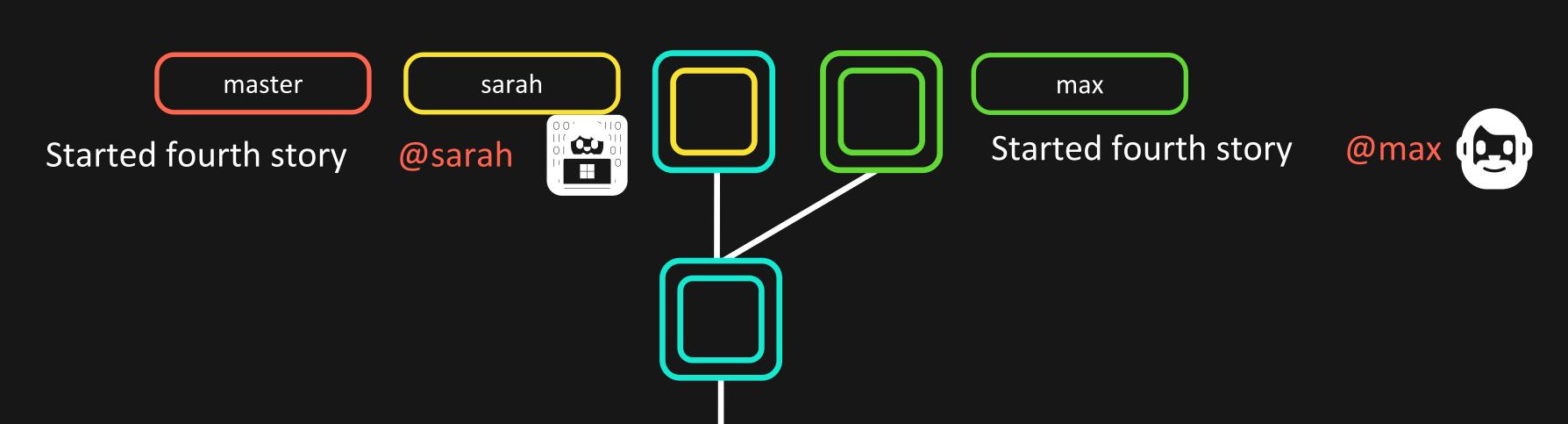
This is Max's version

of the fourth story!

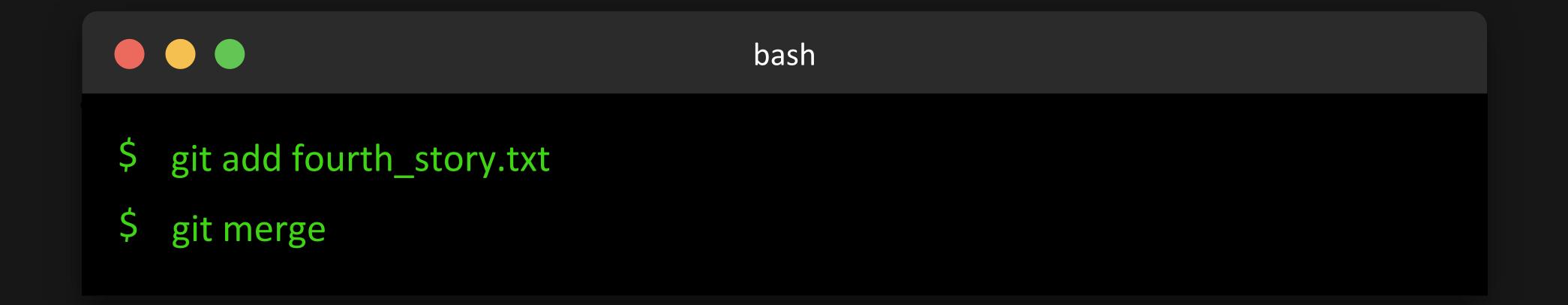
Some extra stuff Sarah added

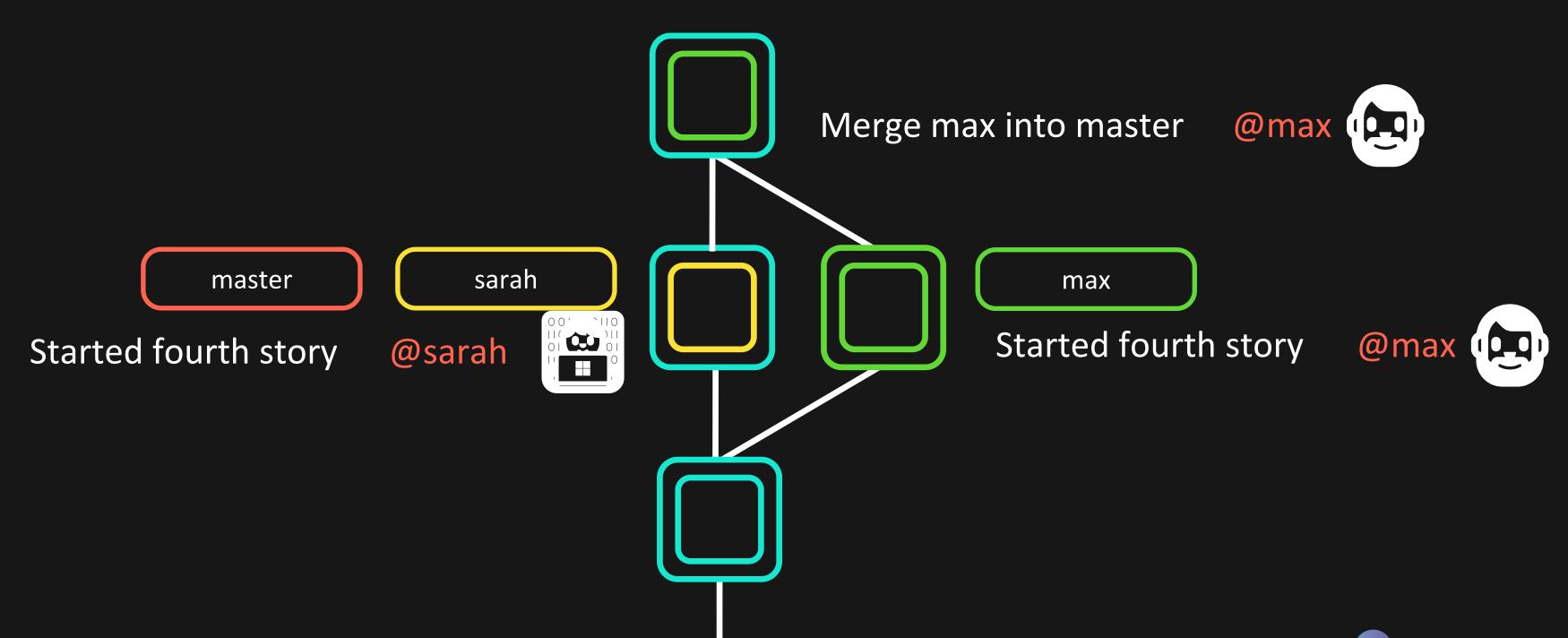












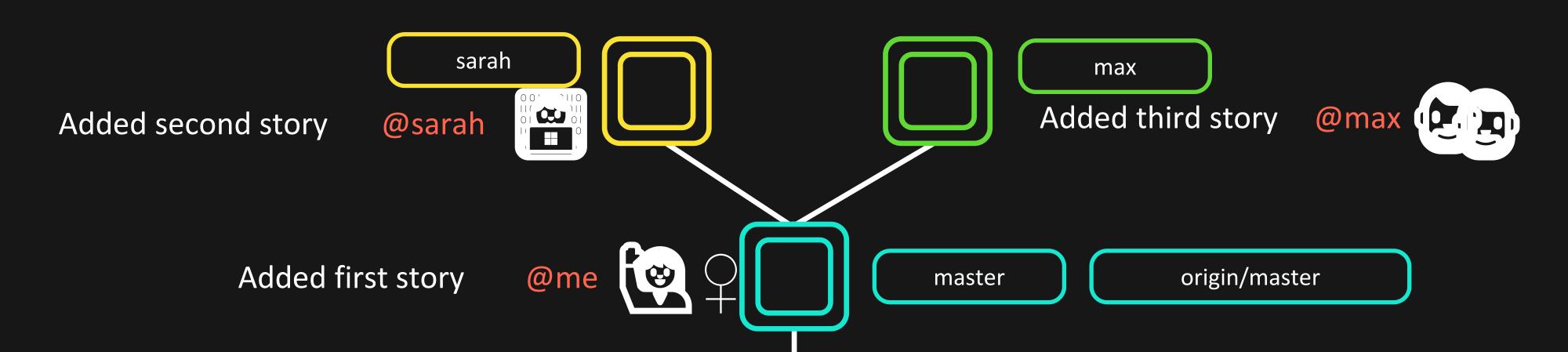




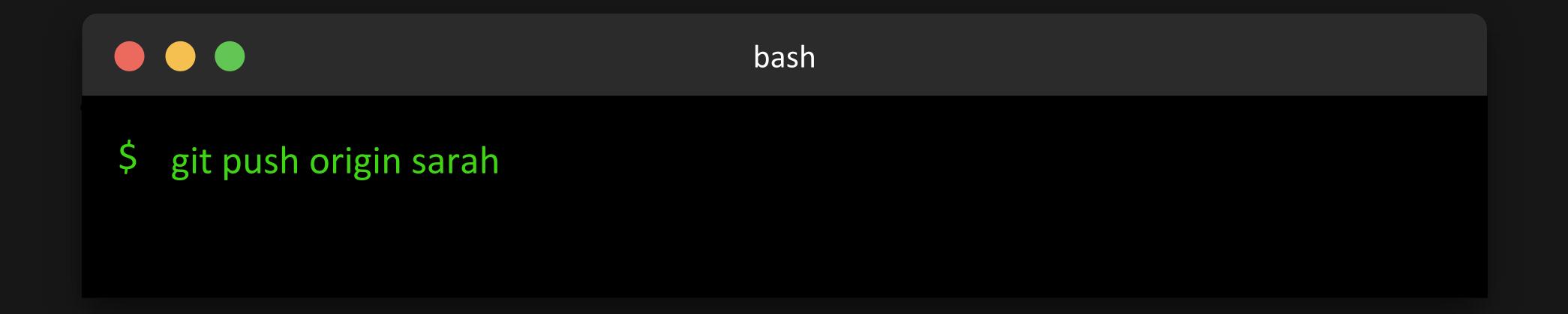


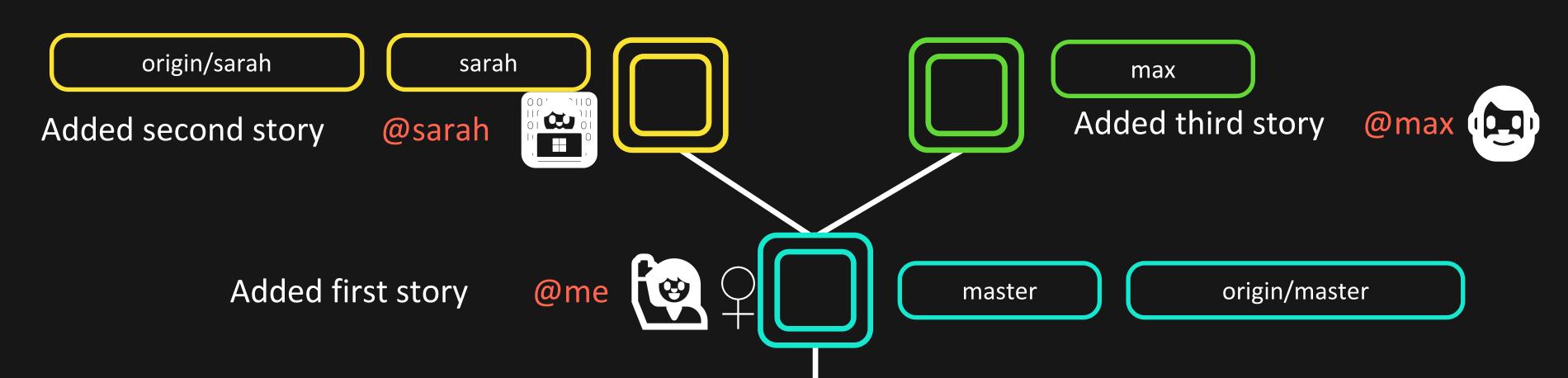
Pull Request



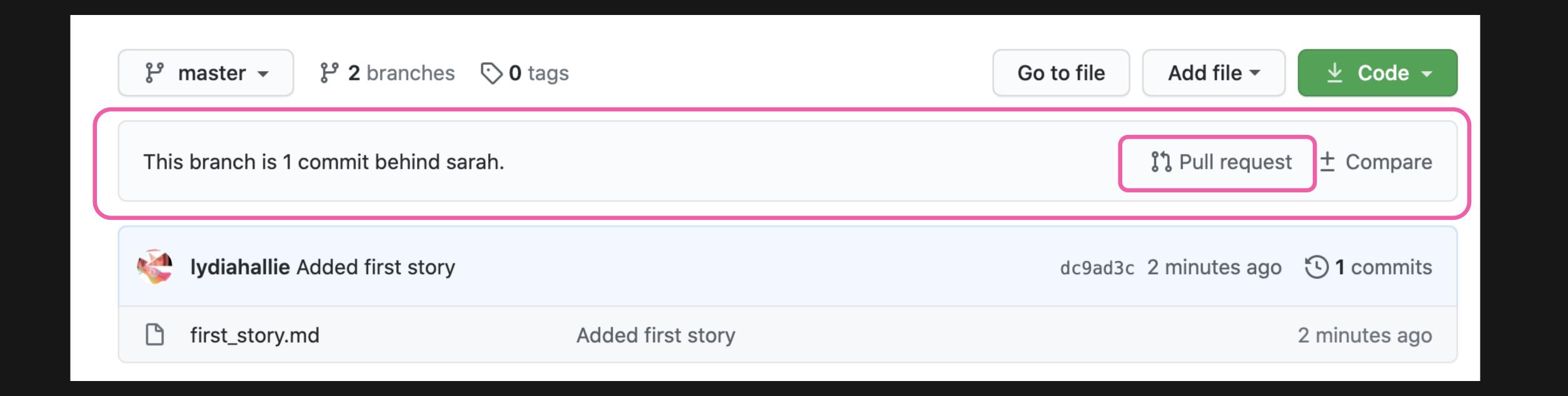








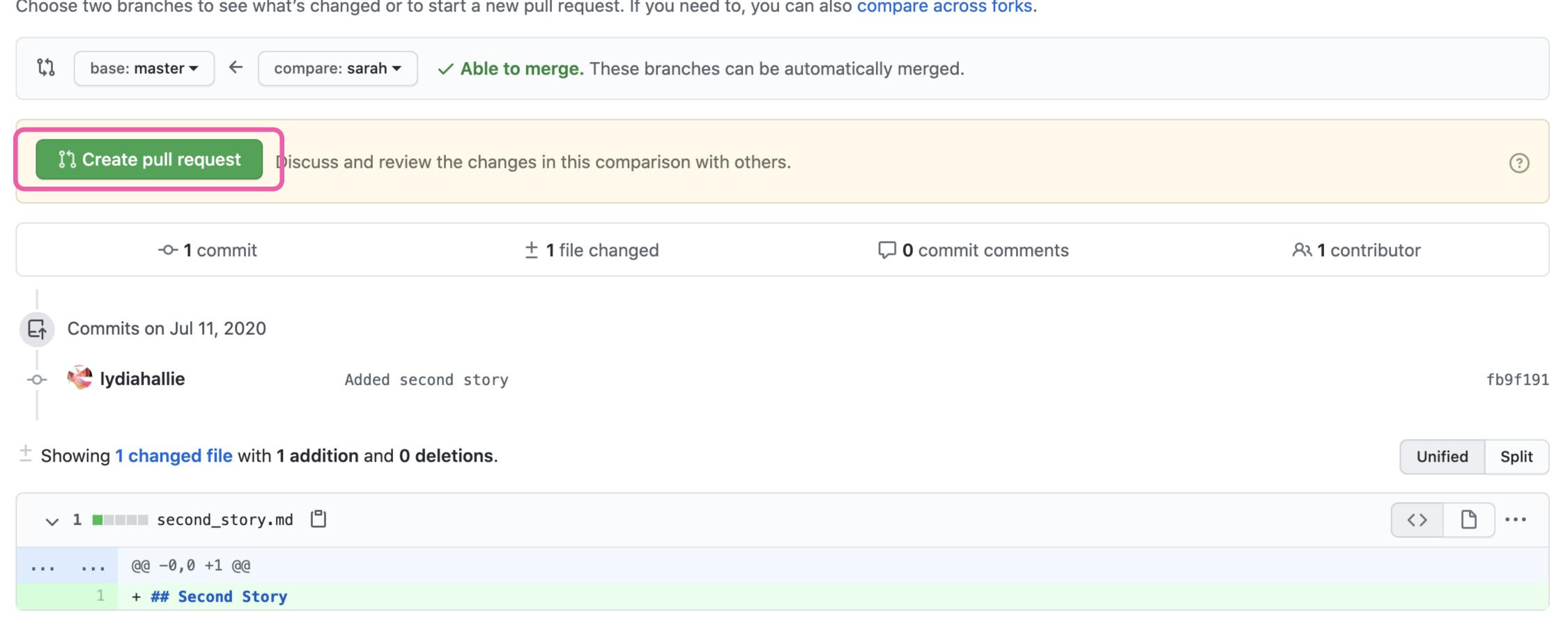






Comparing changes

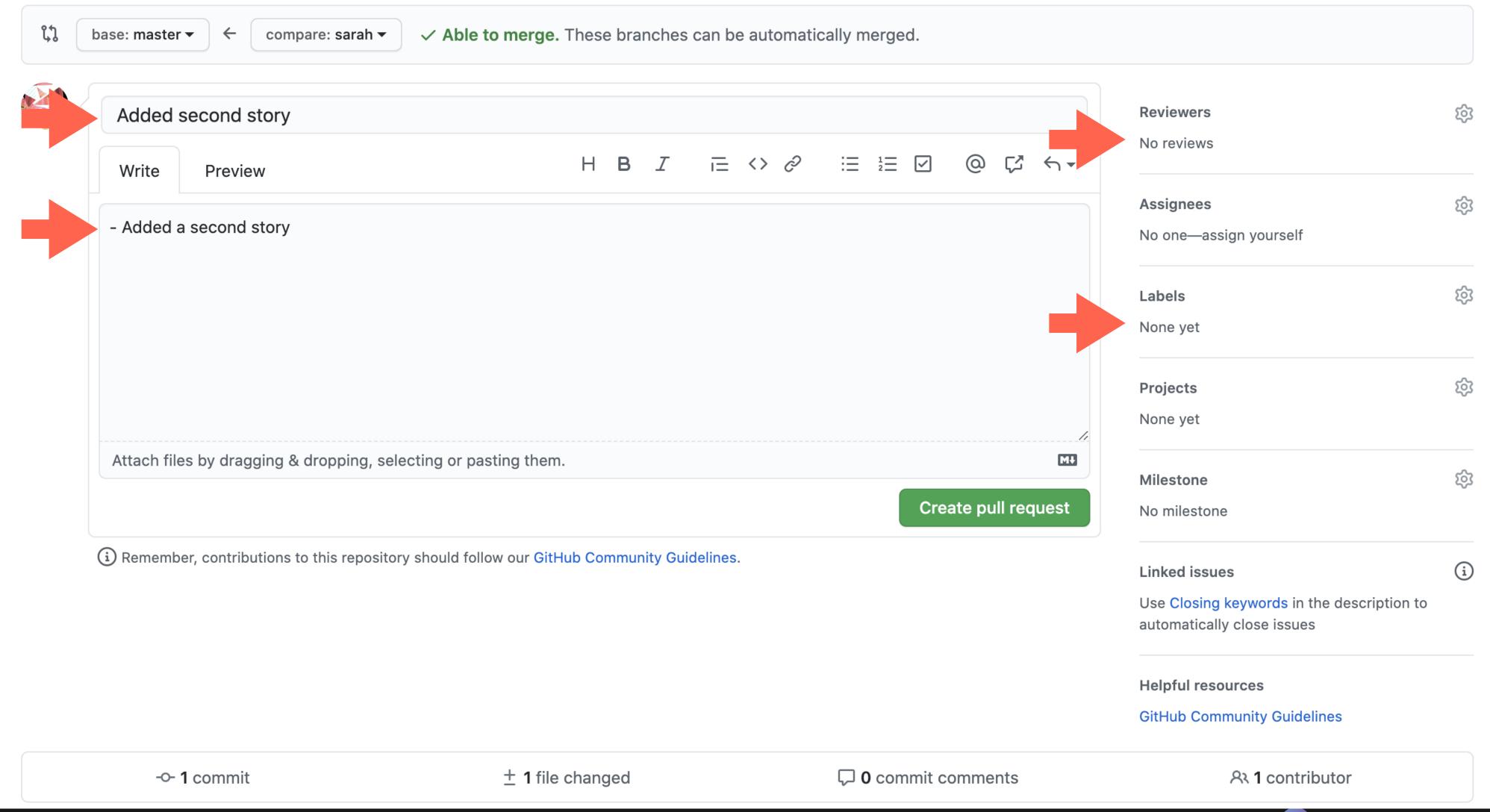
Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks.



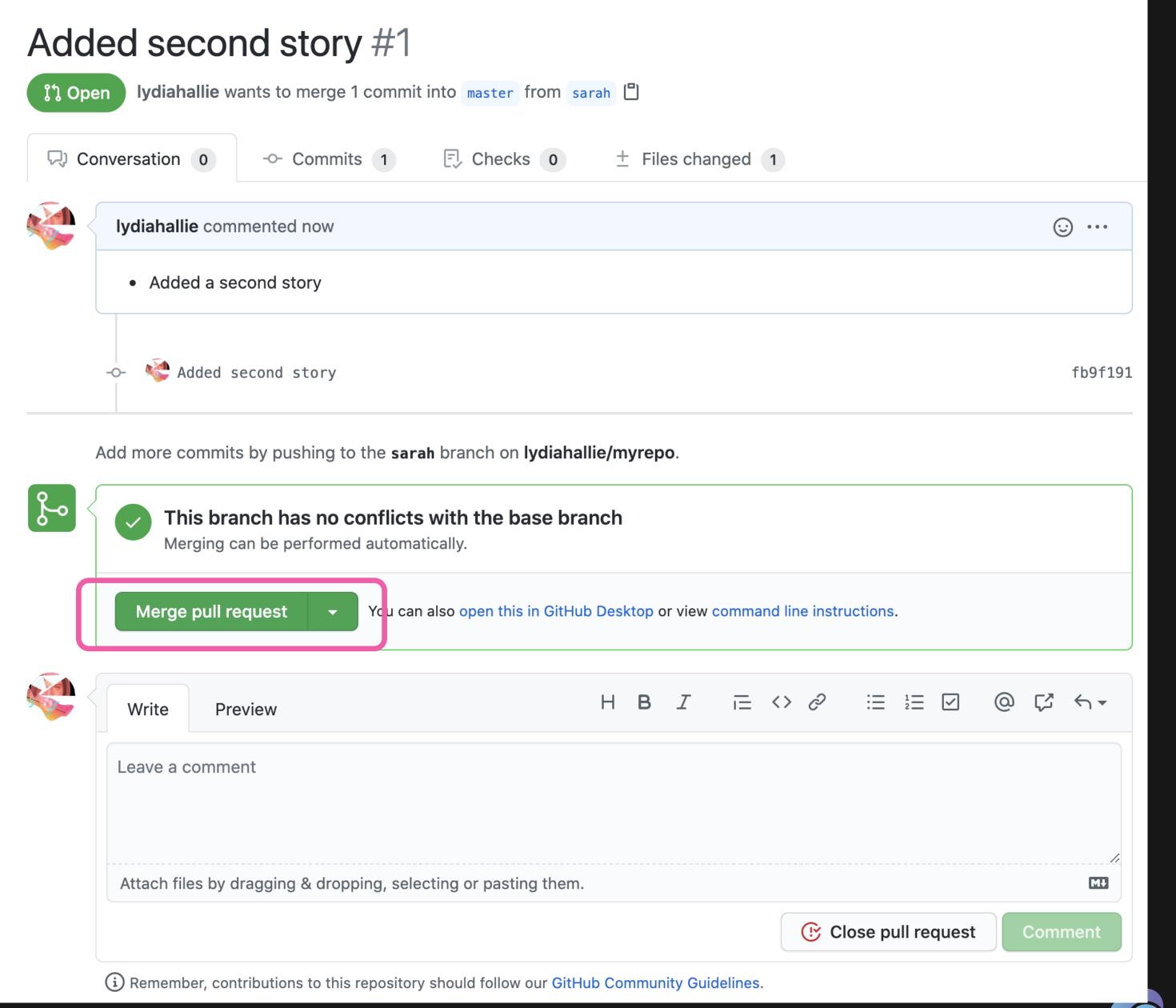


Open a pull request

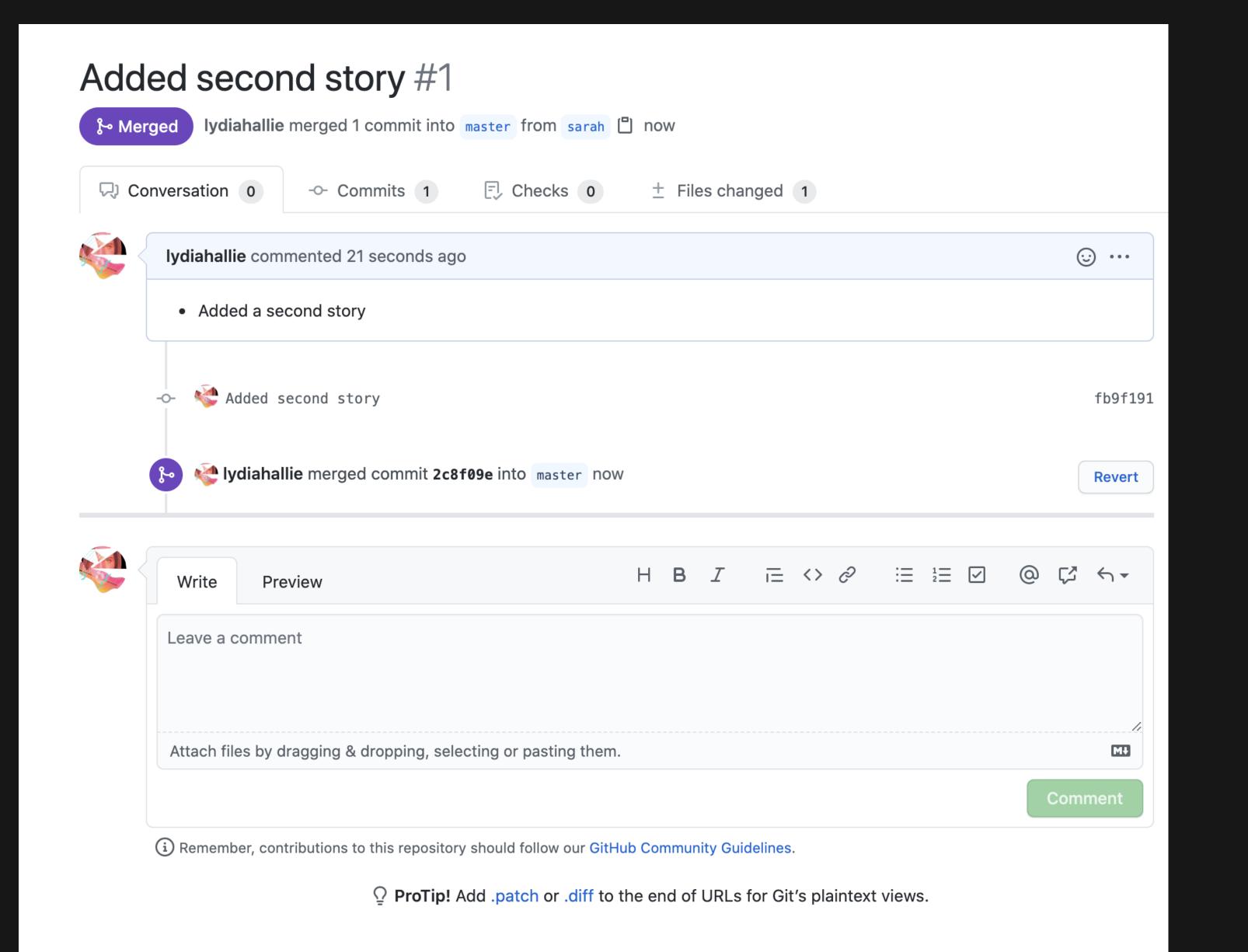
Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.











