

Collaborating Using the GitHub Flow



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Overview



Working with branches

Using the GitHub Flow

Forking a repository



Working with Branches





Branching traditionally means diverging from the main development line

Expensive operation

- Copy of source directory



Branching in Git



Much more lightweight

Branching is very fast

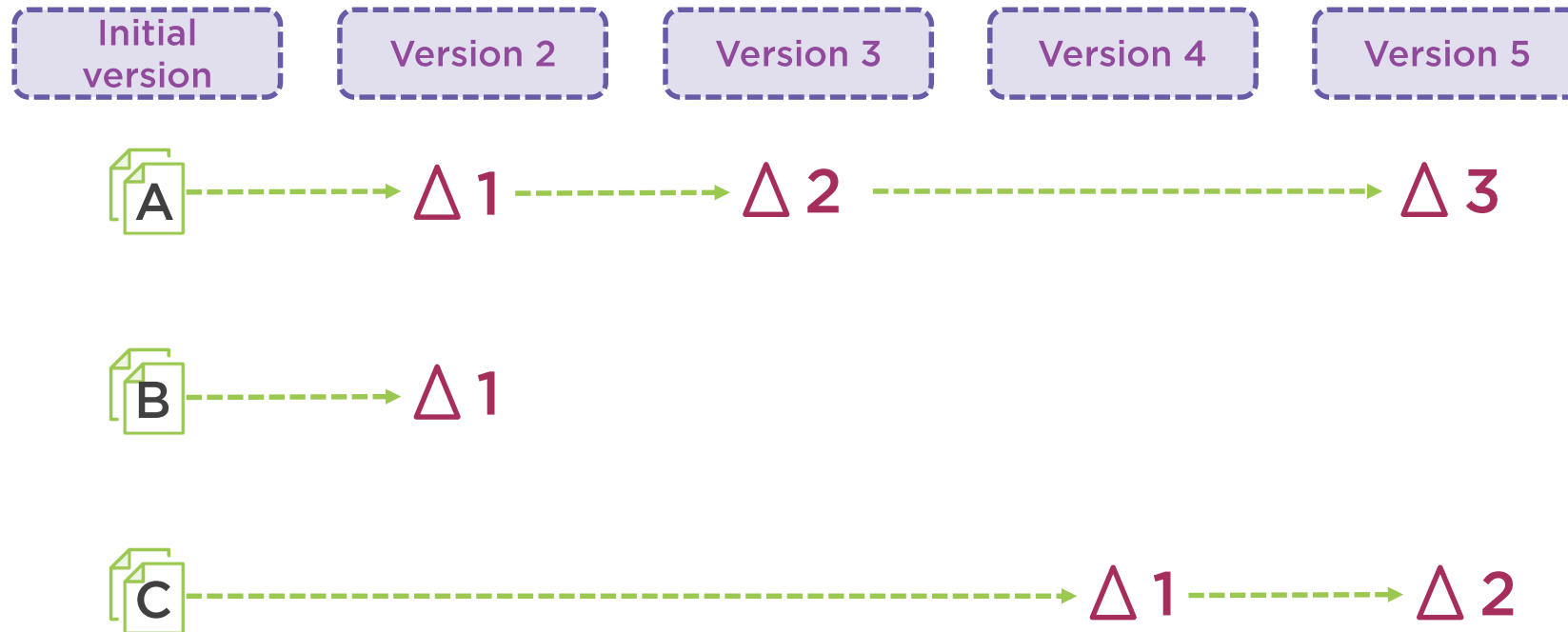
Encouraged to be used

Works because of the way Git works

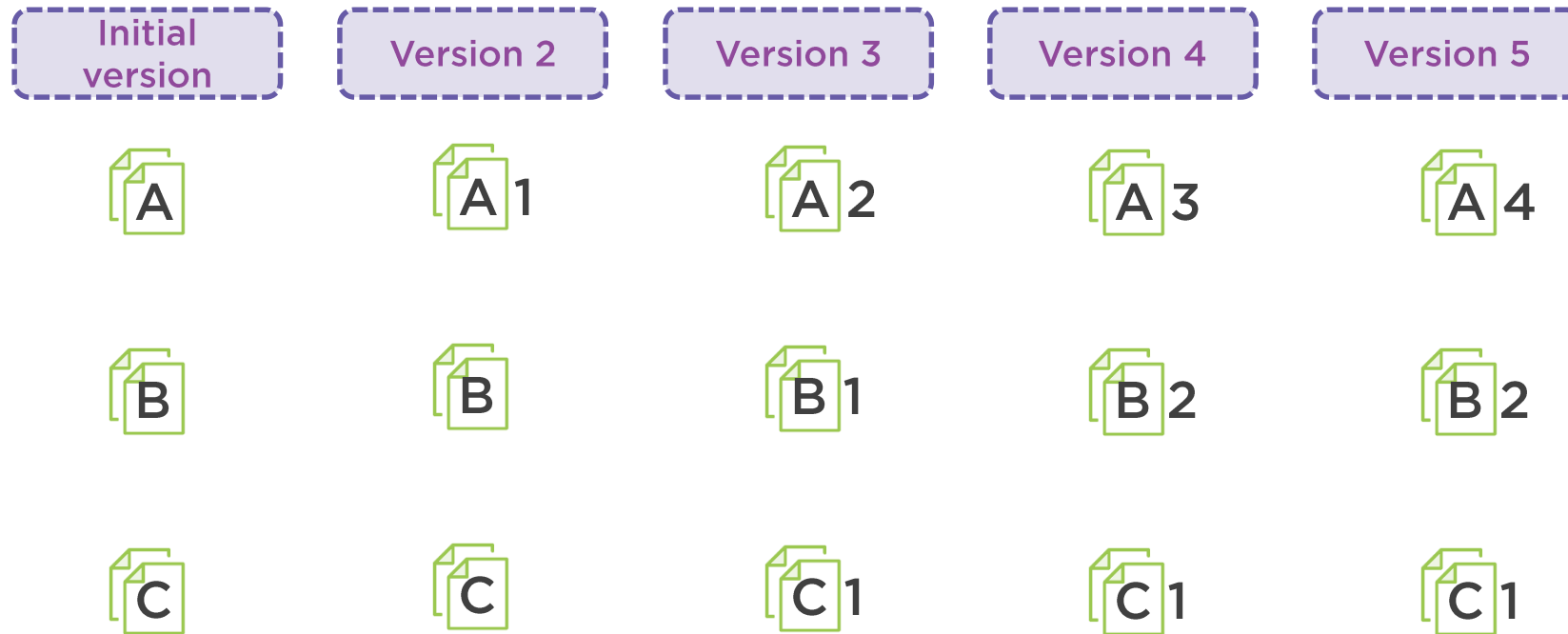
- Snapshots



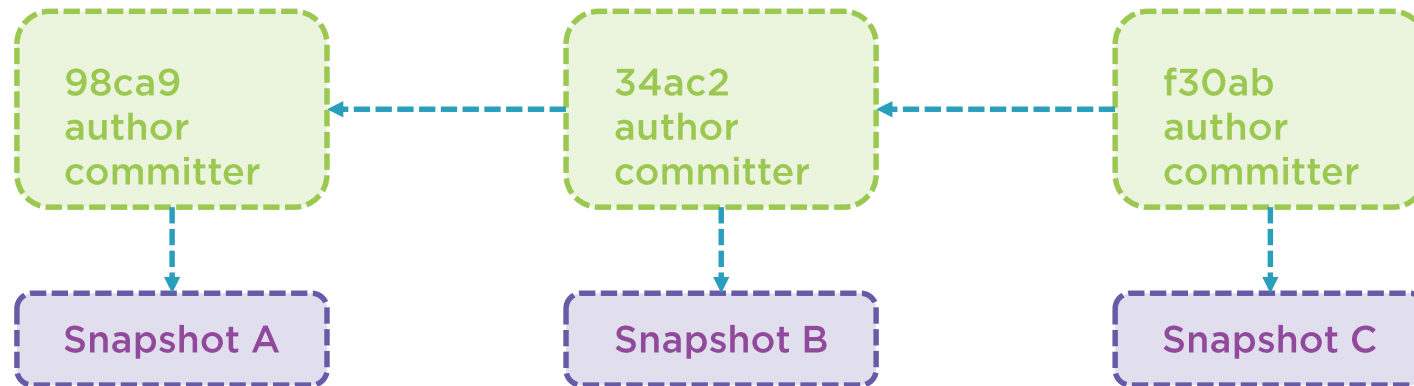
Traditional Source Management



The Concept of Snapshots in Git (and GitHub)