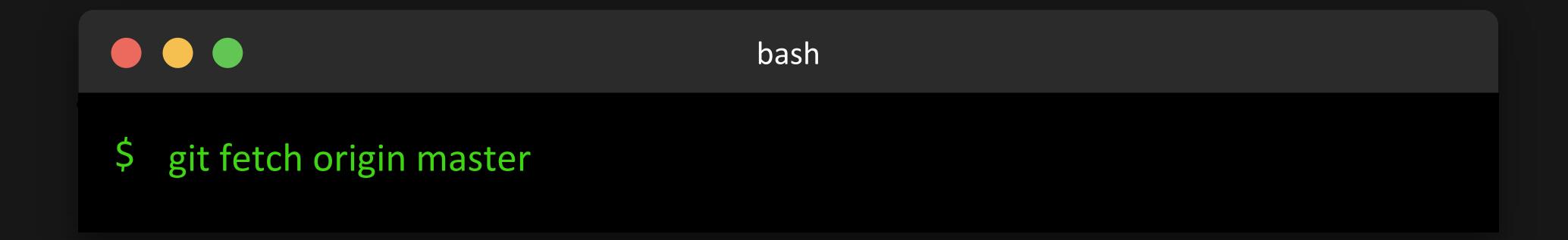


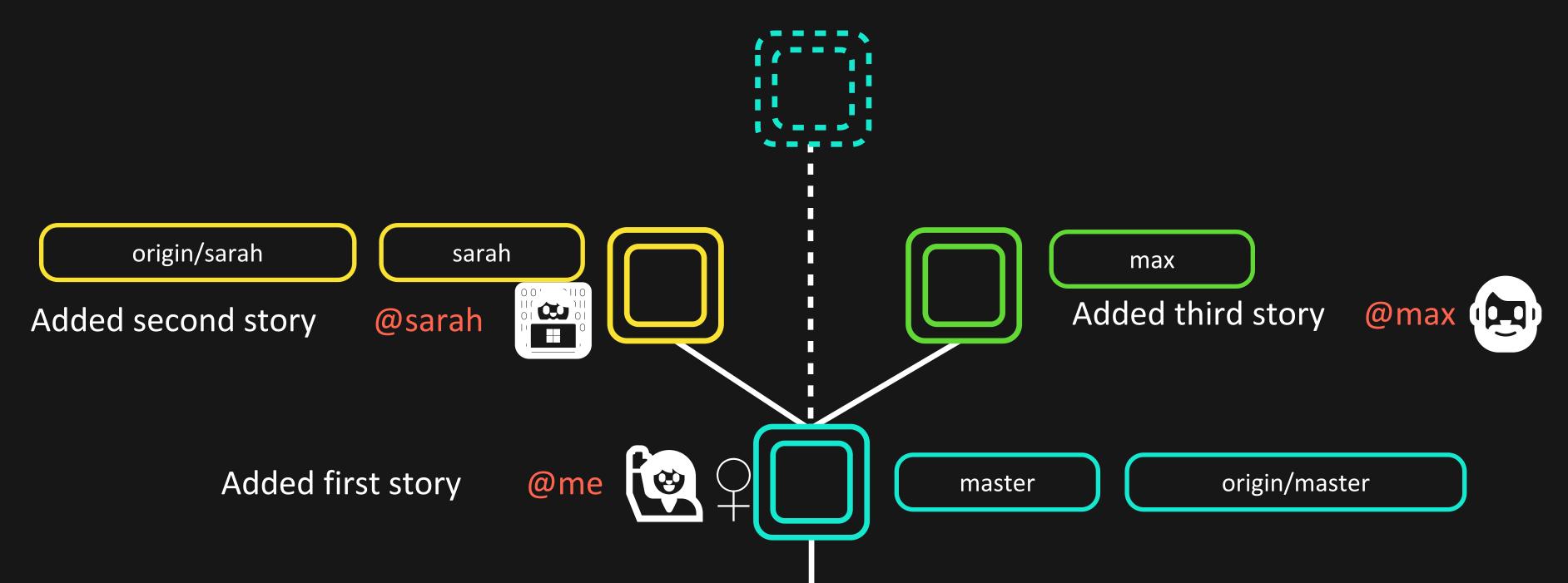




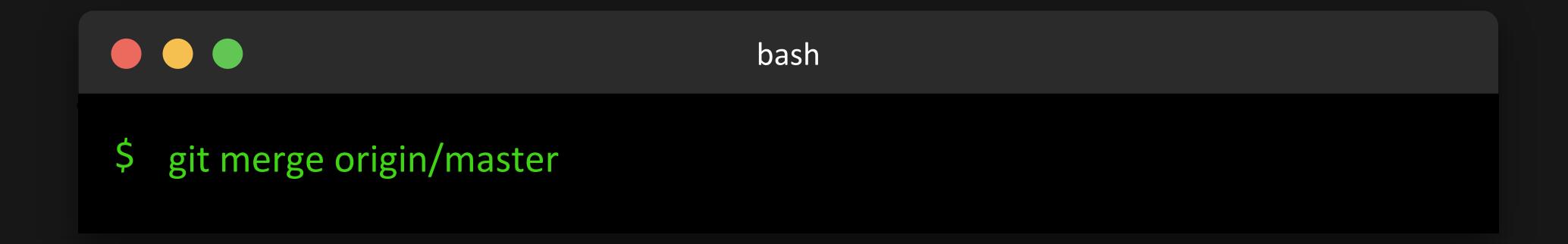
Fetching and Pulling

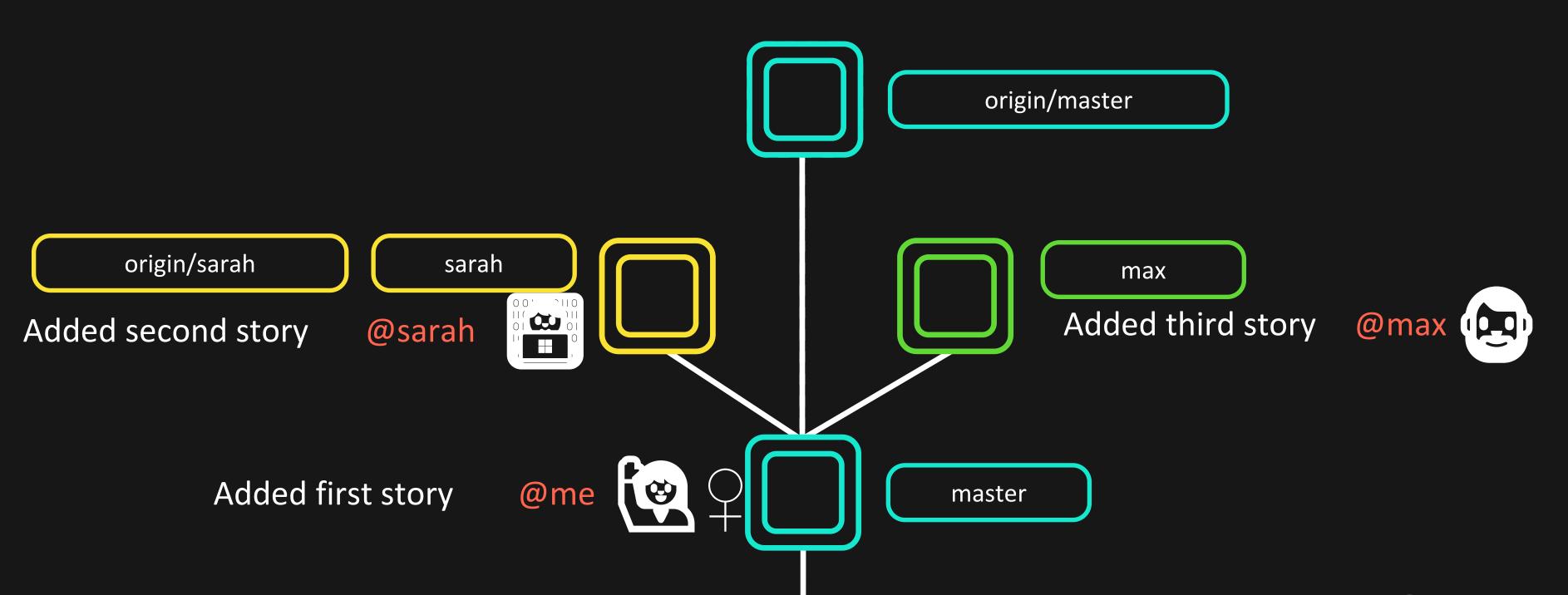




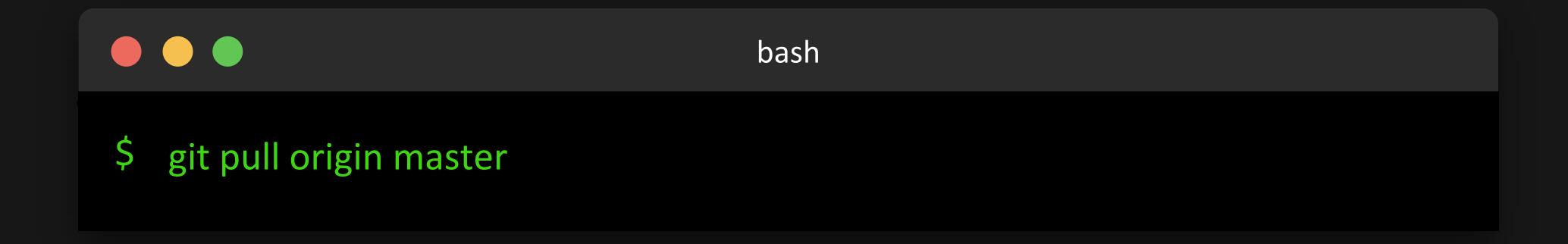


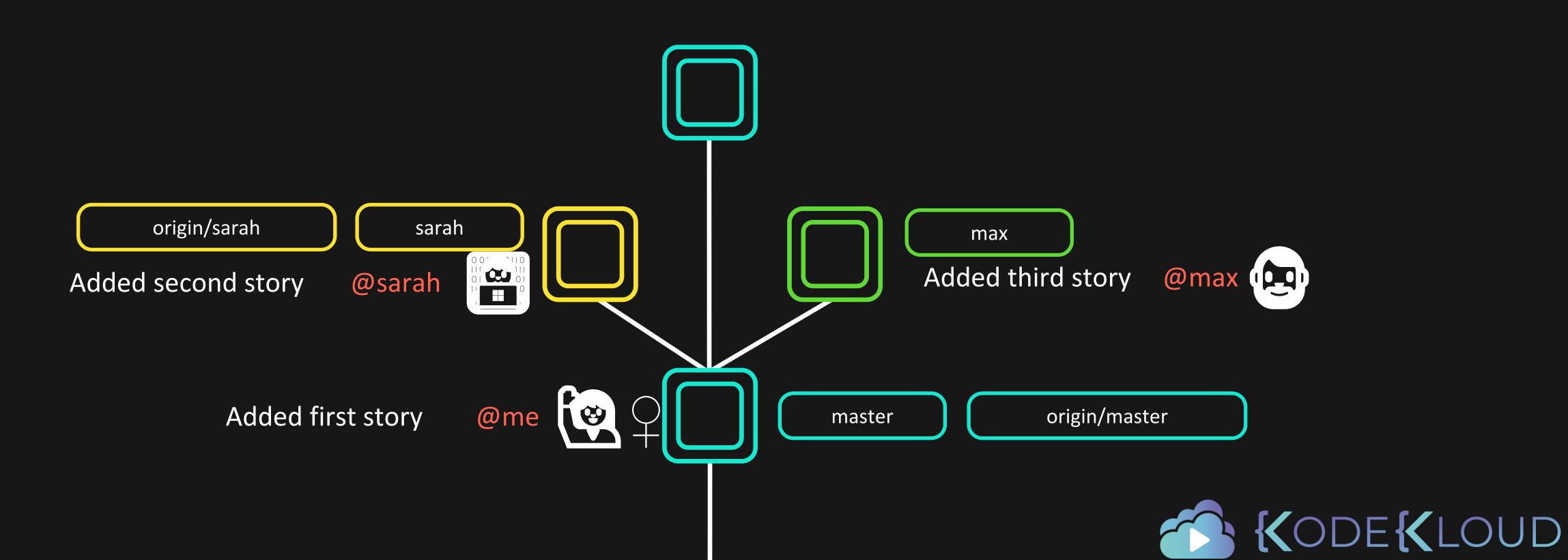










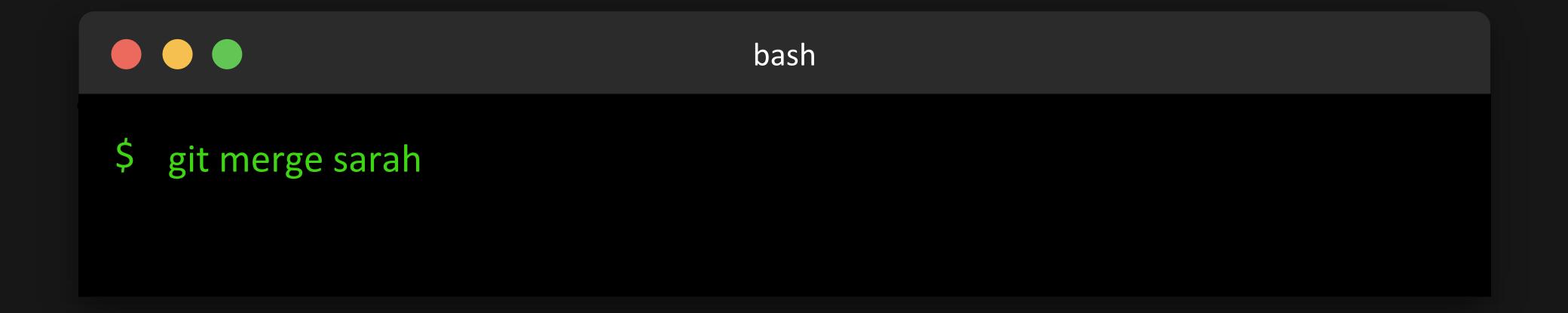


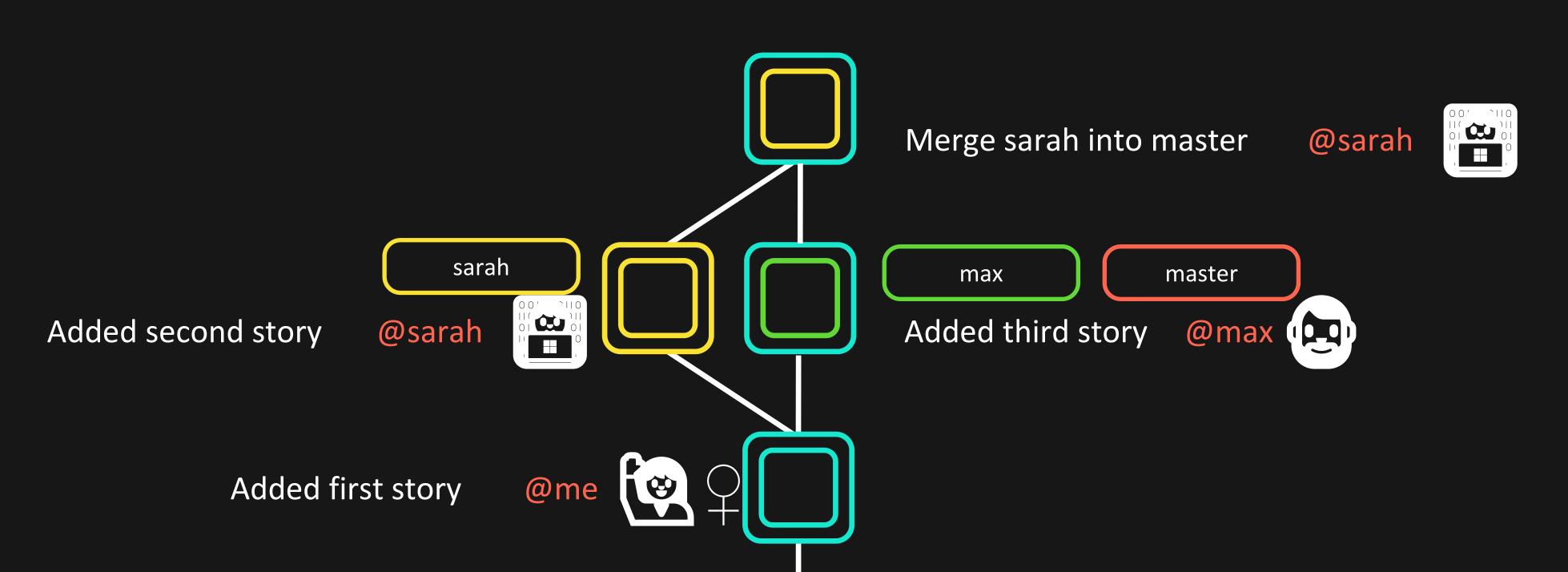




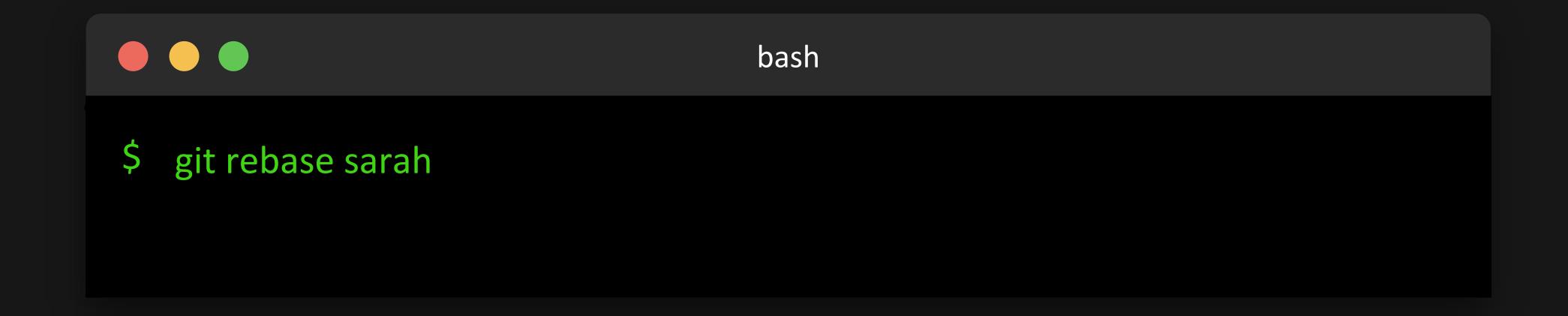
Rebasing

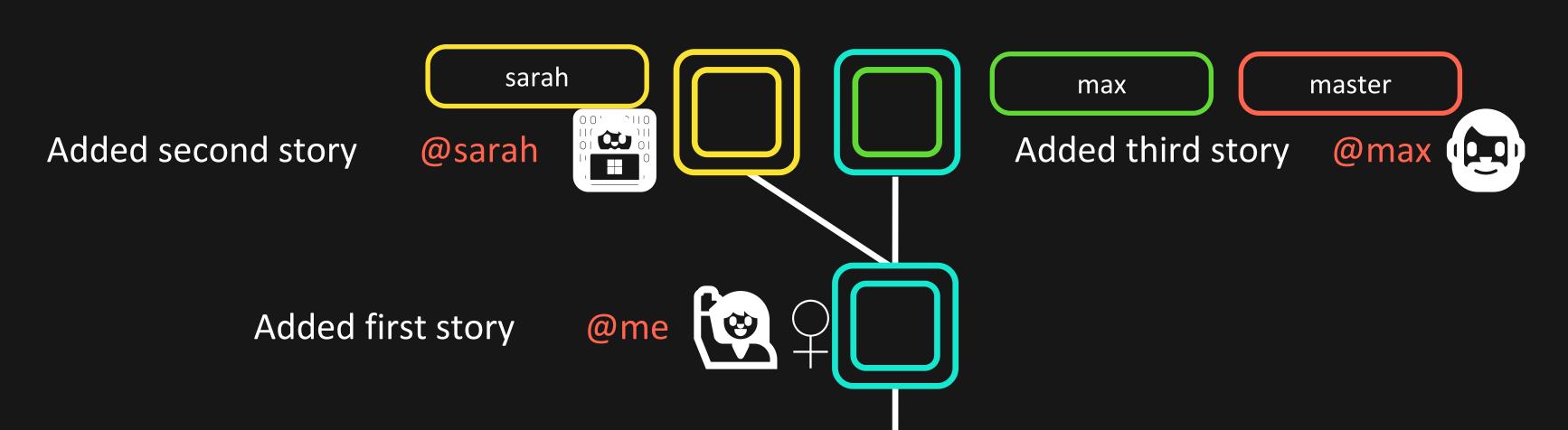




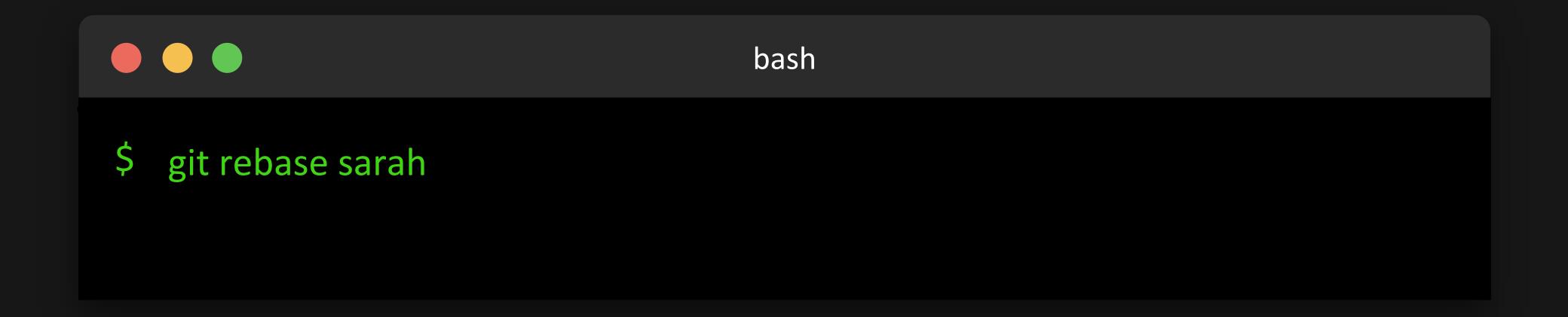


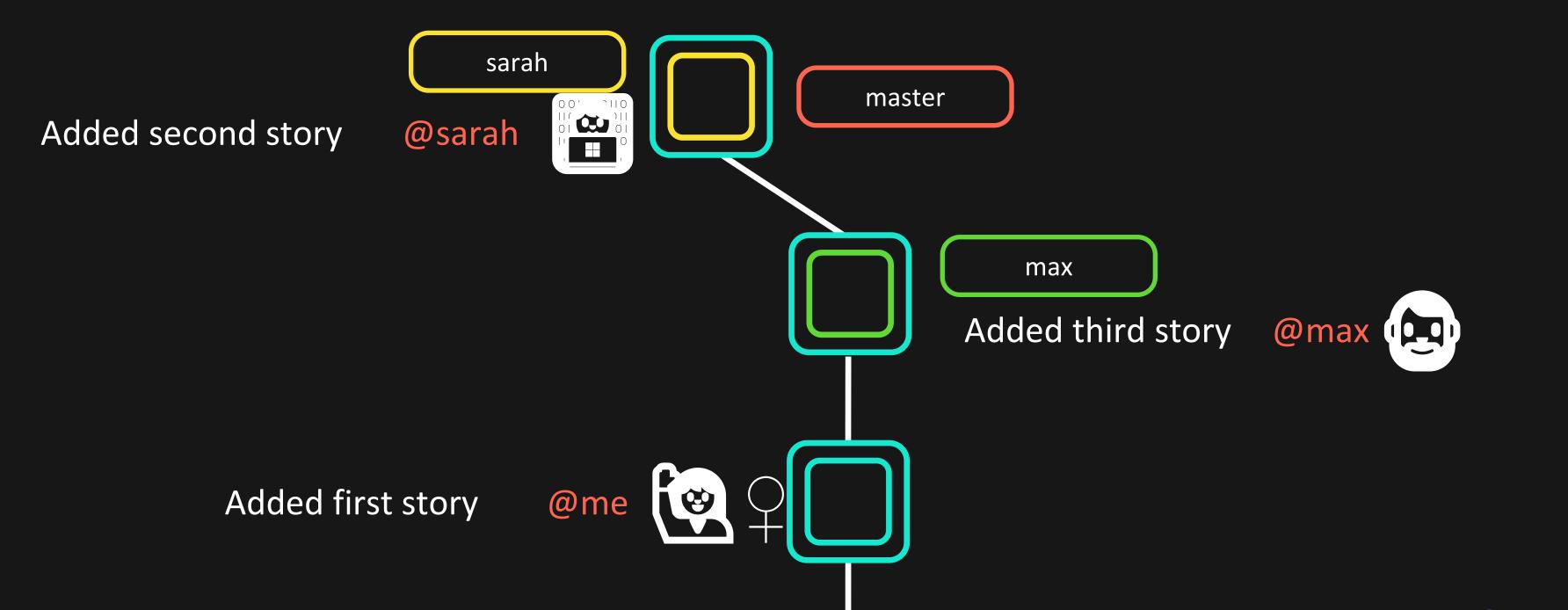




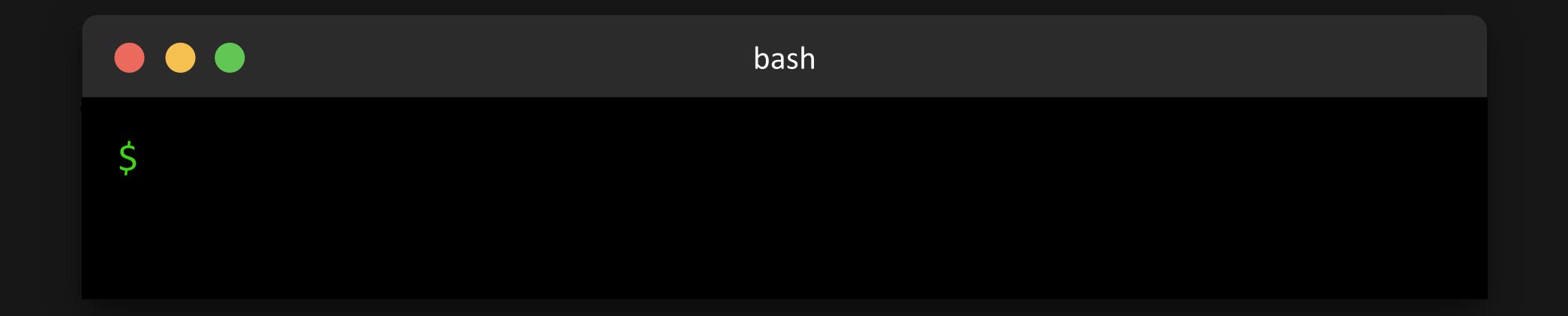




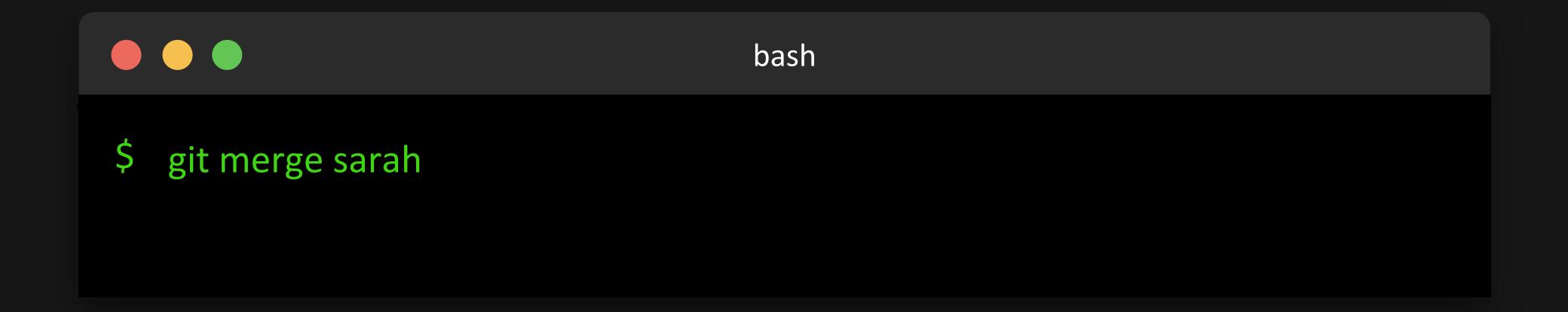


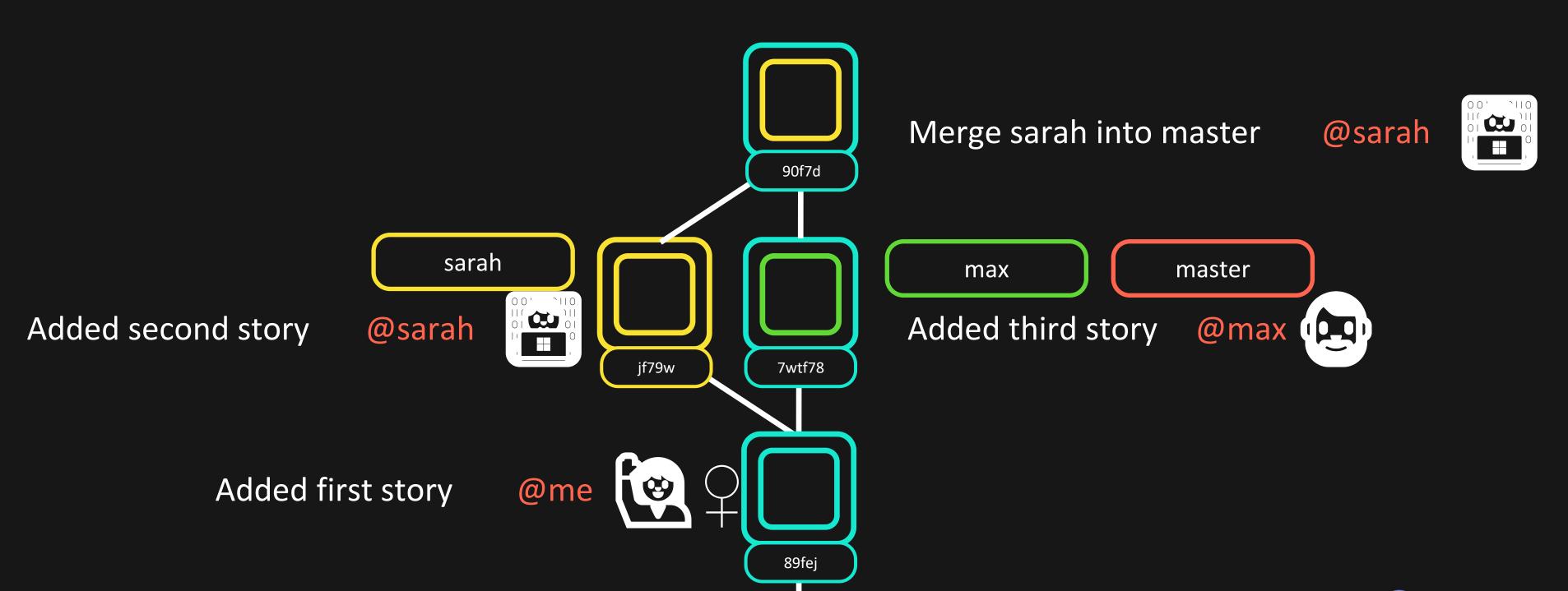




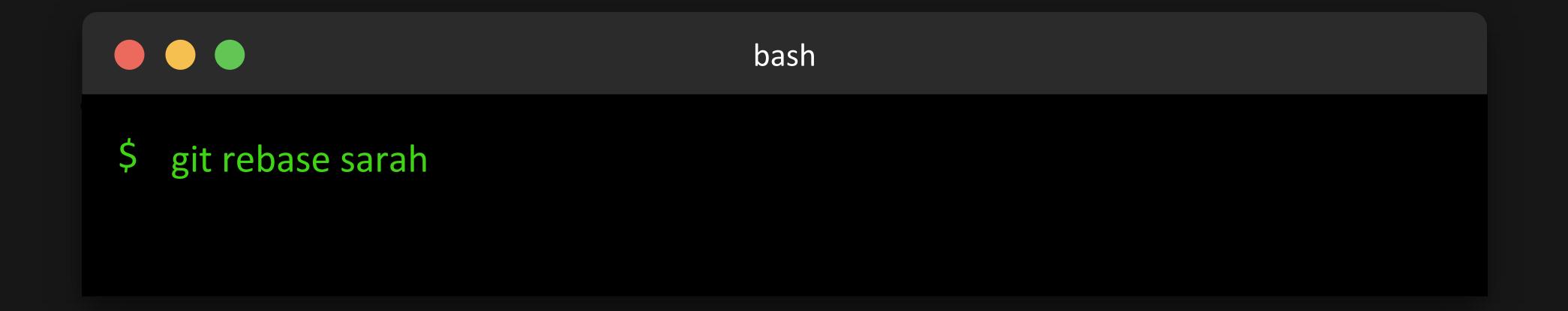


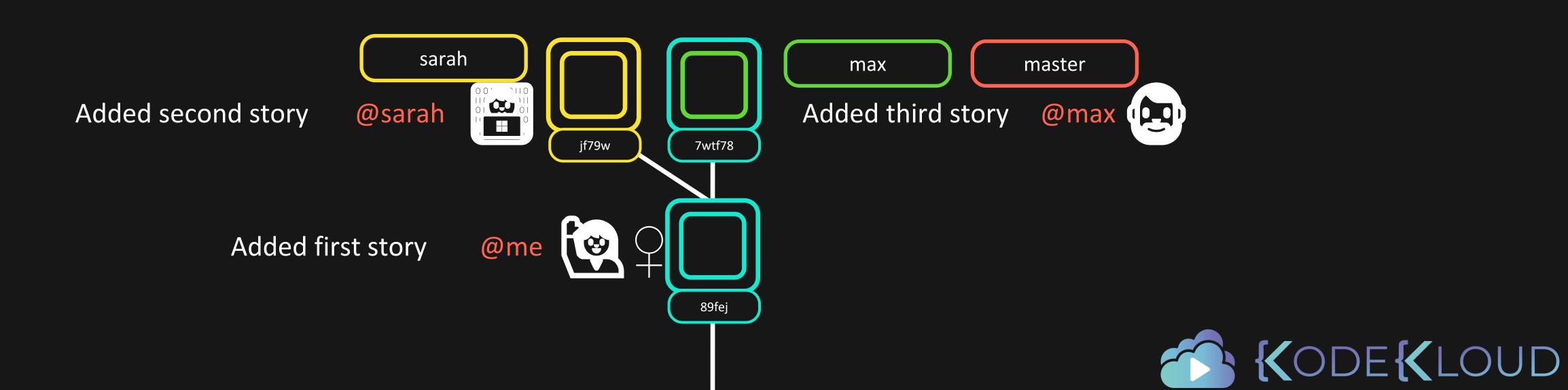


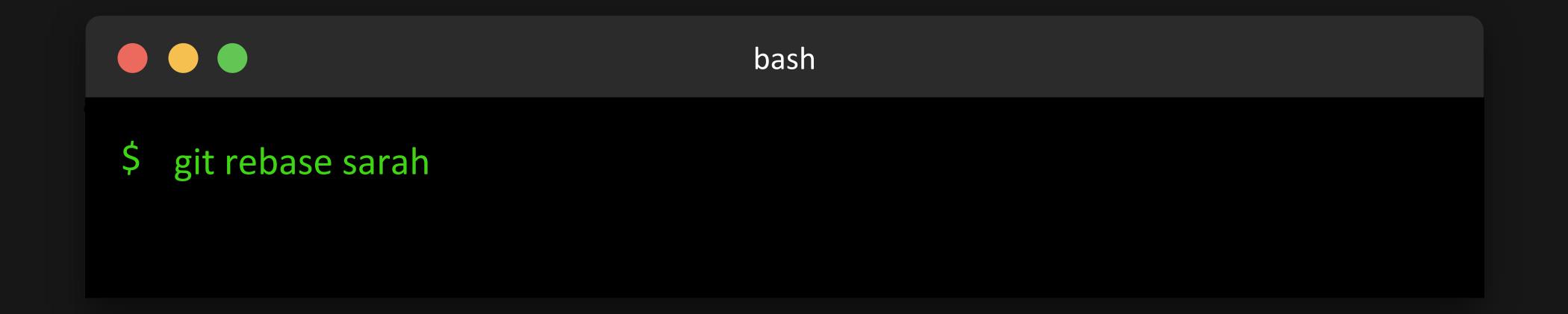


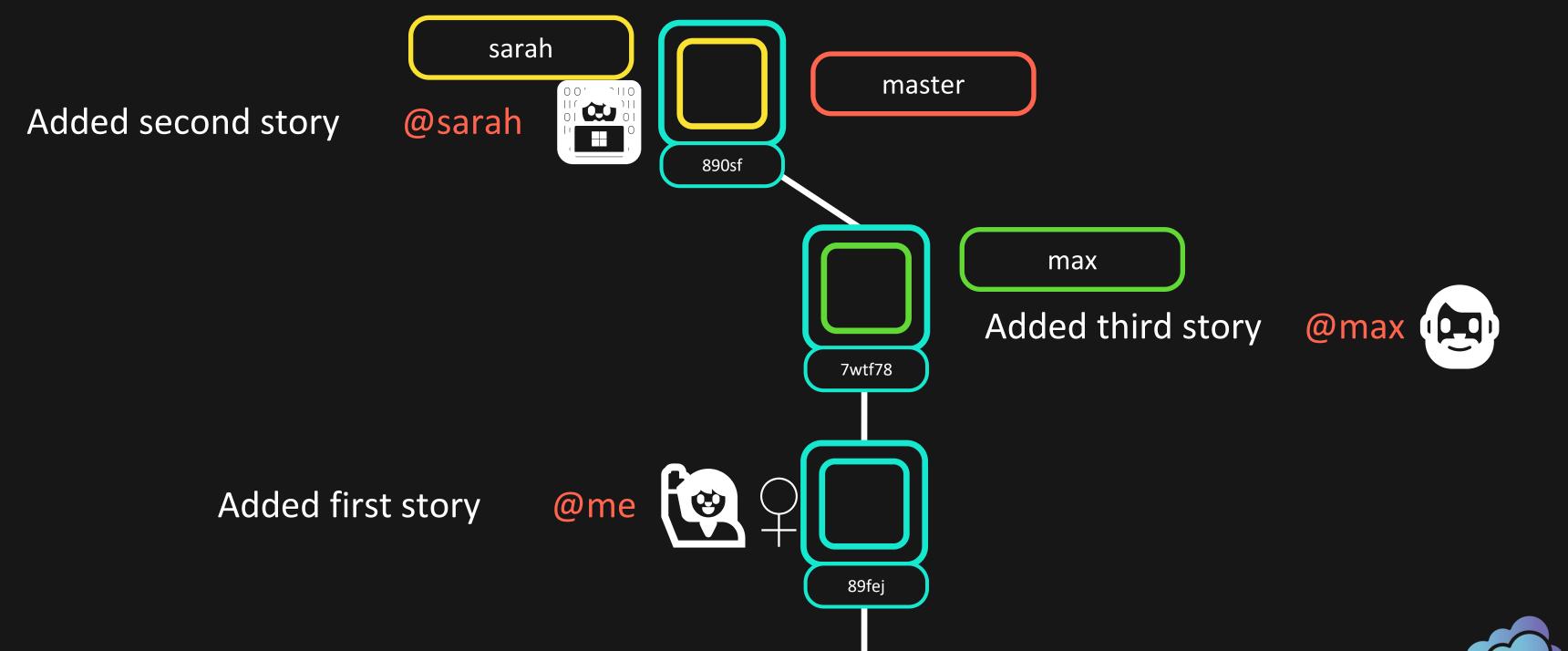












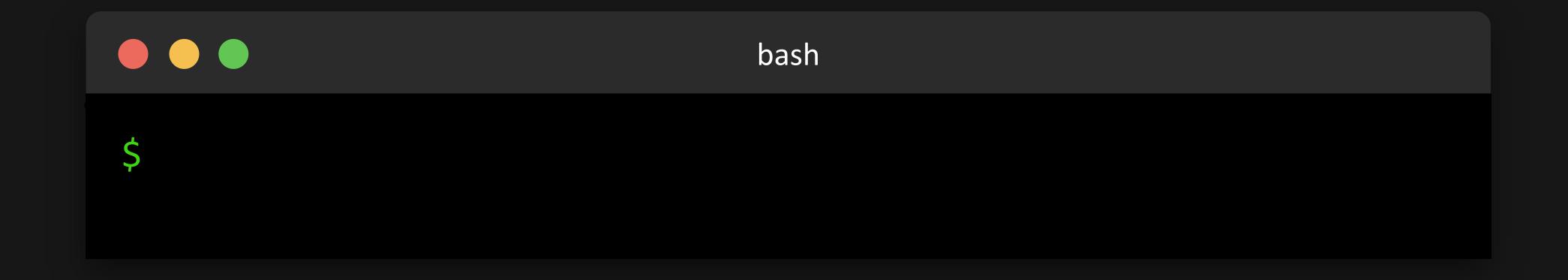


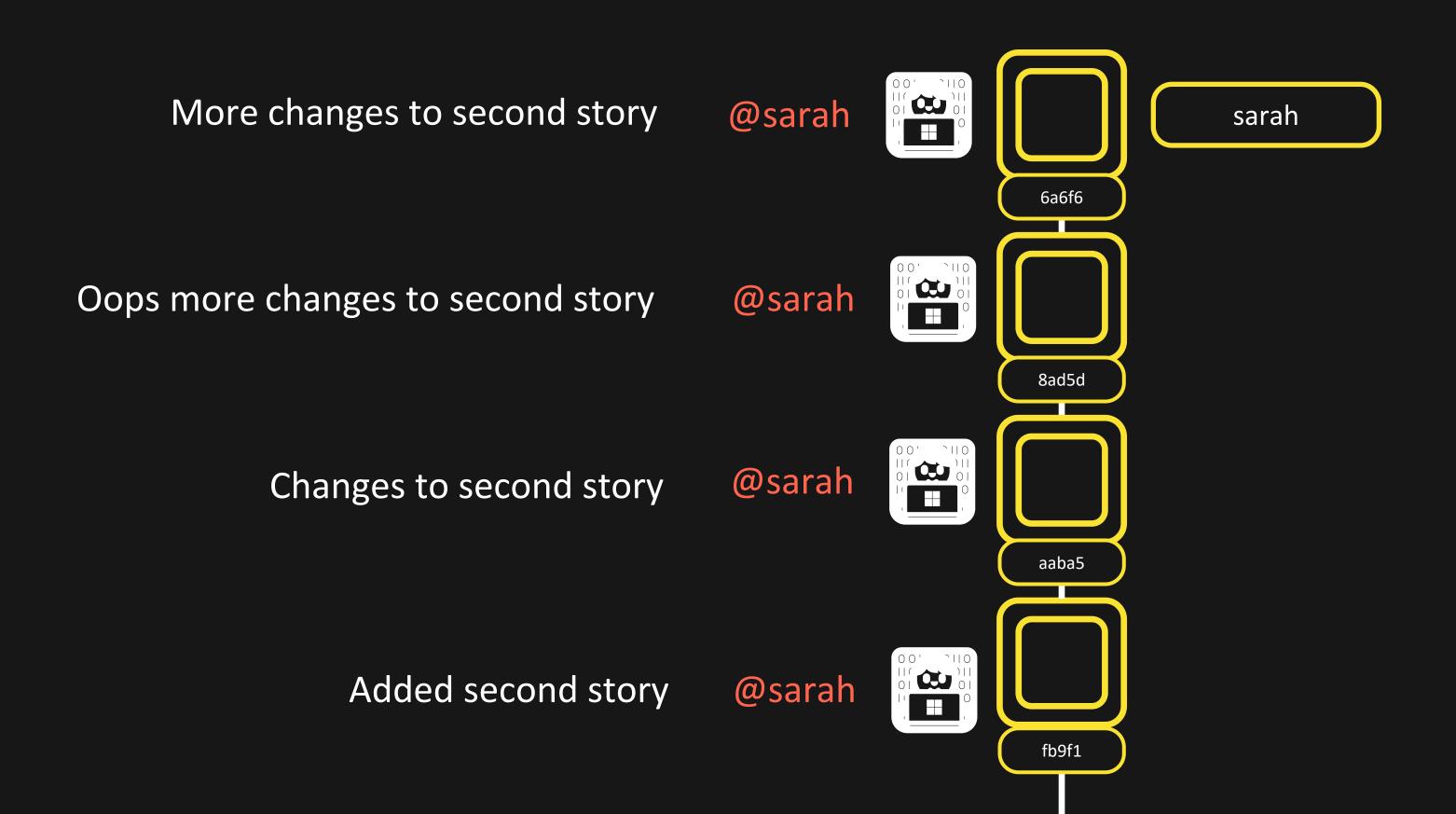




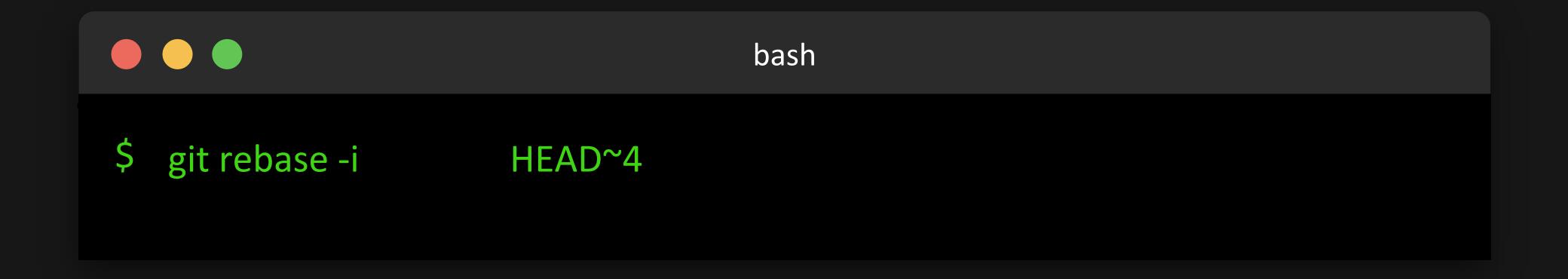
Interactive Rebasing

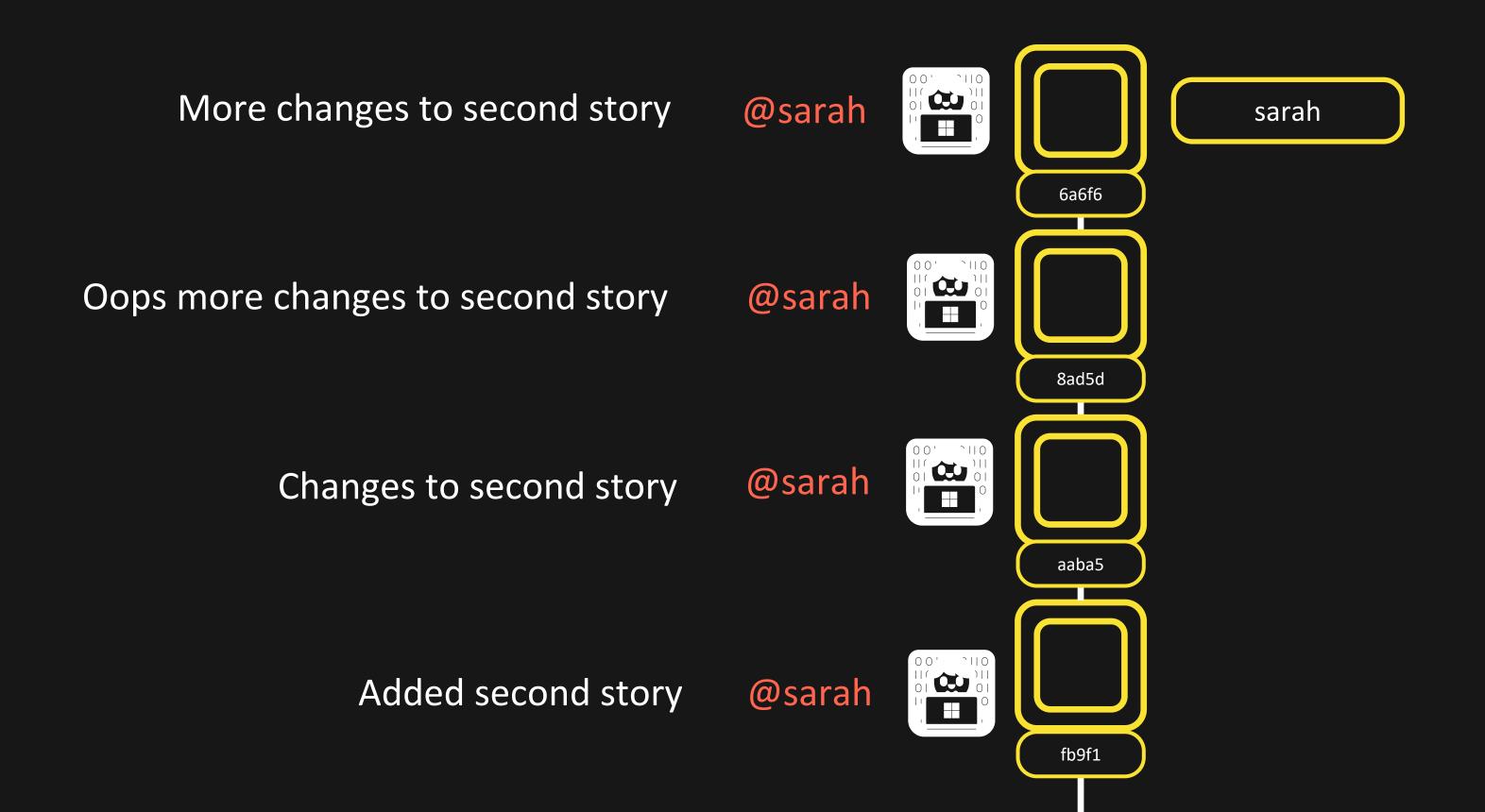














git rebase -i HEAD~4 pick fb9f191 Added second story aaba5e7 Changes to second story pick pick 8ad5d7b Oops more changes to second story pick 6a6f68b More changes to second story # Rebase dc9ad3c..6a6f68b onto 6a6f68b (4 commands) # Commands: # p, pick <commit> = use commit # r, reword <commit> = use commit, but edit the commit message # e, edit <commit> = use commit, but stop for amending # s, squash <commit> = use commit, but meld into previous commit # f, fixup <commit> = like "squash", but discard this commit's log message # x, exec <command> = run command (the rest of the line) using shell # b, break = stop here (continue rebase later with 'git rebase --continue') # d, drop <commit> = remove commit # I, label <label> = label current HEAD with a name # t, reset <label> = reset HEAD to a label # m, merge [-C <commit> | -c <commit>] <label> [# <oneline>] create a merge commit using the original merge commit's message (or the oneline, if no original merge commit was

specified). Use -c <commit> to reword the commit message.



git rebase -i HEAD~4 pick fb9f191 Added second story aaba5e7 Changes to second story pick pick 8ad5d7b Oops more changes to second story pick 6a6f68b More changes to second story # Rebase dc9ad3c..6a6f68b onto 6a6f68b (4 commands) # Commands: # p, pick <commit> = use commit # r, reword <commit> = use commit, but edit the commit message # e, edit <commit> = use commit, but stop for amending # s, squash <commit> = use commit, but meld into previous commit # f, fixup <commit> = like "squash", but discard this commit's log message # x, exec <command> = run command (the rest of the line) using shell # b, break = stop here (continue rebase later with 'git rebase --continue') # d, drop <commit> = remove commit # I, label <label> = label current HEAD with a name # t, reset <label> = reset HEAD to a label # m, merge [-C <commit> | -c <commit>] <label> [# <oneline>] create a merge commit using the original merge commit's

message (or the oneline, if no original merge commit was

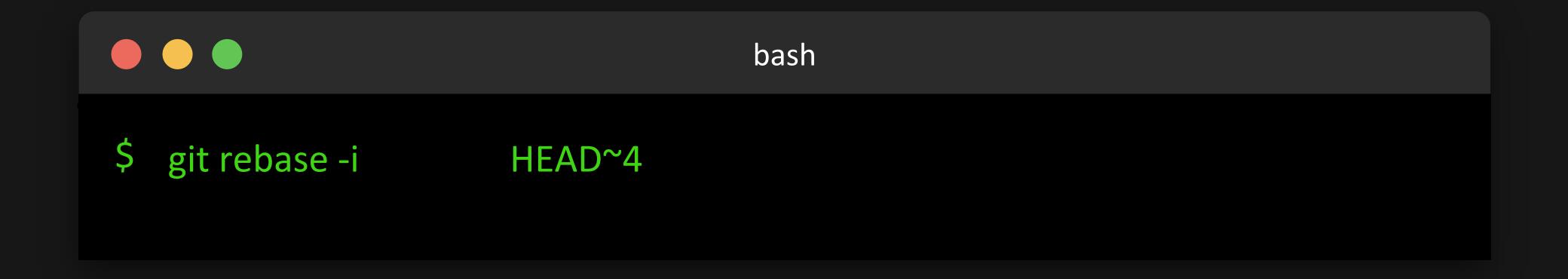
specified). Use -c <commit> to reword the commit message.

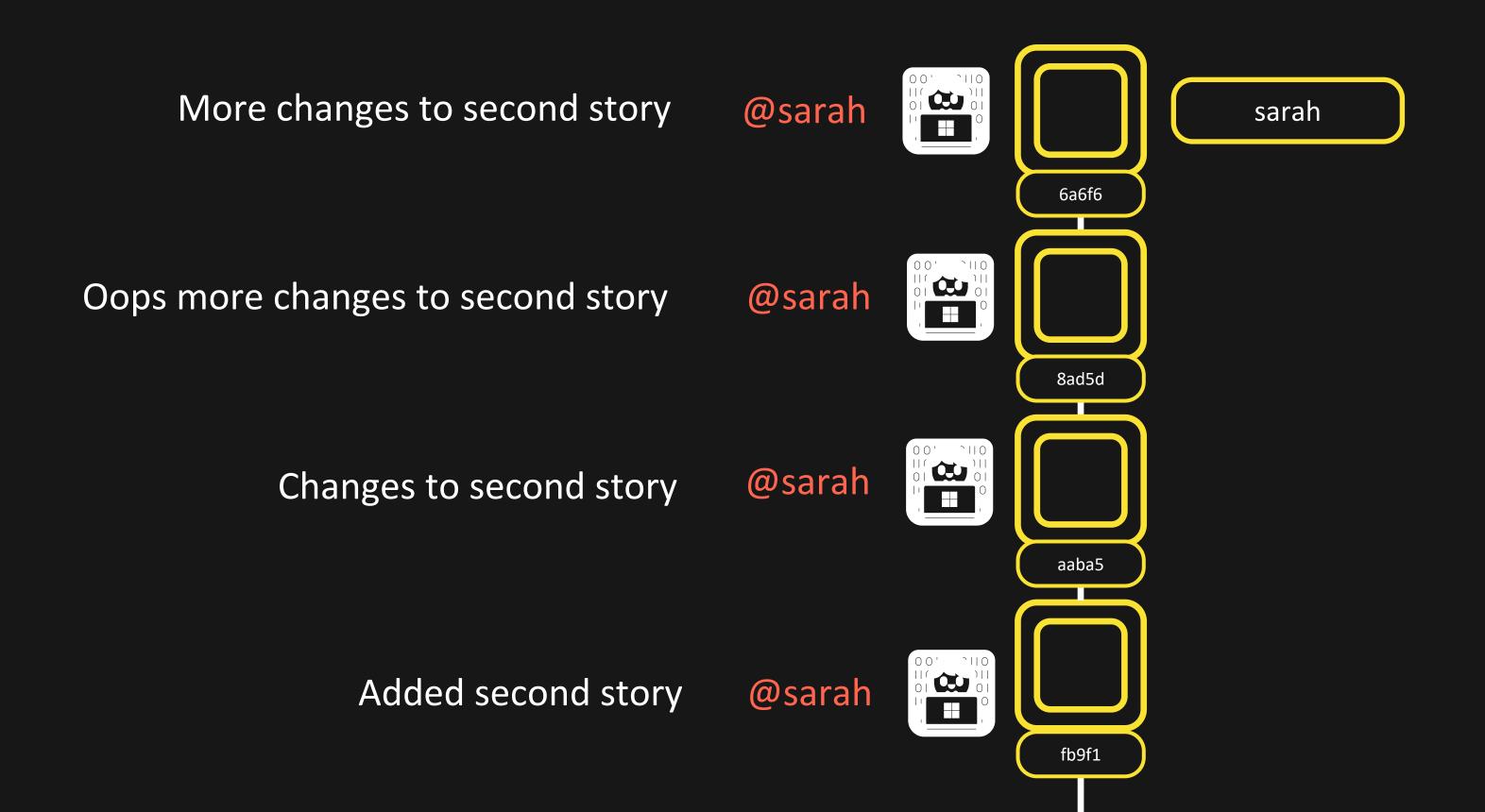




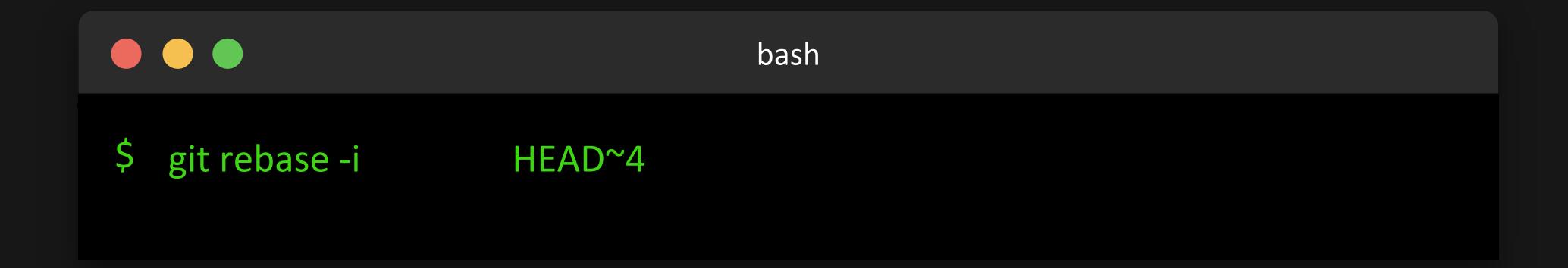
```
git rebase -i
                                HEAD~4
pick fb9f191 Added second story
          aaba5e7 Changes to second story
squash
          8ad5d7b Oops more changes to second story
squash
          6a6f68b More changes to second story
squash
# Rebase dc9ad3c..6a6f68b onto 6a6f68b (4 commands)
# Commands:
# p, pick <commit> = use commit
# r, reword <commit> = use commit, but edit the commit message
# e, edit <commit> = use commit, but stop for amending
# s, squash <commit> = use commit, but meld into previous commit
# f, fixup <commit> = like "squash", but discard this commit's log message
# x, exec <command> = run command (the rest of the line) using shell
# b, break = stop here (continue rebase later with 'git rebase --continue')
# d, drop <commit> = remove commit
# I, label <label> = label current HEAD with a name
# t, reset <label> = reset HEAD to a label
# m, merge [-C <commit> | -c <commit>] <label> [# <oneline>]
     create a merge commit using the original merge commit's
      message (or the oneline, if no original merge commit was
     specified). Use -c <commit> to reword the commit message.
```



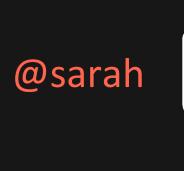


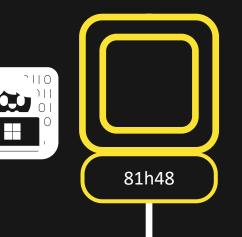






Added second story
Changes to second story
Oops more changes to second story
More changes to second story





sarah

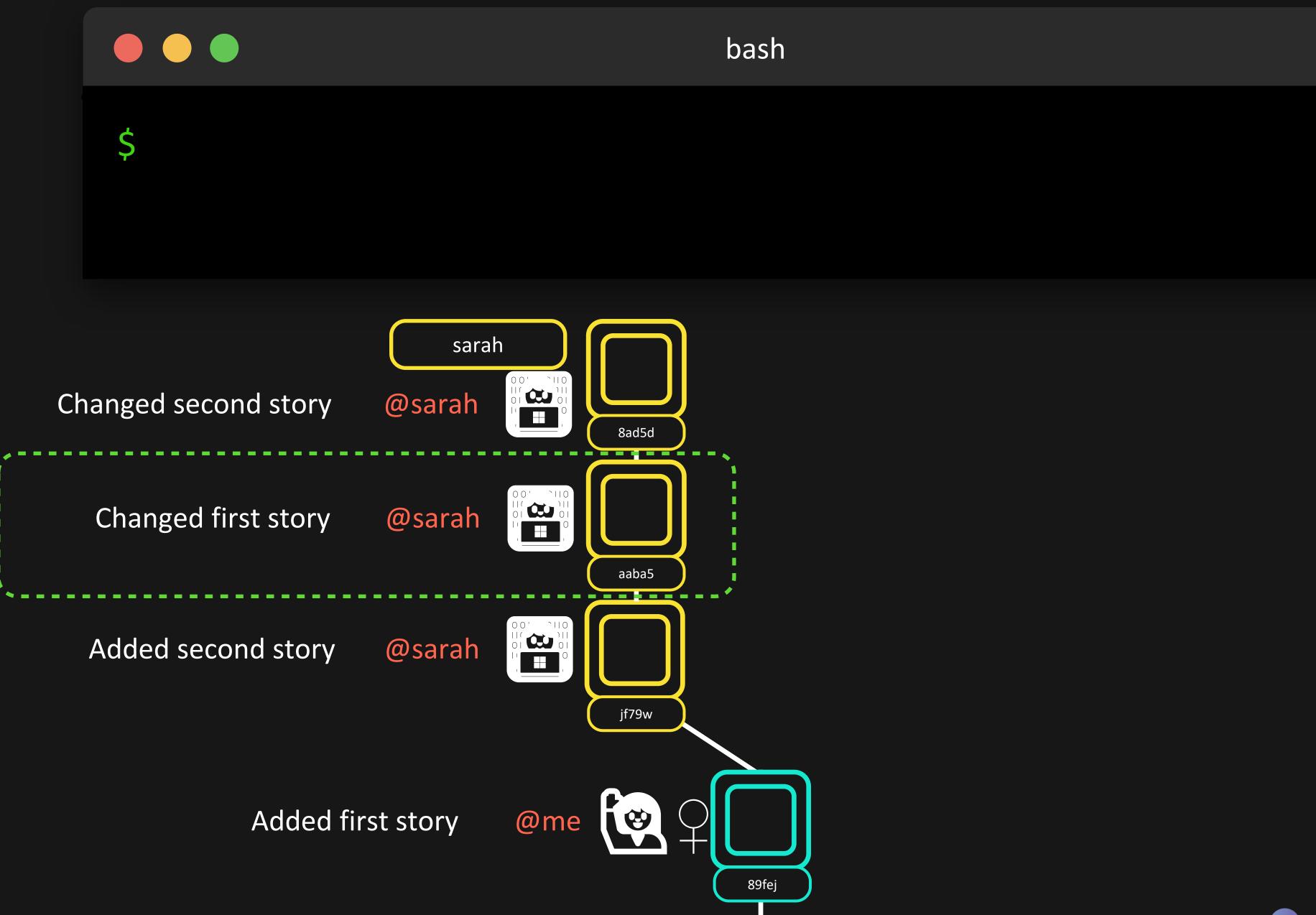




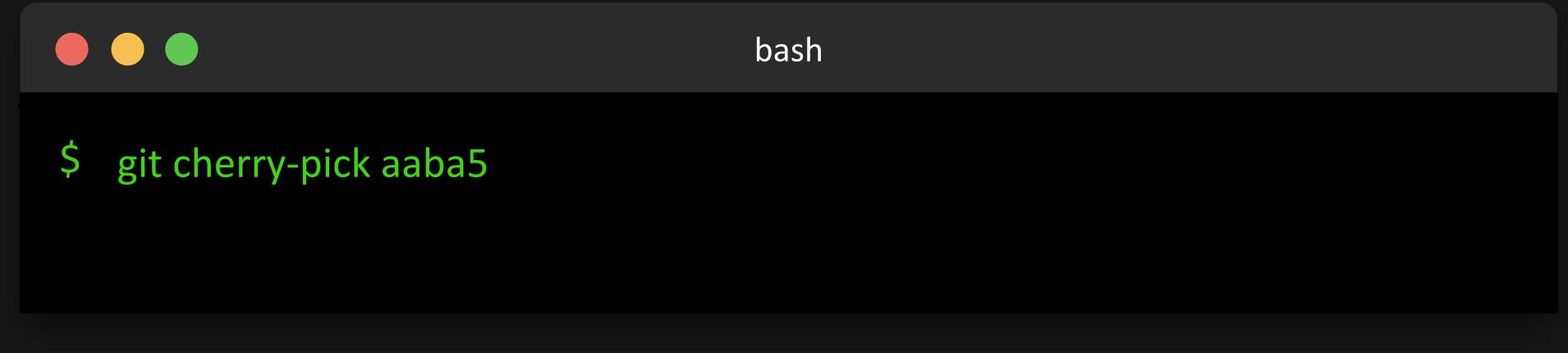


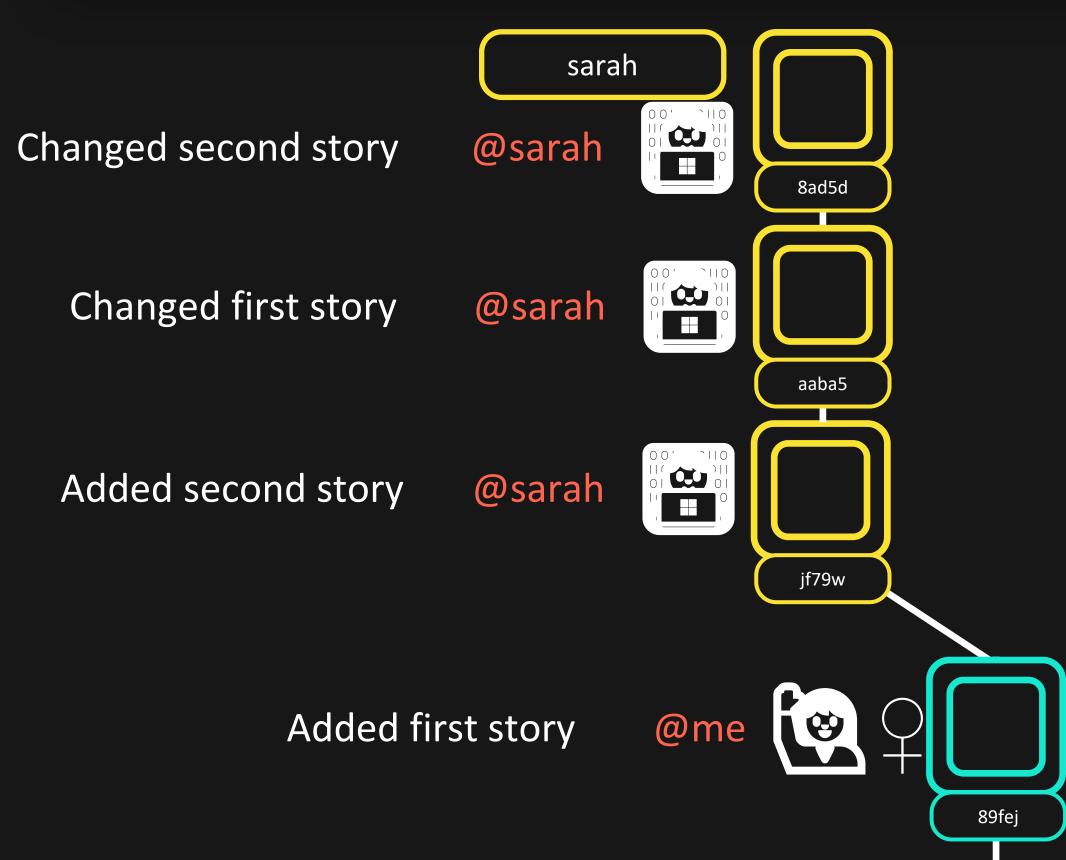
Cherry-Picking



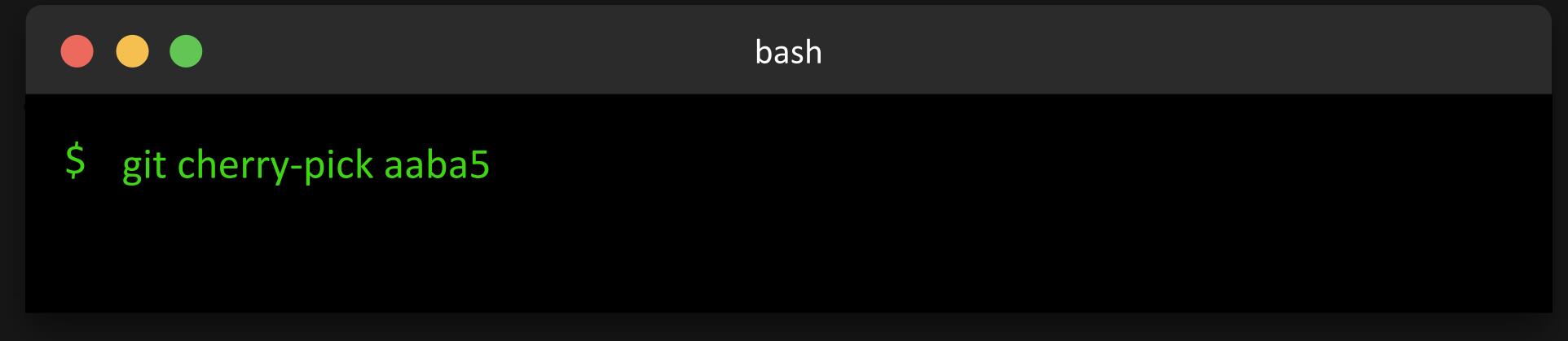


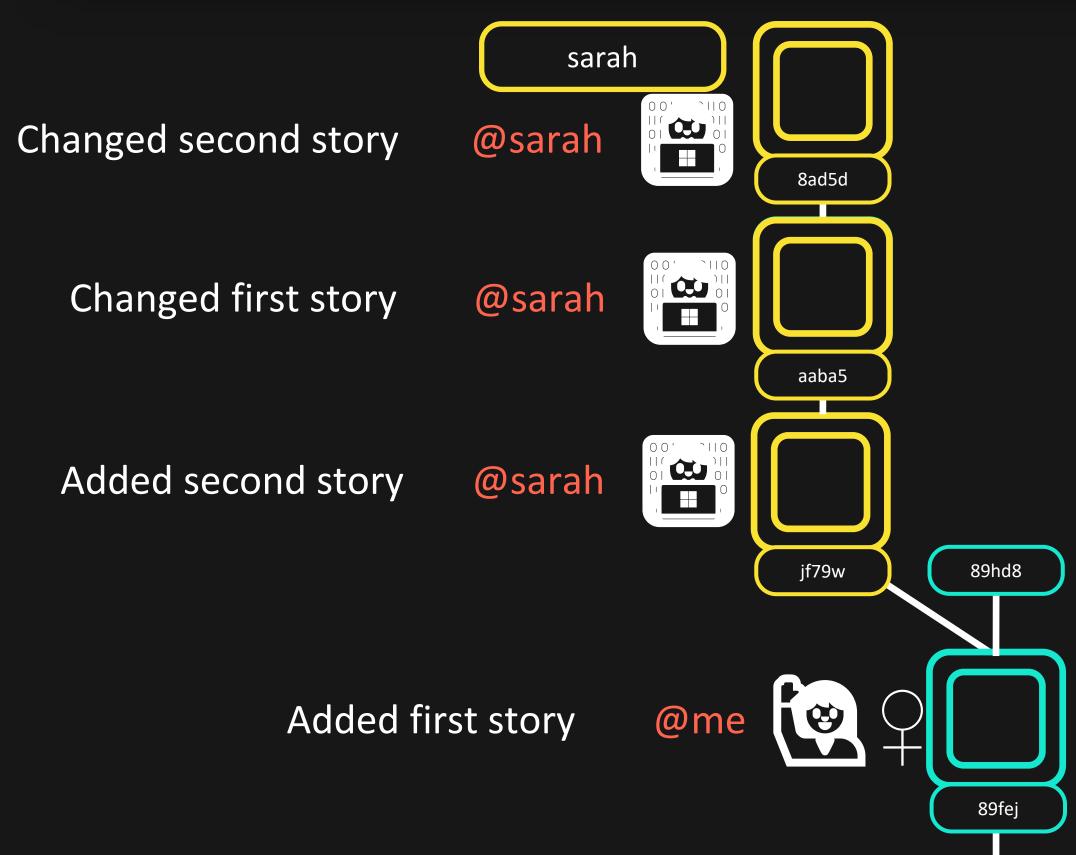




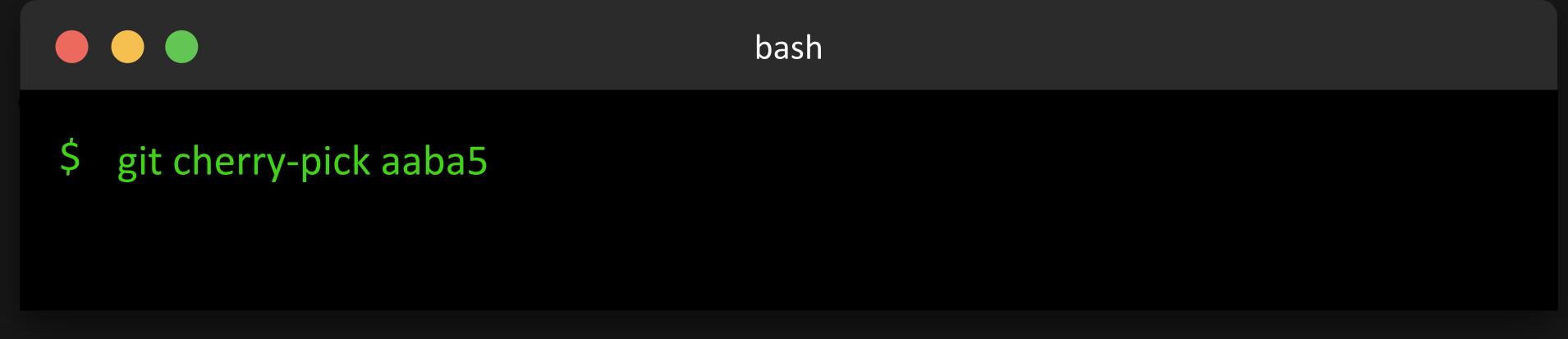


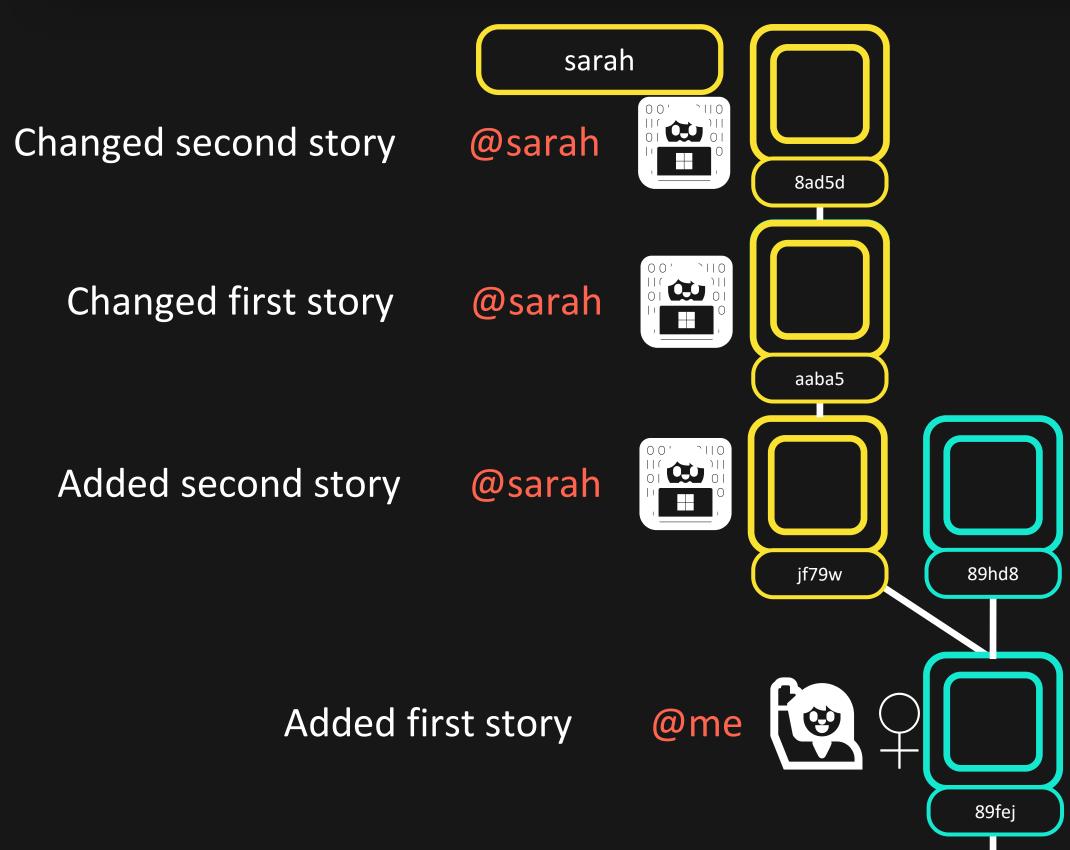




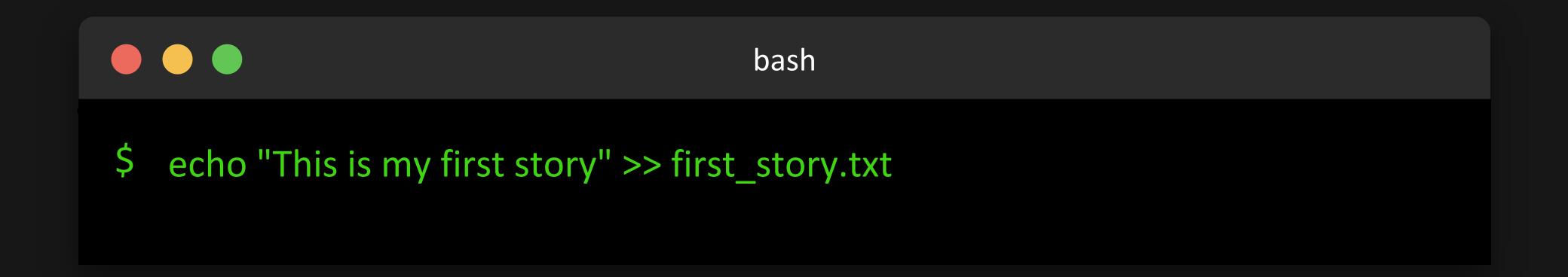














Porcelain Commands

git add

git status

git commit

git stash

•••

Plumbing Commands

git hash-object

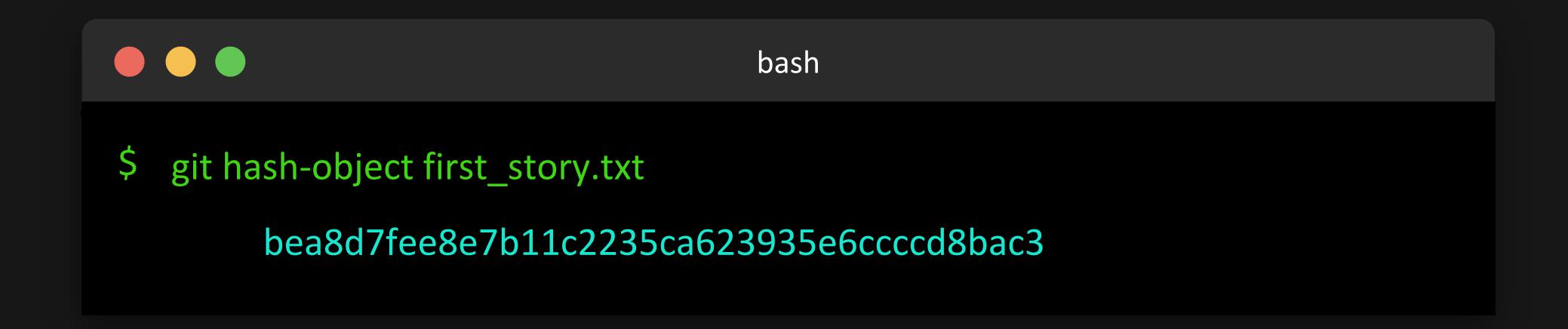
git Is-files

git rev-parse

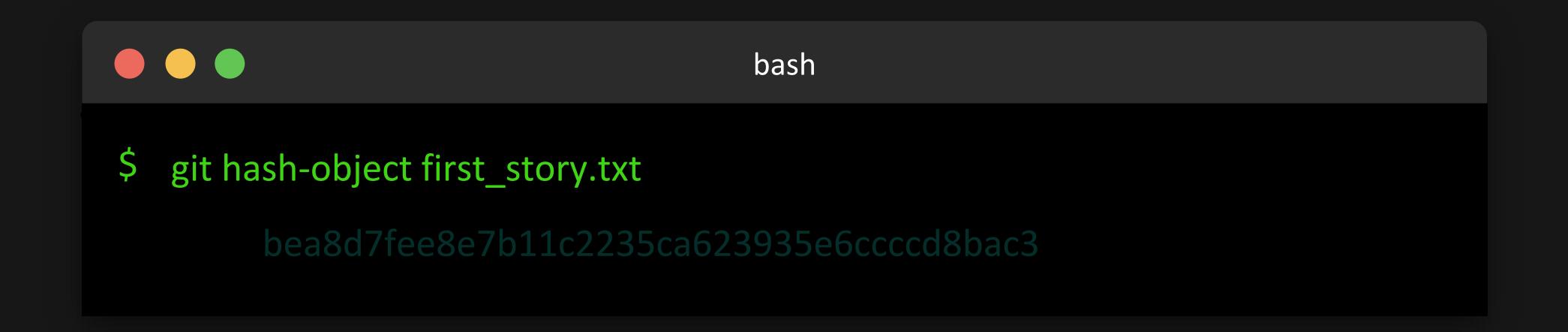
git ls-remote

• • •













- \$ git add first_story.txt
- \$ git commit -m "First story"
- \$ Is ./.git/objects
 - 26 be a0 info pack





- \$ git add first_story.txt
- \$ git commit -m "First story"
- \$ ls ./.git/objects
 - 26 be a0 info pack
- \$ ls ./.git/objects/be

a8d7fee8e7b11c2235ca623935e6ccccd8bac3





- \$ git add first_story.txt
- \$ git commit -m "First story"
- \$ Is ./.git/objects
 - 26 be a0 info pack
- \$ ls./.git/objects/be a8d7fee8e7b11c2235ca623935e6ccccd8bac3
- \$ git cat-file -p bea8d7

 "This is my first story"





git cat-file -p 4cdf4

tree 2ea7de7ff3bd48cbb020b215b36feb67ee7f9a30 parent f4e830485cc852686cf115e75a79cbb41a0de713 author Lydia Hallie <e@mail.com> 1594547678 +0200 committer Lydia Hallie <e@mail.com> 1594547678 +0200

First story





git cat-file -p 4cdf4

tree 2ea7de7ff3bd48cbb020b215b36feb67ee7f9a30 parent f4e830485cc852686cf115e75a79cbb41a0de713 author Lydia Hallie <e@mail.com> 1594547678 +0200 committer Lydia Hallie <e@mail.com> 1594547678 +0200

First story



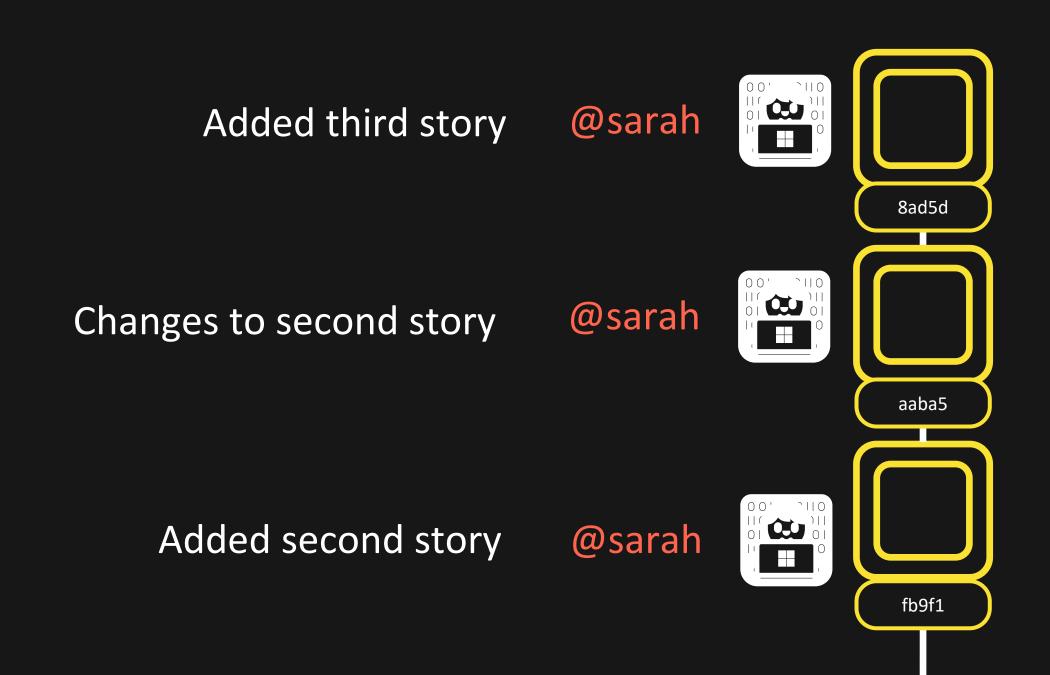
Git Object Contents

commit

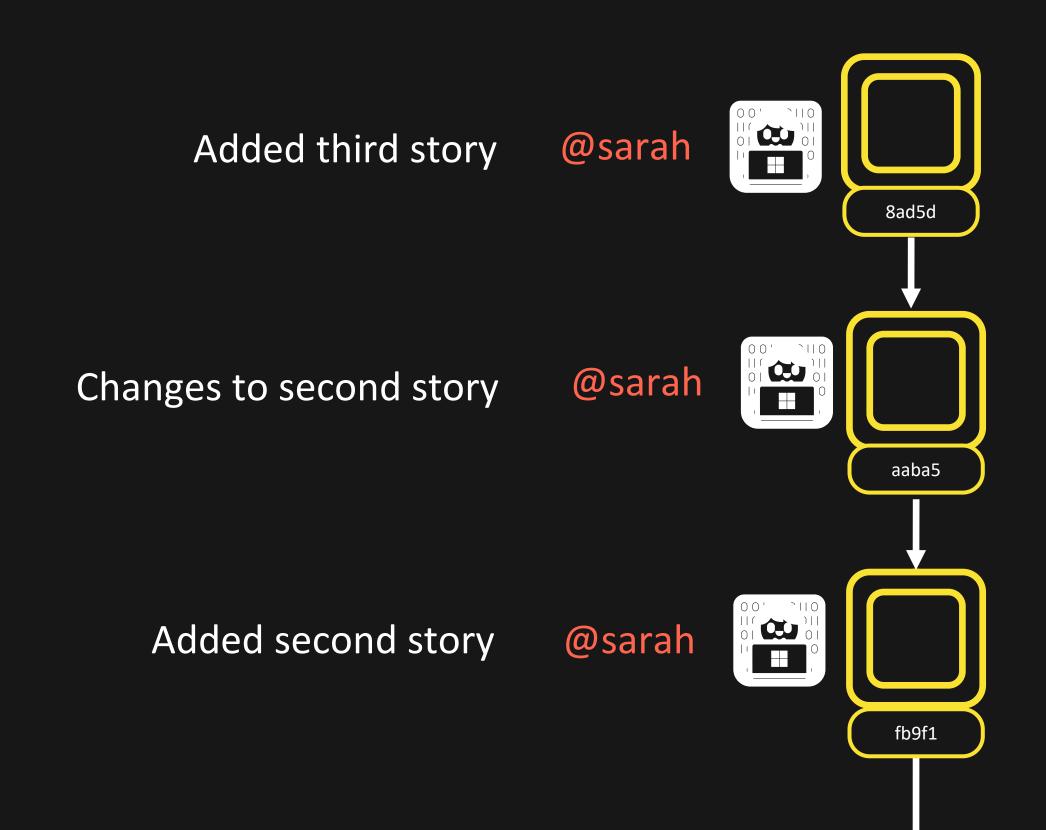
tree

blob

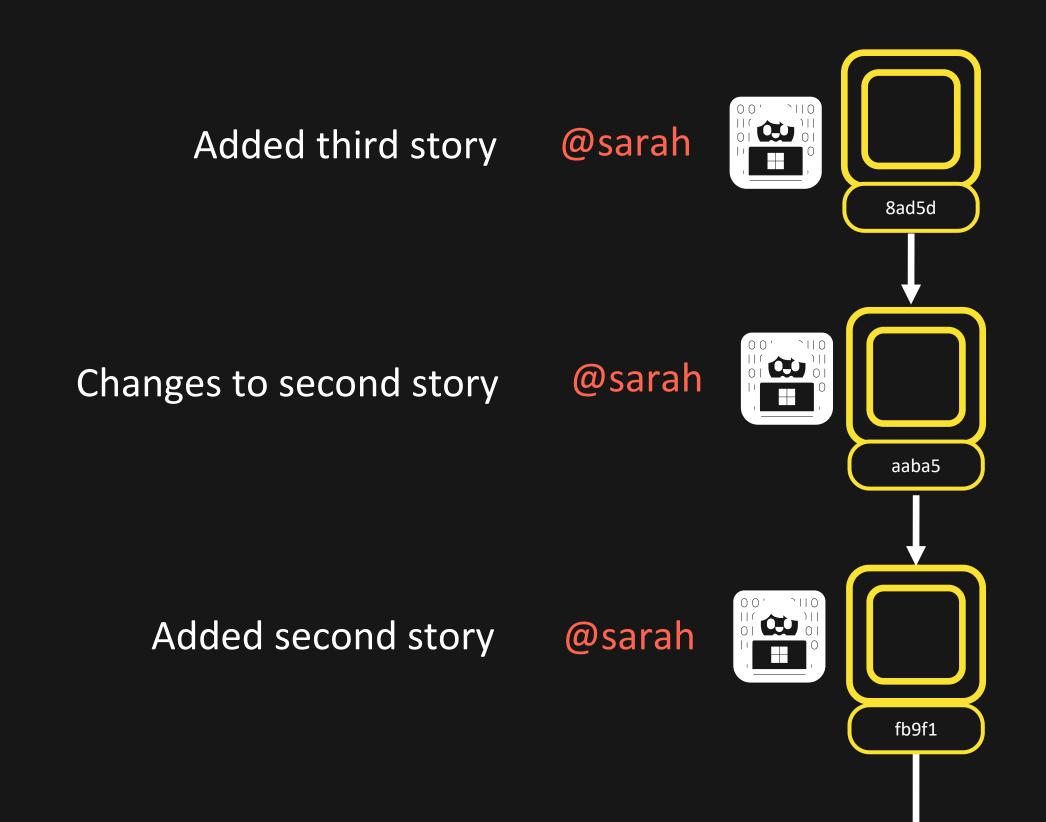




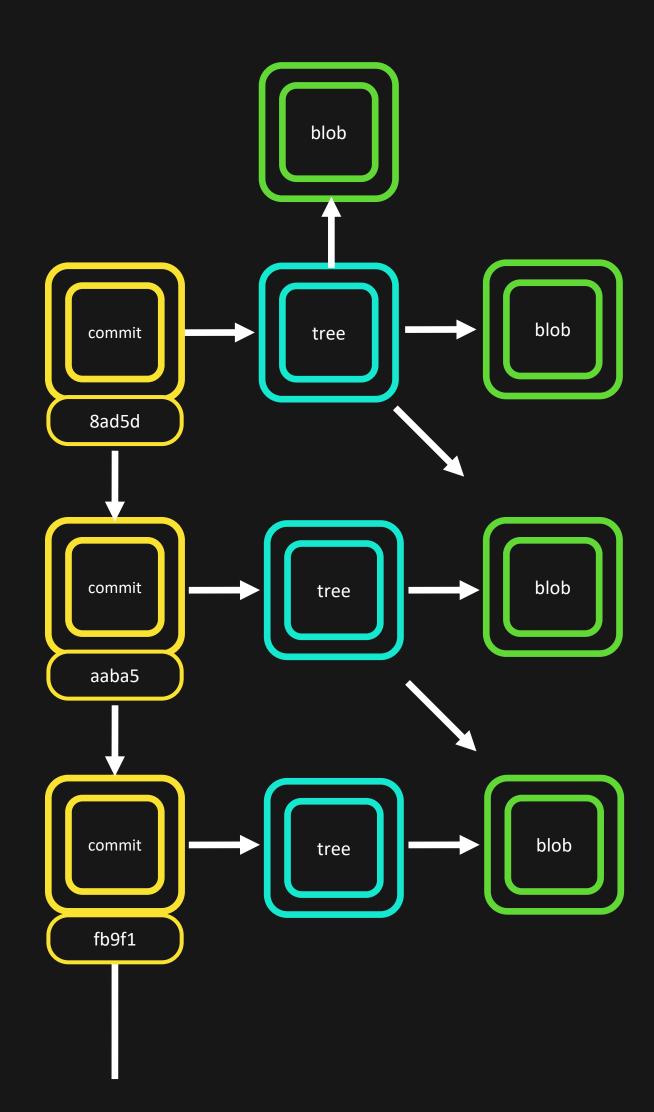




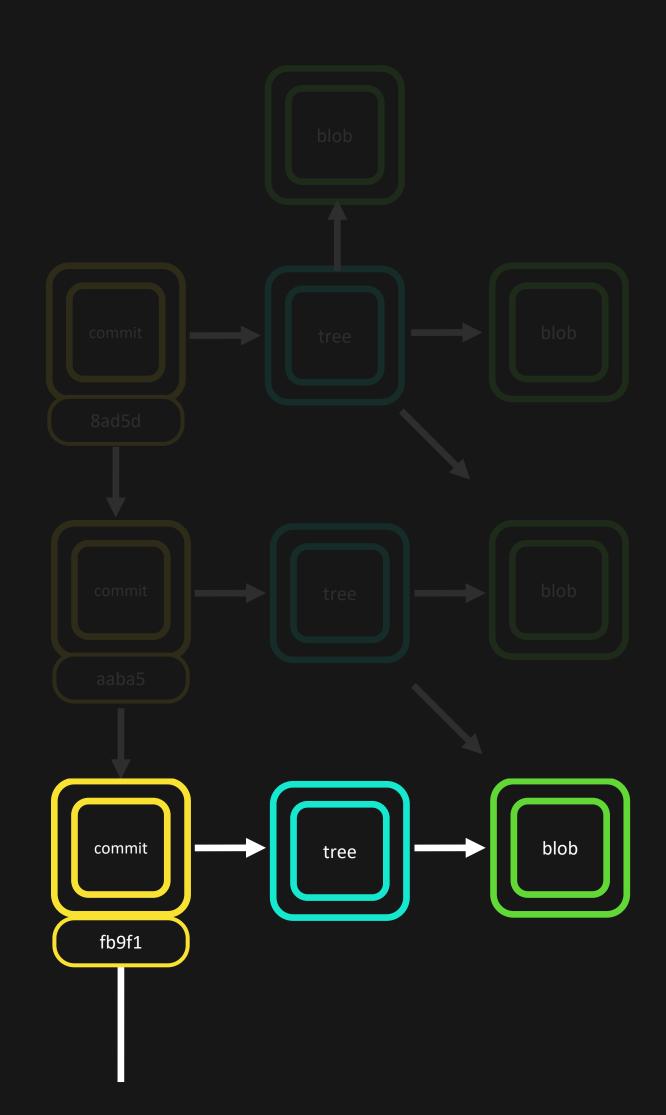




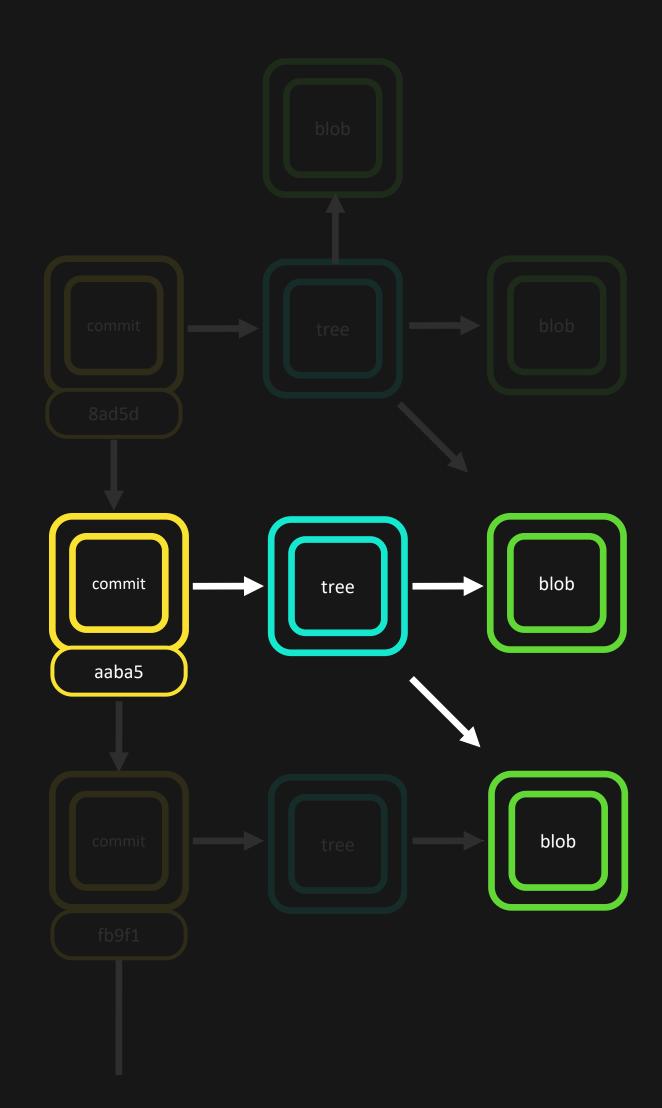




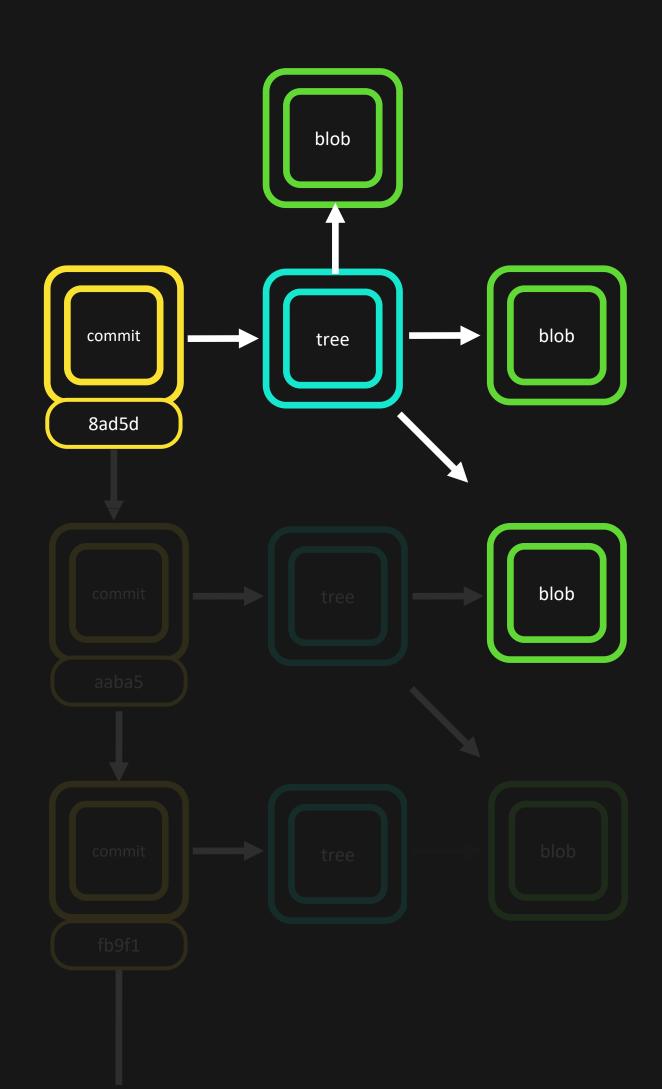






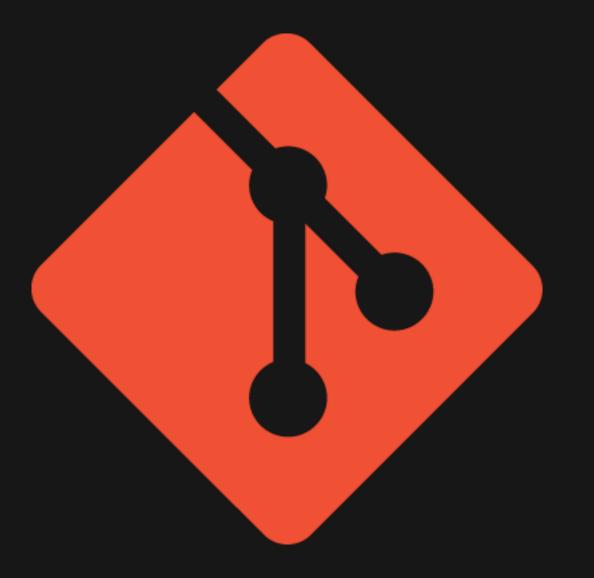






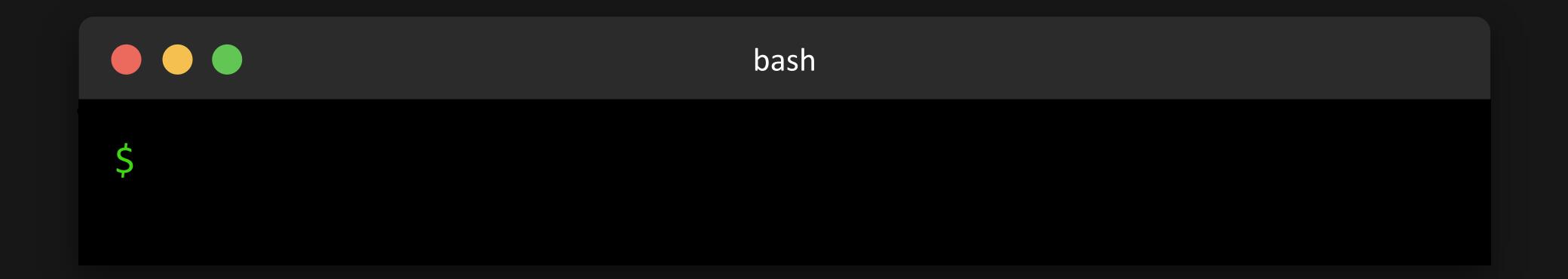


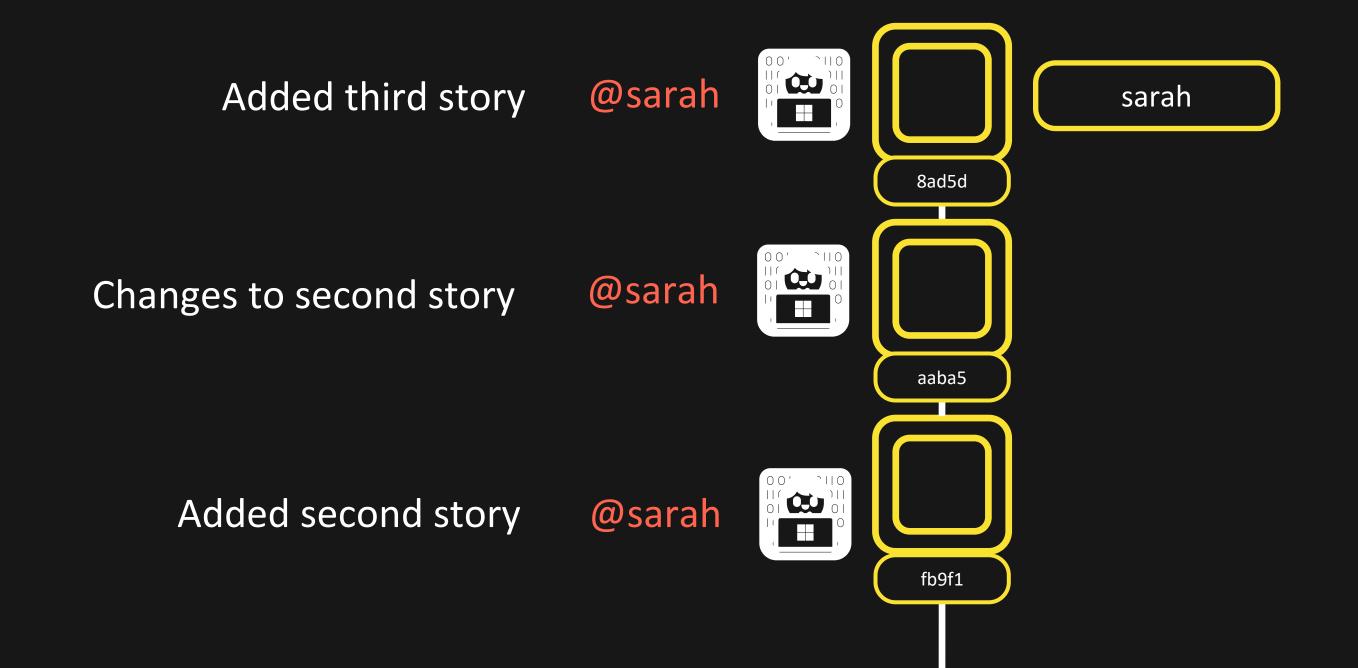




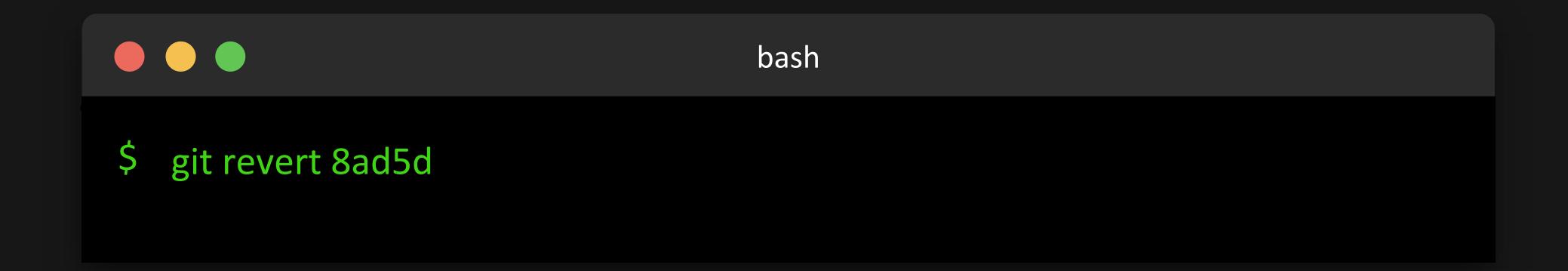
Resetting and Reverting

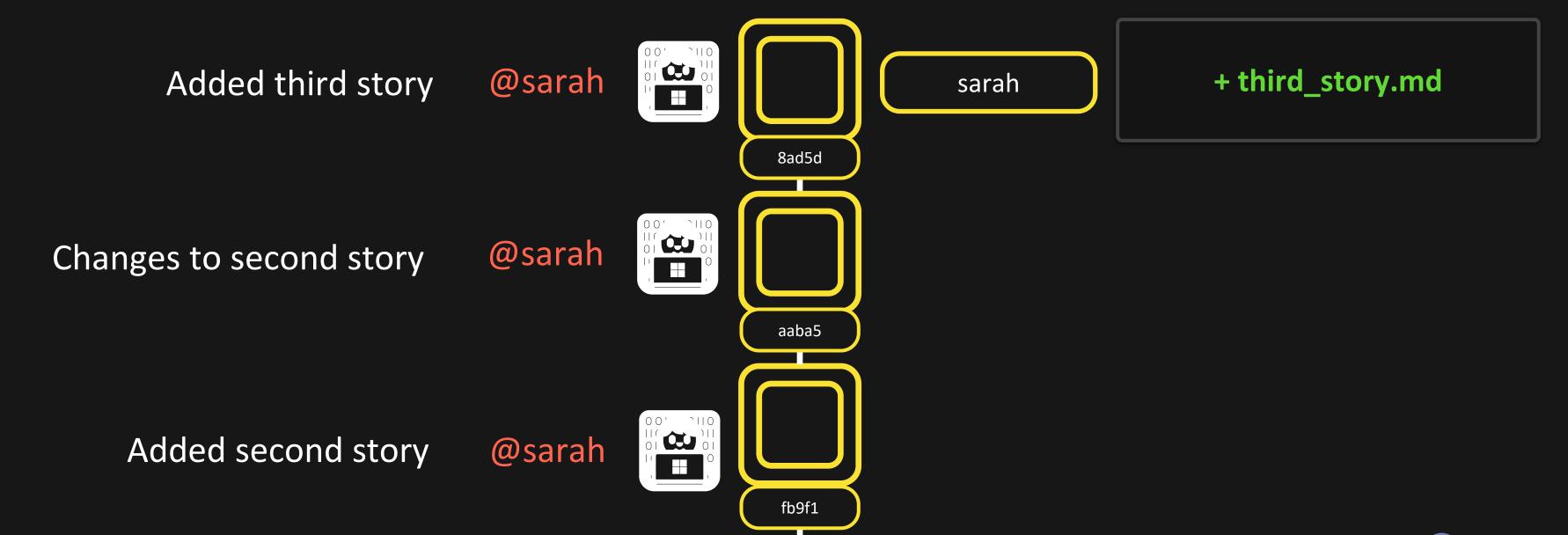




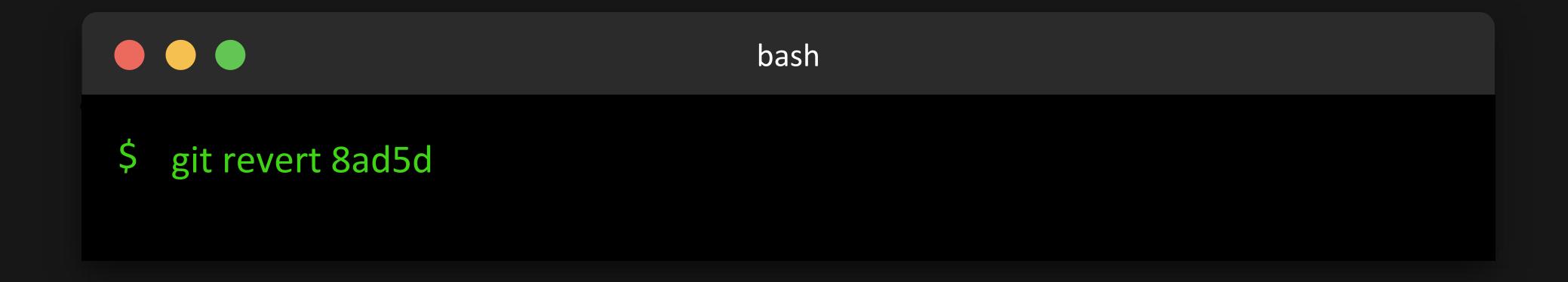


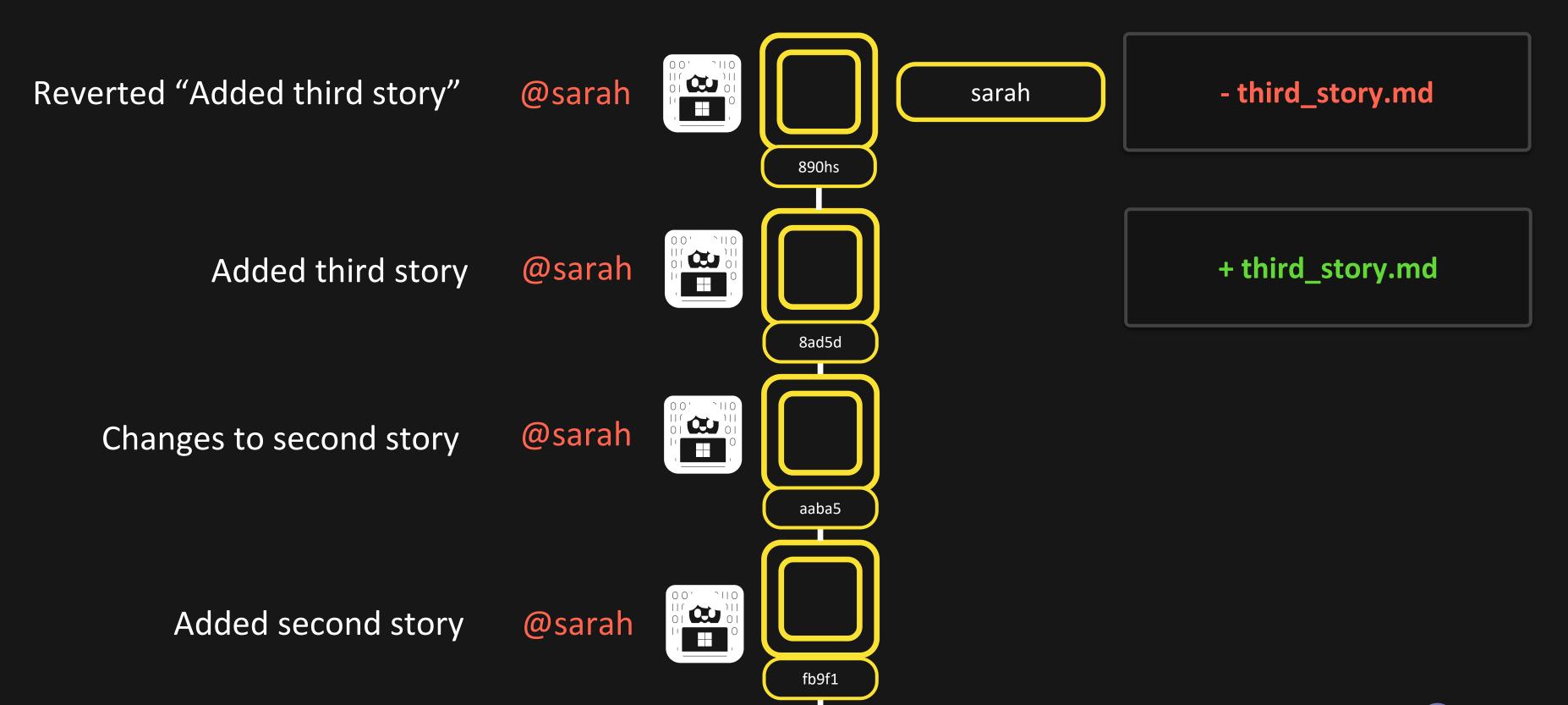




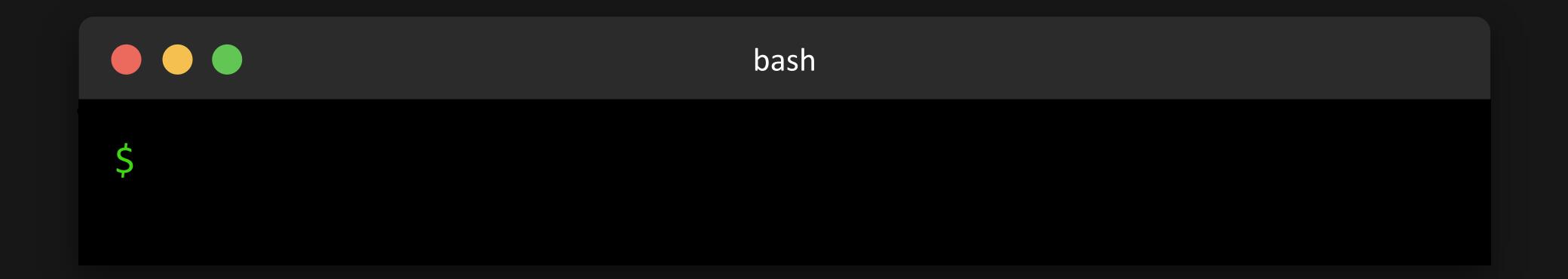


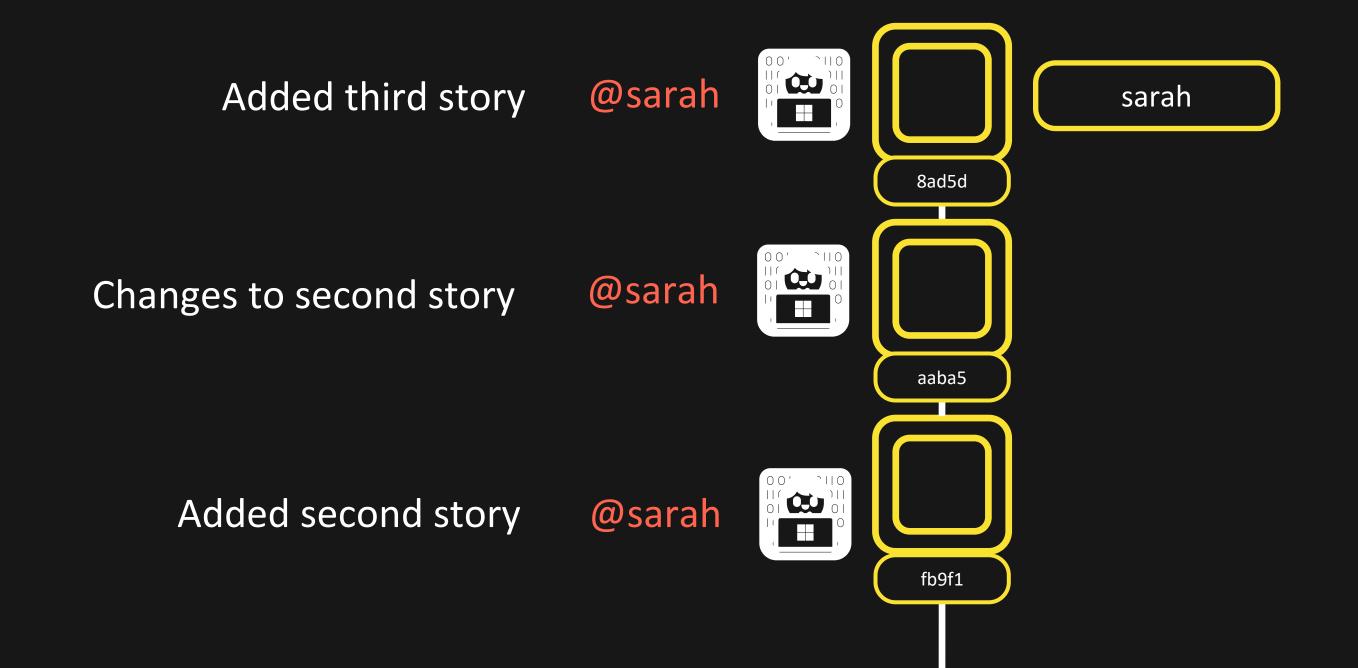




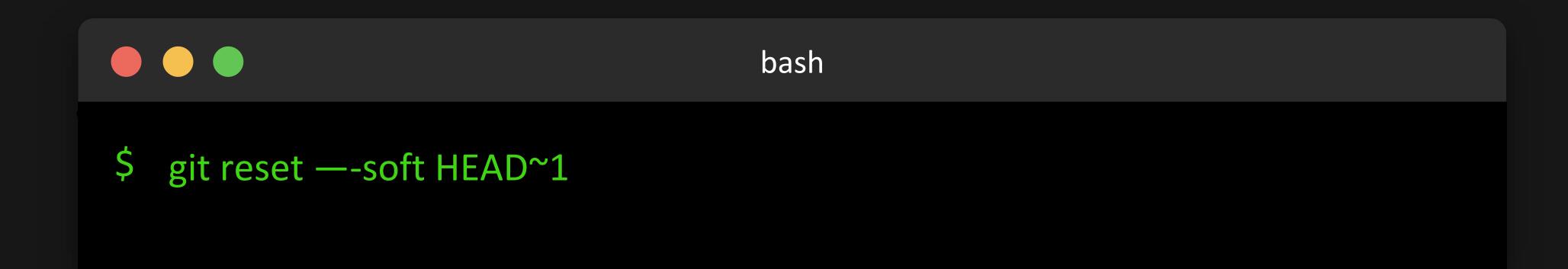


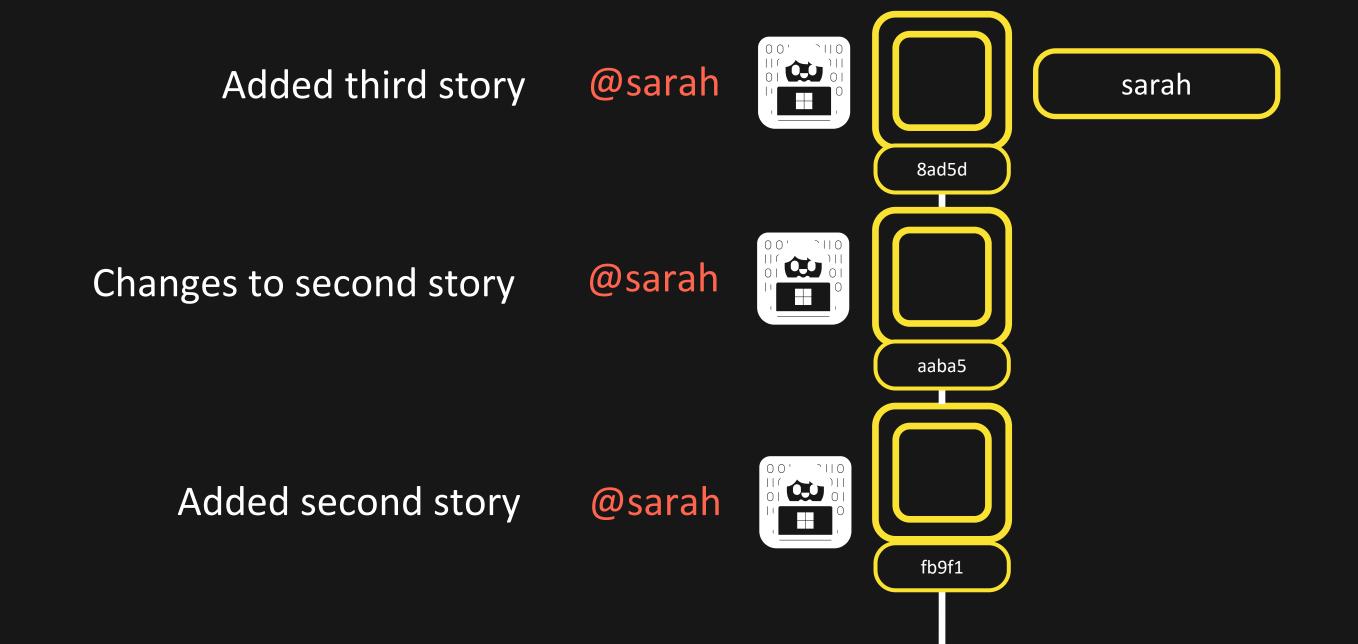




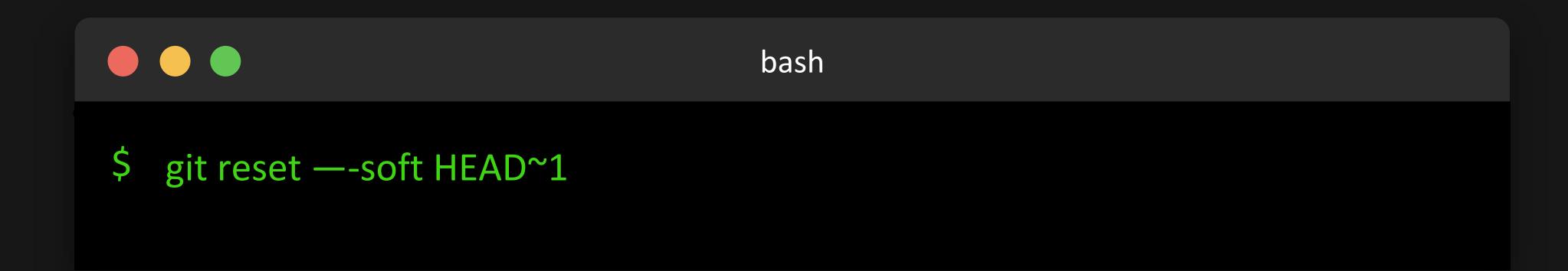


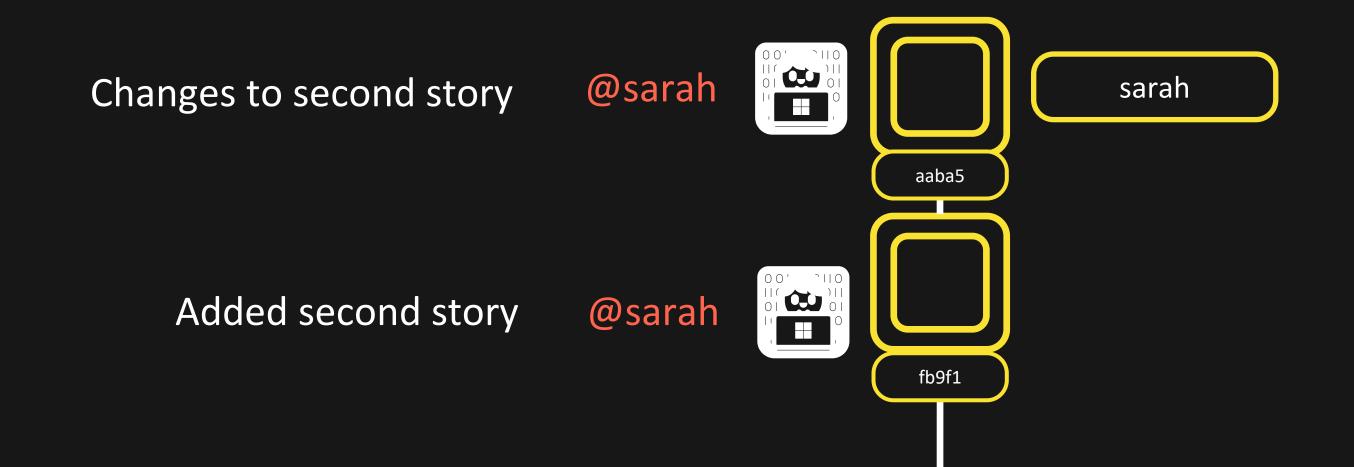




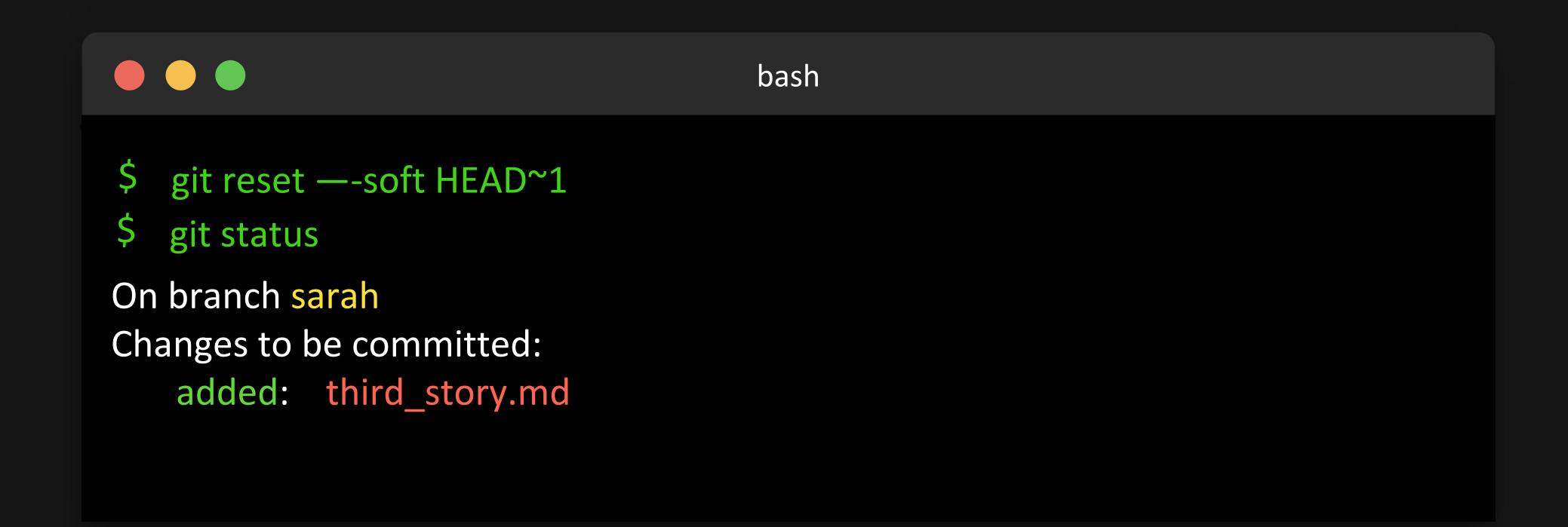


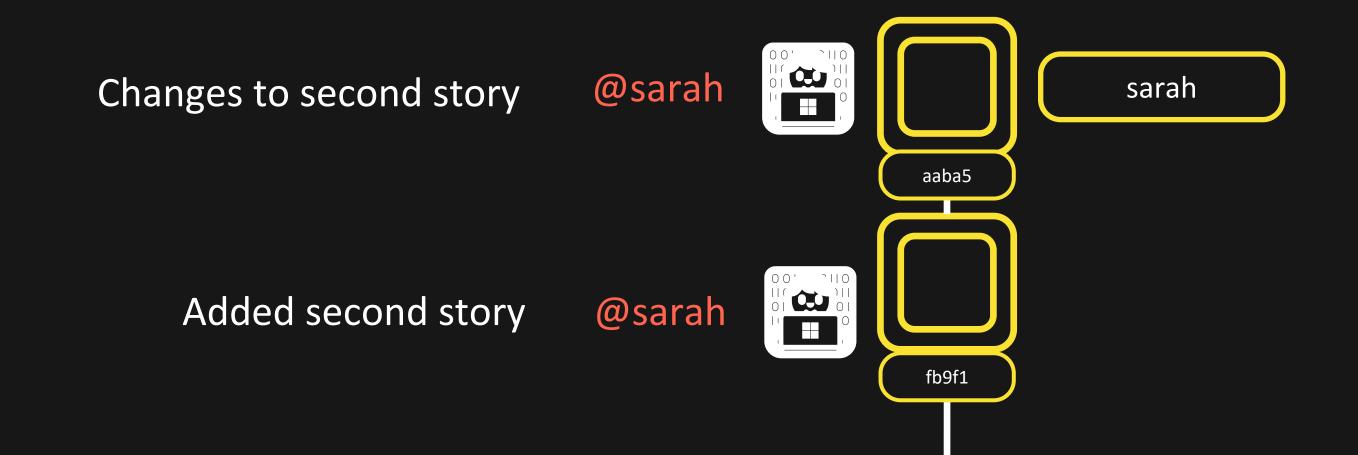




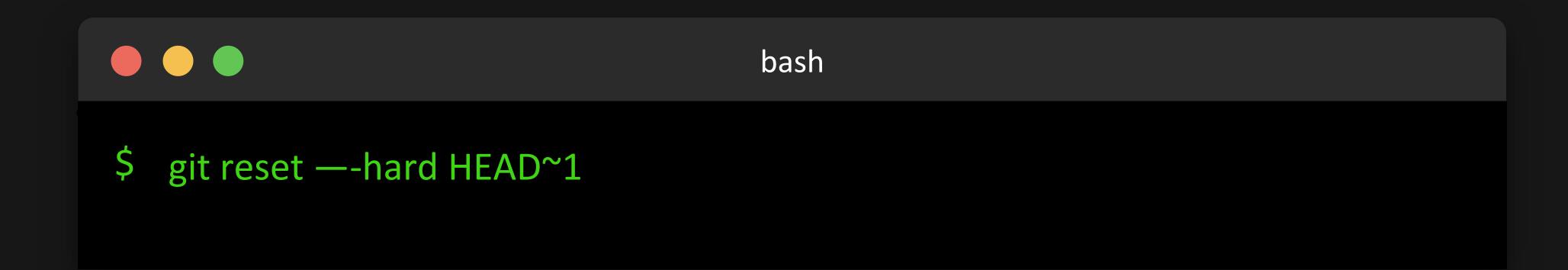


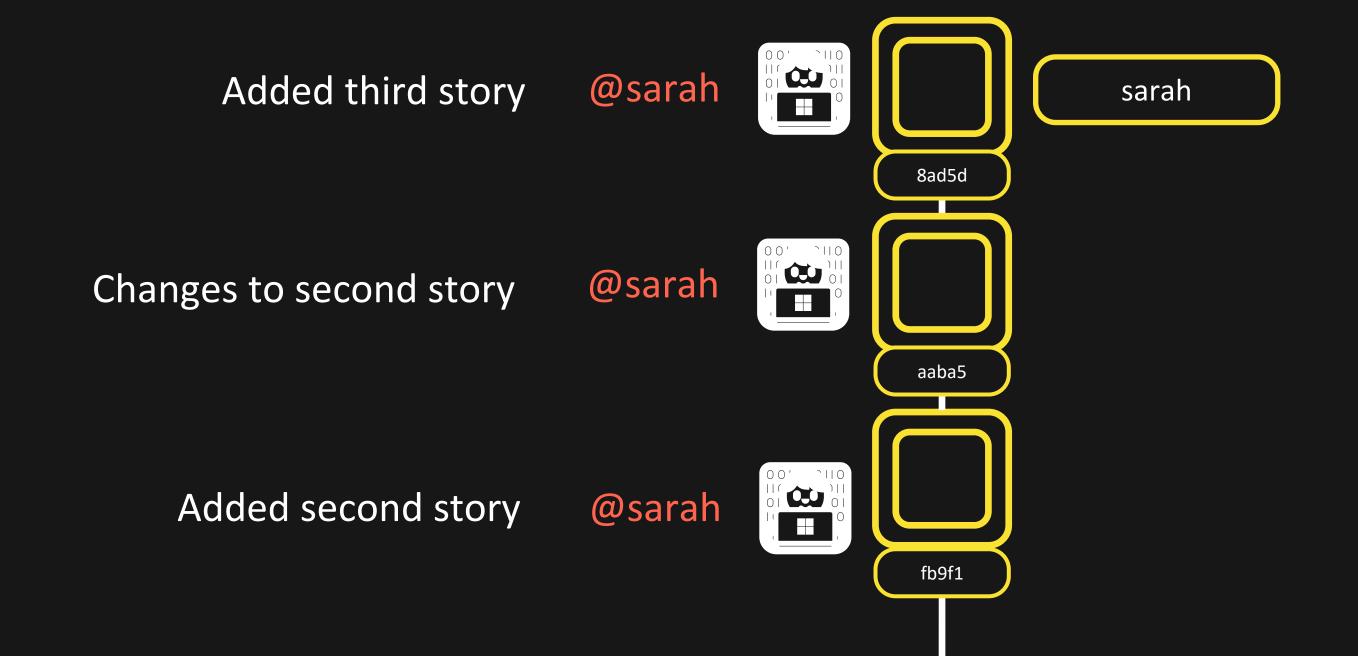




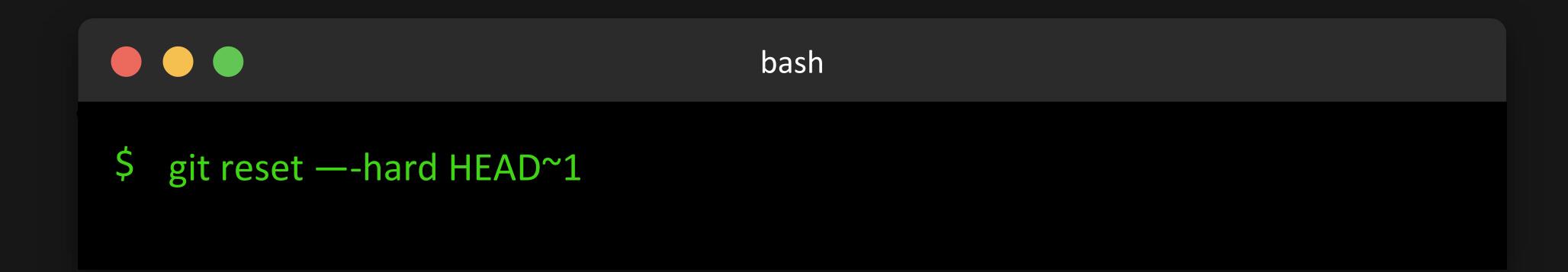


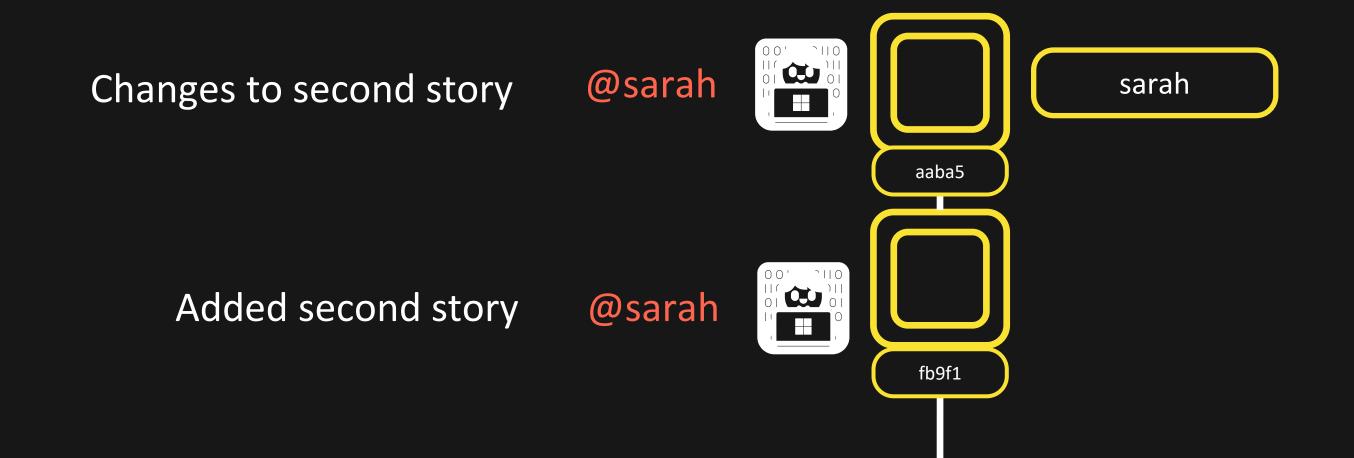






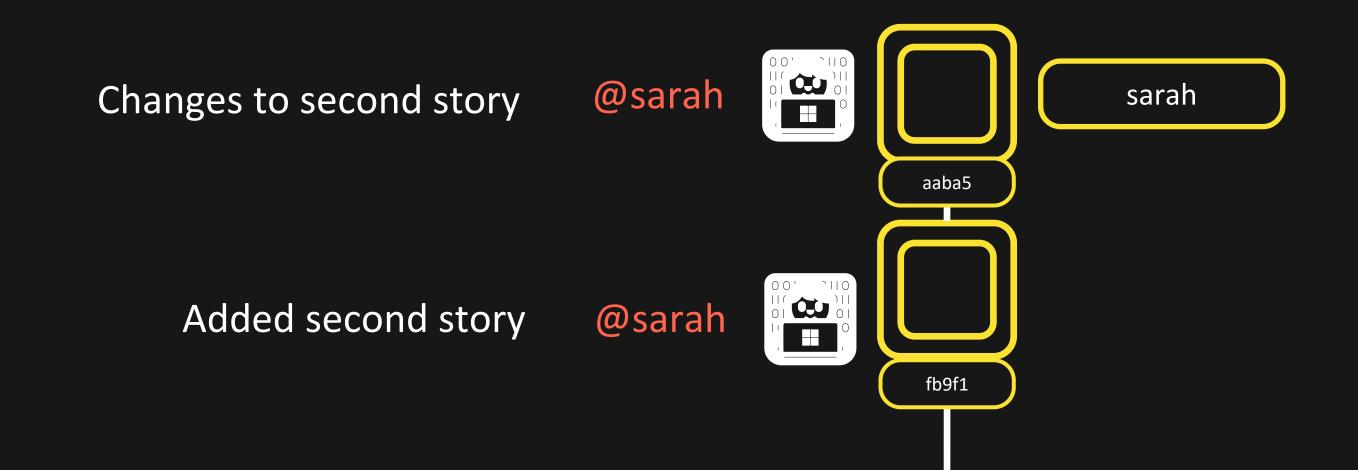


















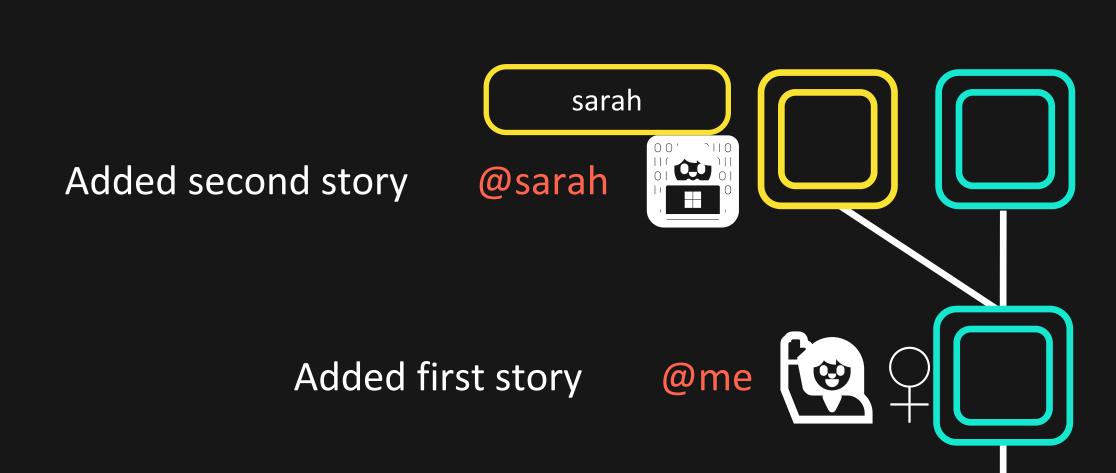
Git Stash

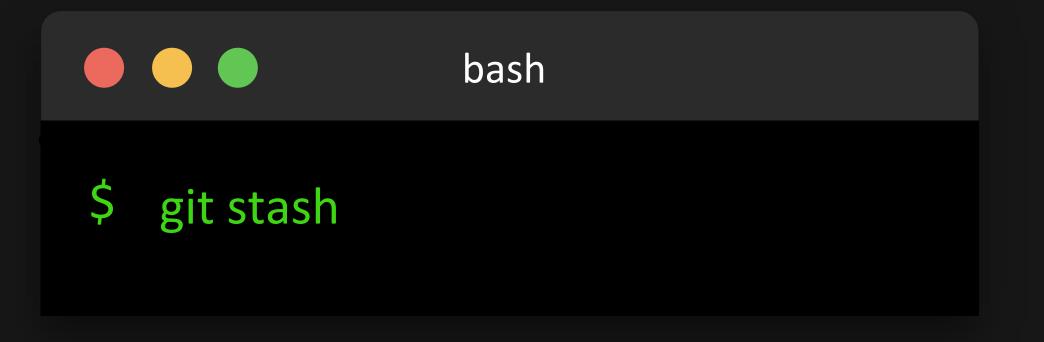


Staging Area

+ third_story.md

Committed Files







Staging Area

+ third_story.md

Committed Files

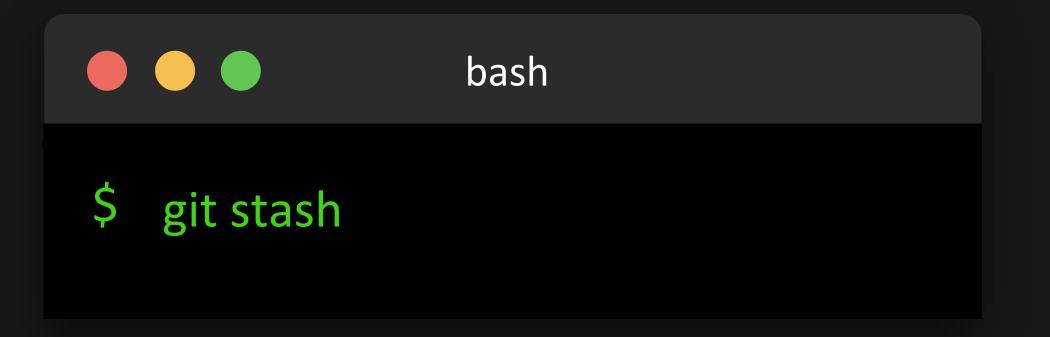
Stash

Added first story

Sarah

Added first story

@me



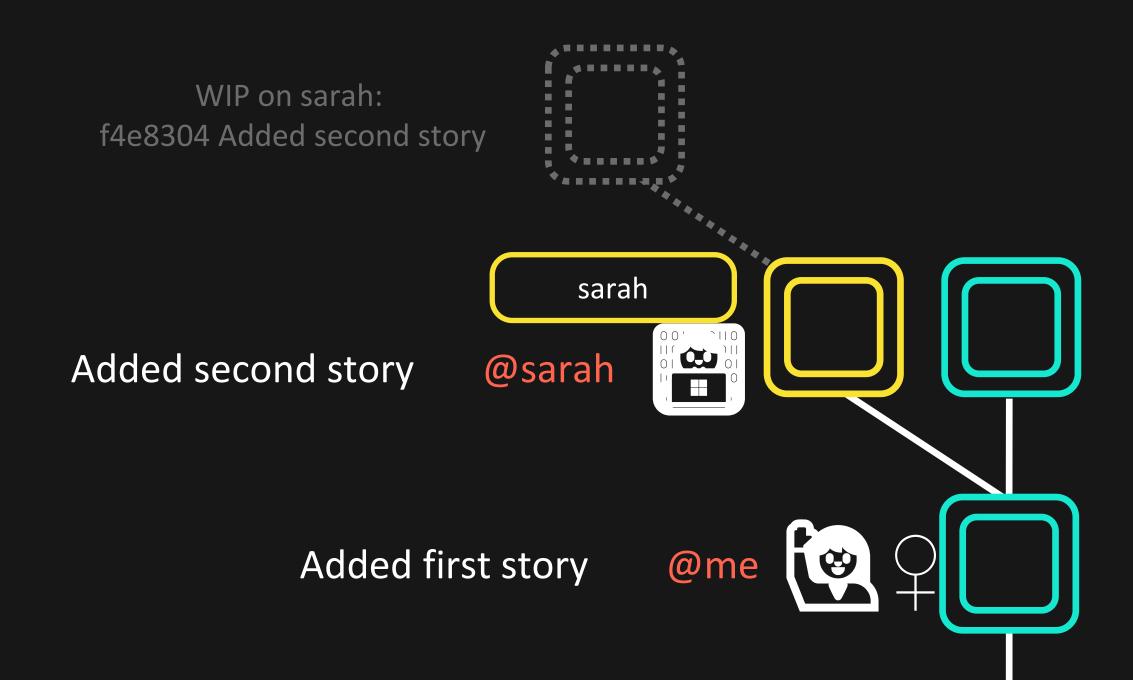


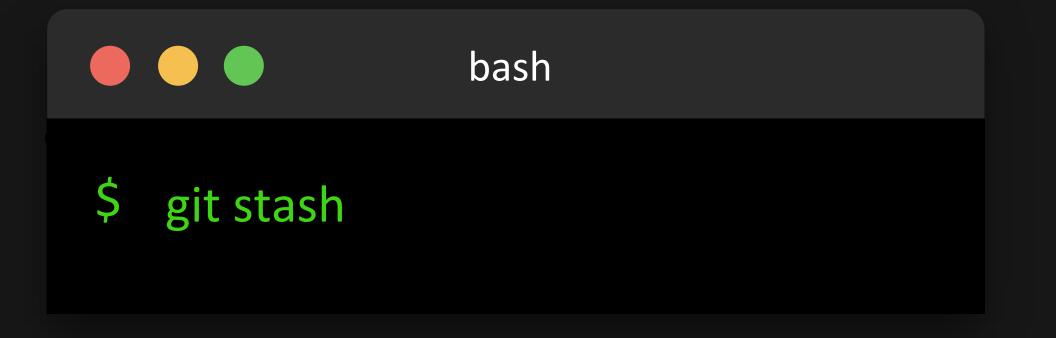
Staging Area

Committed Files

Stash

+ third_story.md





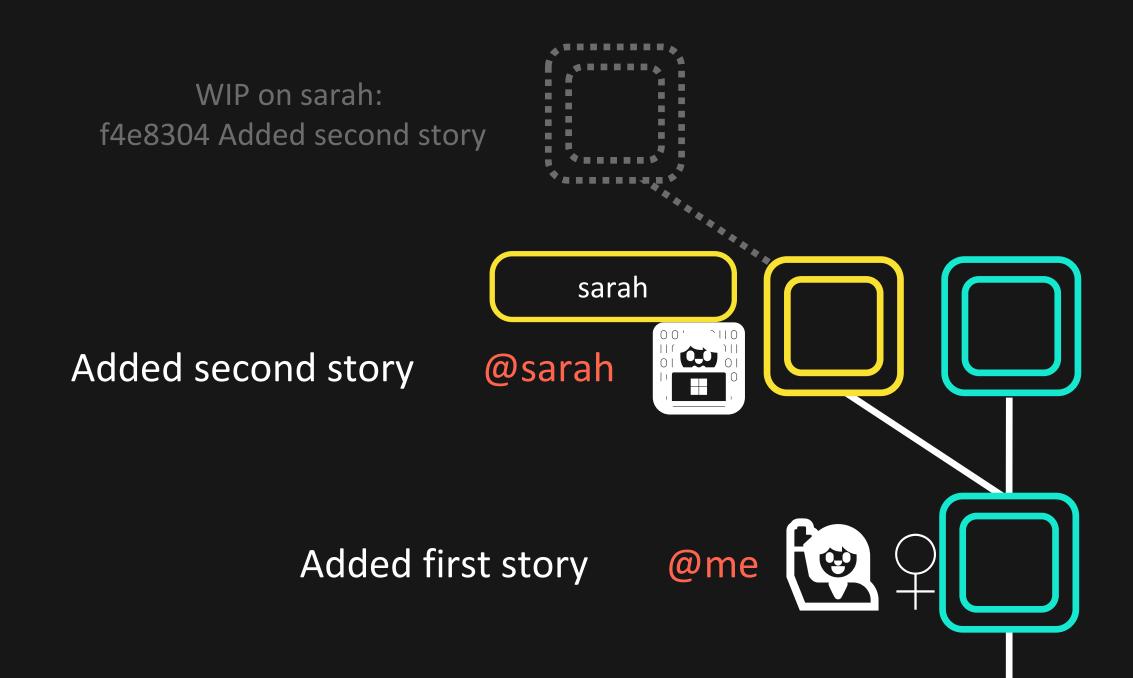


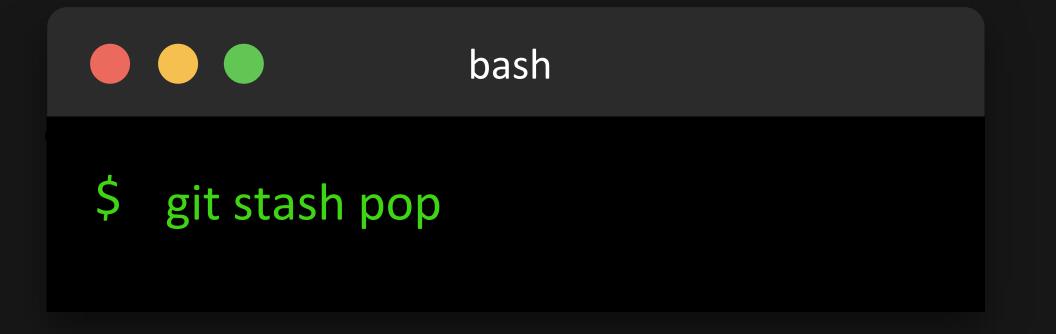
Staging Area

Committed Files

Stash

+ third_story.md





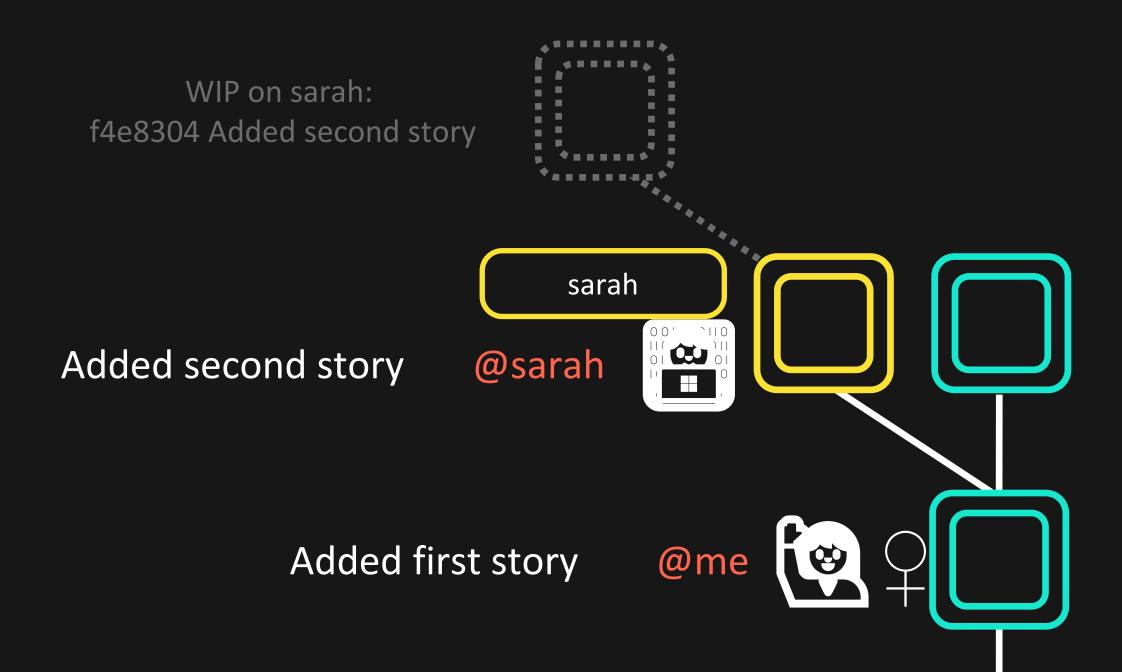


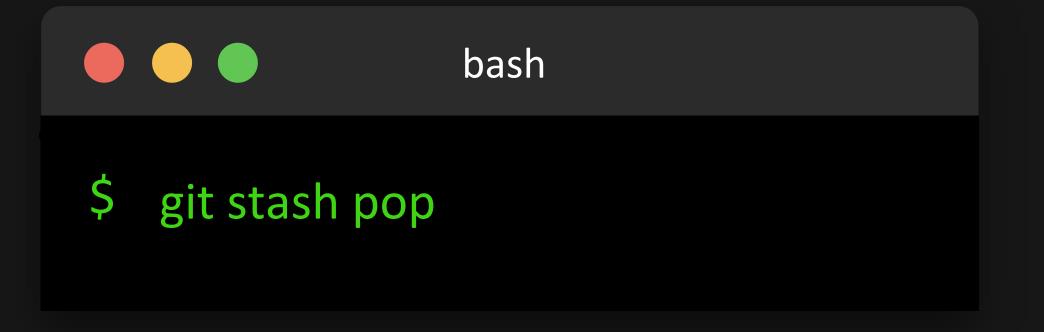
Staging Area

+ third_story.md

Committed Files

Stash





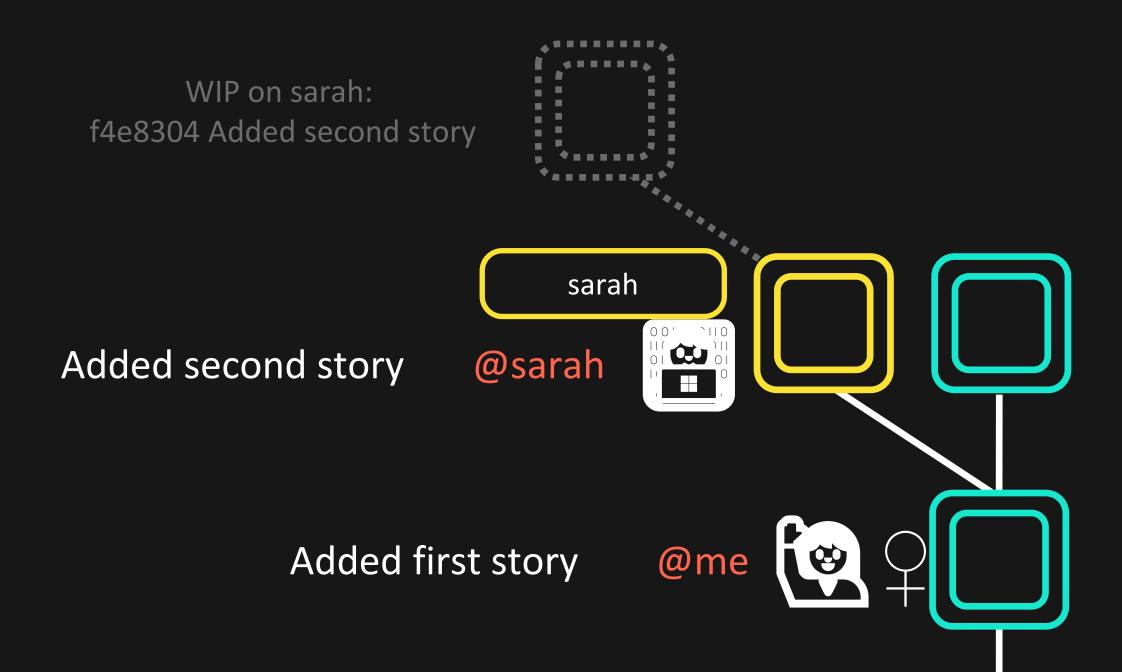


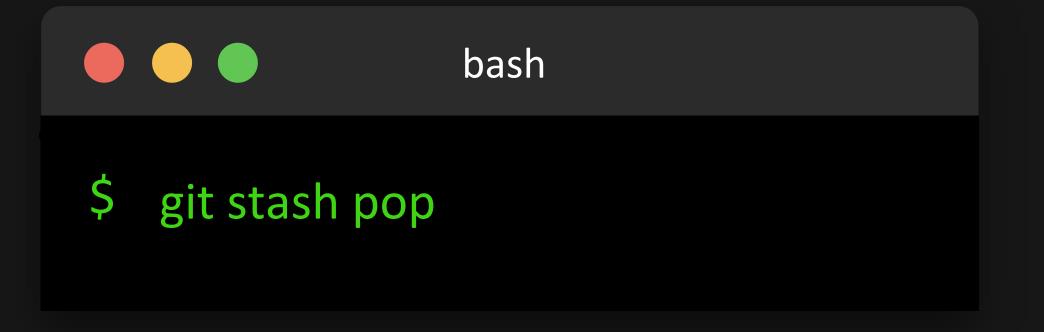
Staging Area

+ third_story.md

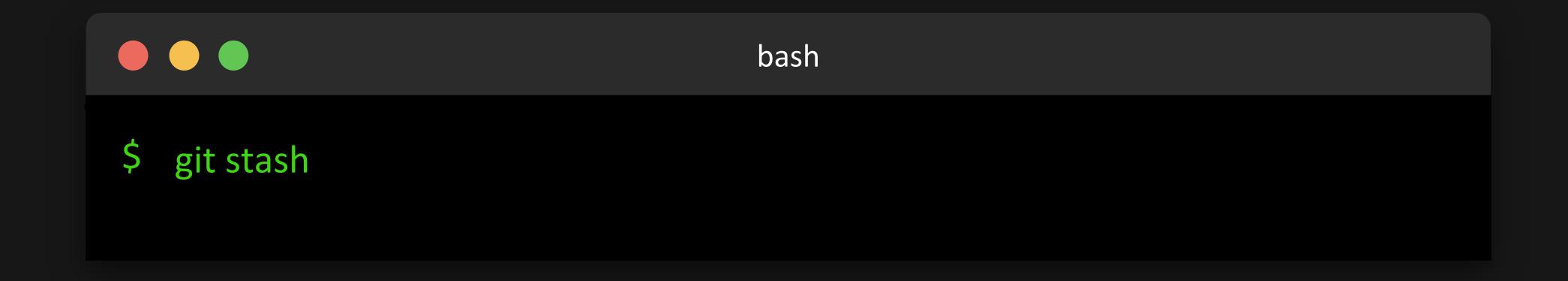
Committed Files

Stash





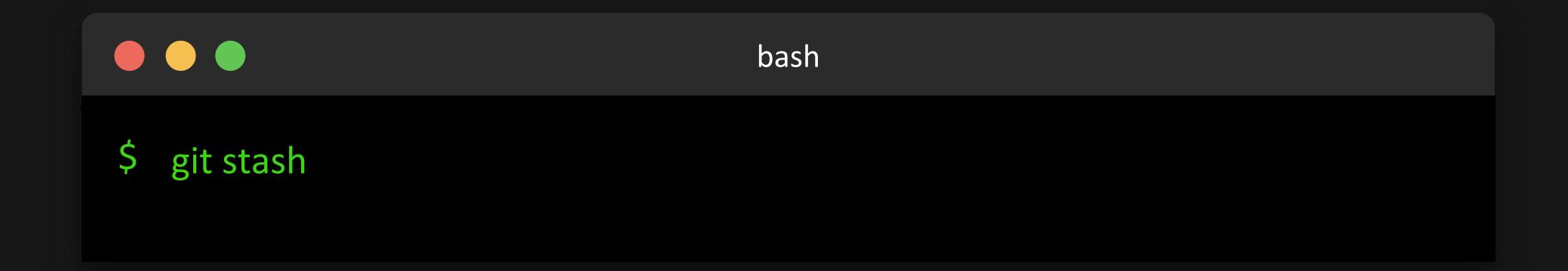






Stash

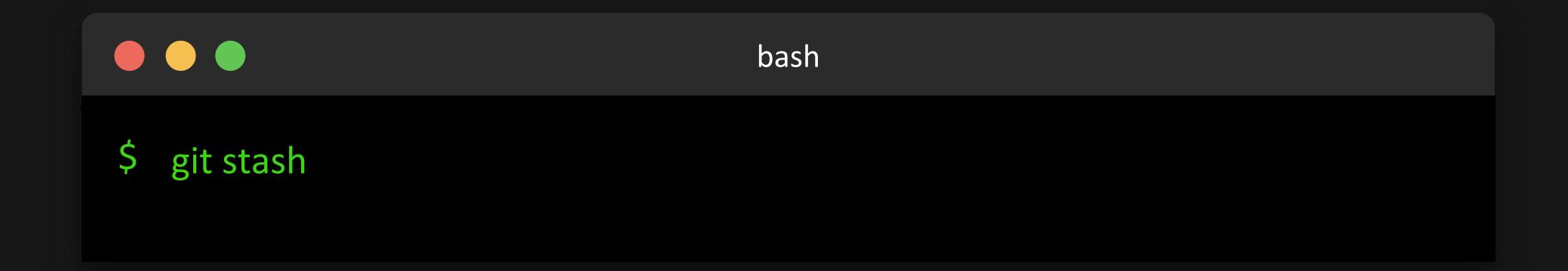




Staging Area



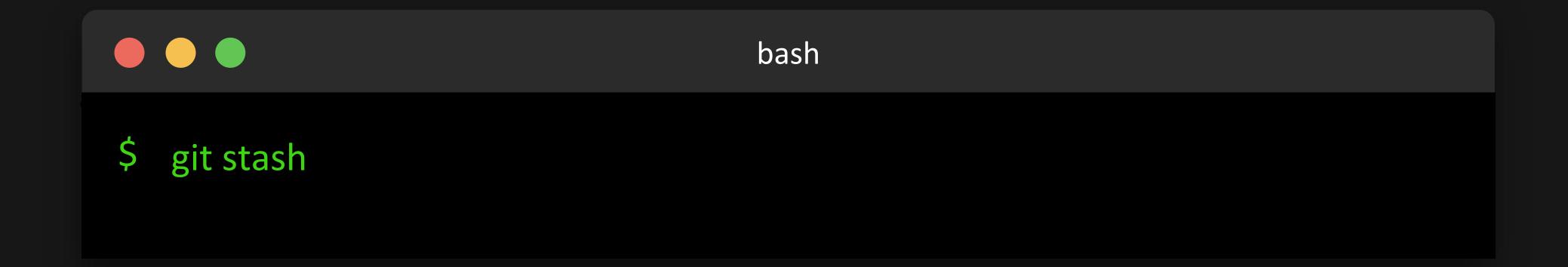




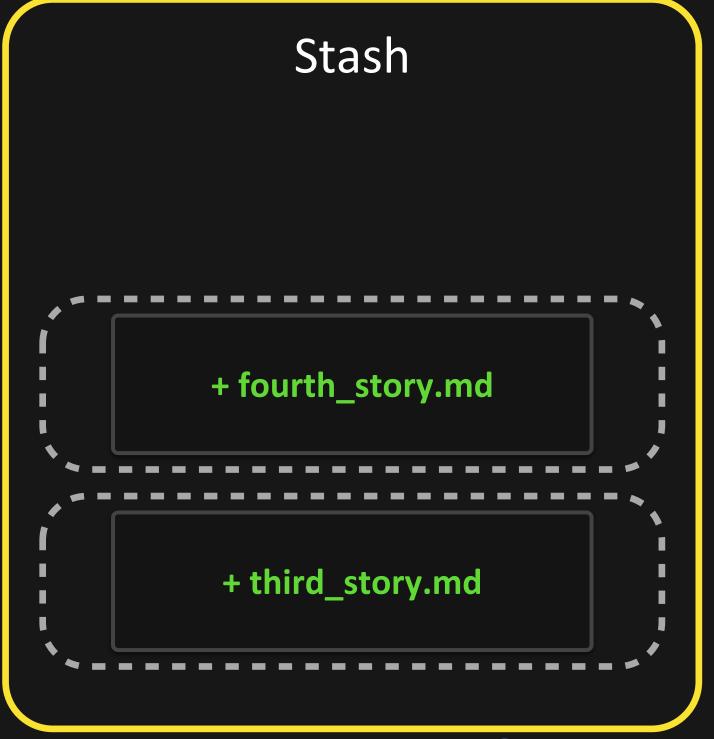




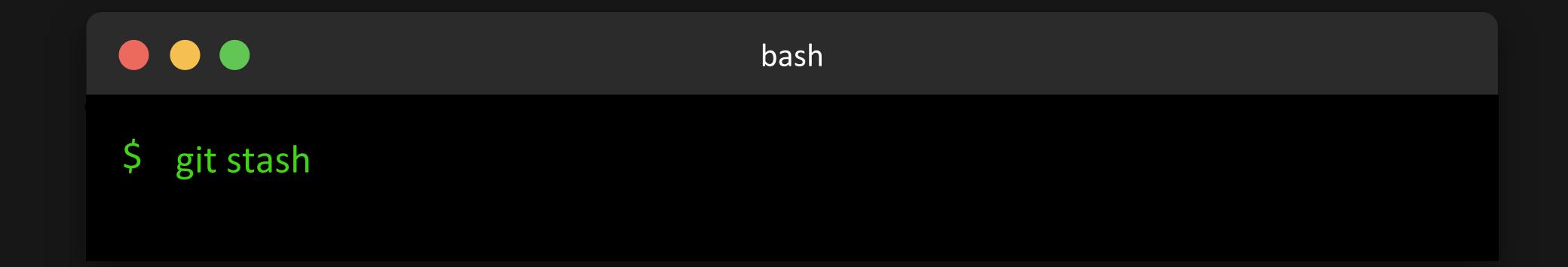




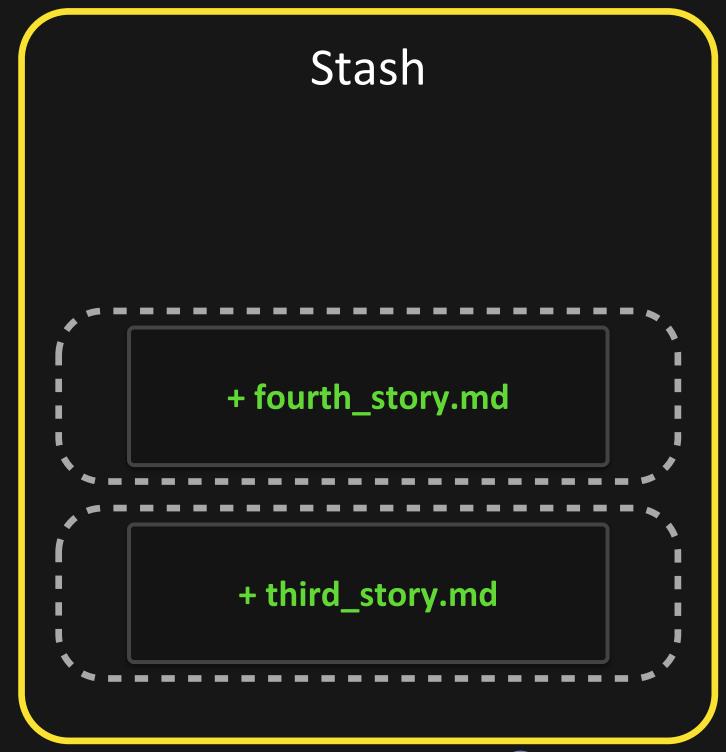
Staging Area



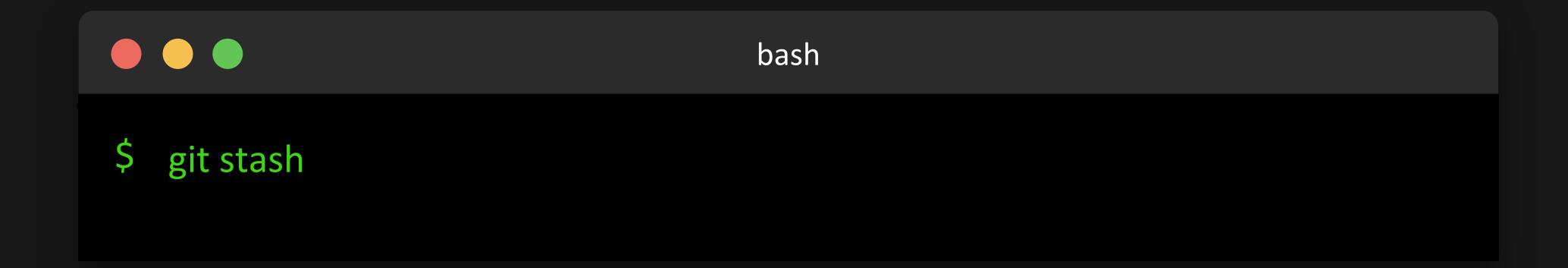




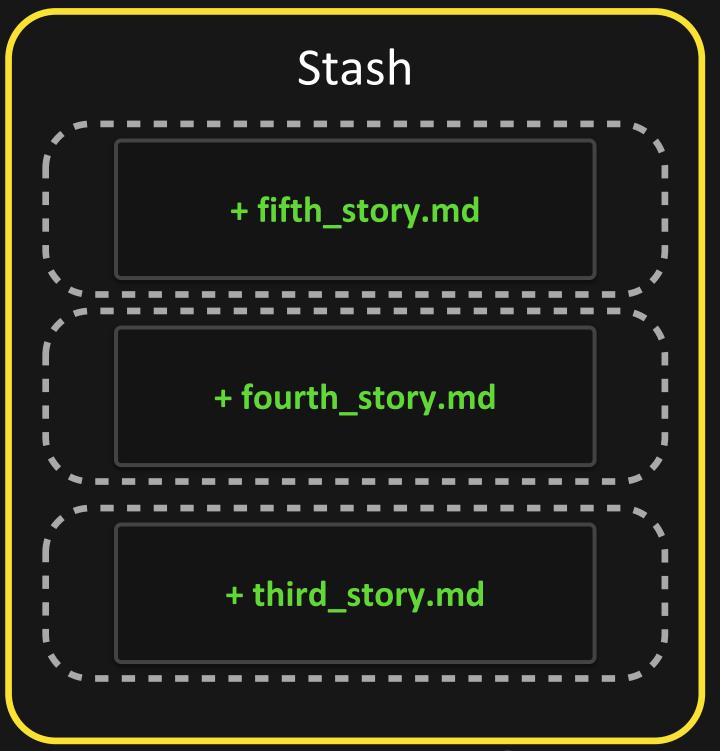








Staging Area







\$ git stash list

stash@{0}: WIP on sarah: f4e8304 Added second story

stash@{1}: WIP on sarah: f4e8304 Added second story

stash@{2}: WIP on sarah: f4e8304 Added second story



bash

```
$ git stash list
stash@{0}: WIP on sarah: f4e8304 Added second story
stash@{1}: WIP on sarah: f4e8304 Added second story
stash@{2}: WIP on sarah: f4e8304 Added second story

$ git stash show stash@{1}
fourth_story.md | 1 +
1 file changed, 1 addition(+)
```



bash

```
git stash list
  stash@{0}: WIP on sarah: f4e8304 Added second story
  stash@{1}: WIP on sarah: f4e8304 Added second story
  stash@{2}: WIP on sarah: f4e8304 Added second story
$ git stash show stash@{1}
 fourth_story.md | 1 +
  1 file changed, 1 addition(+)
$ git stash pop stash@{1}
  Dropped stash@{1} (2cfe...)
```