Commits in Git



Branching in Git



Branch is a pointer to a commit

Default branch is master

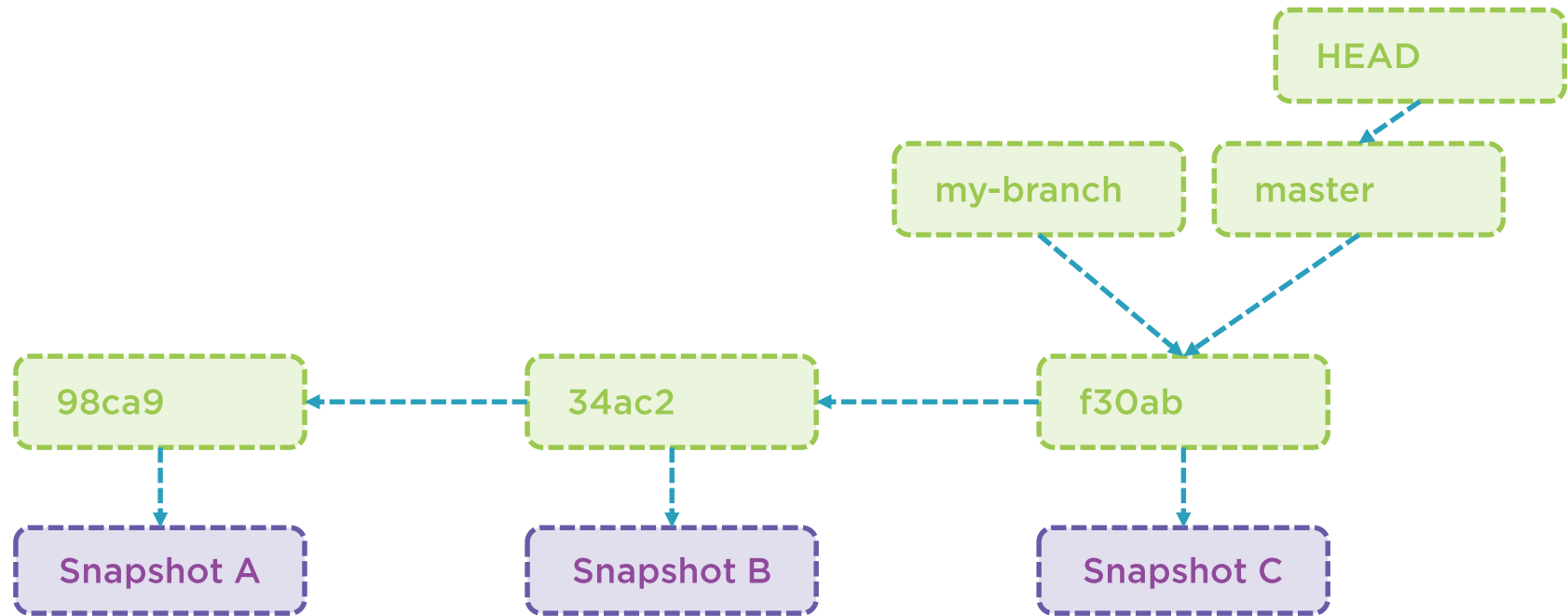
- Points to latest commit
- Moves forward with every commit

Use branches for

- Features
- Bugs
- Experiments



Branching in Git Continued



Demo



Creating a branch on GitHub



The Commands for Branching

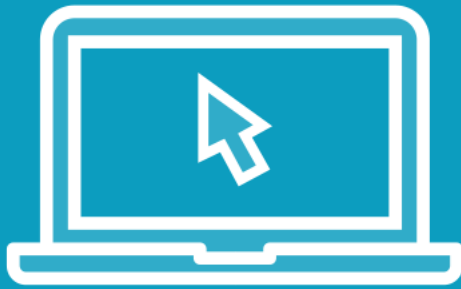
```
$ git branch [branch-name]
```

```
$ git checkout [branch-name]
```

```
$ git push -u [origin] [branch]
```



Demo



Creating local branches

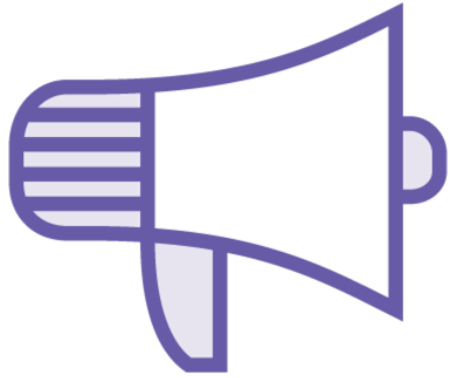
Pushing the branch to GitHub



Using the GitHub Flow



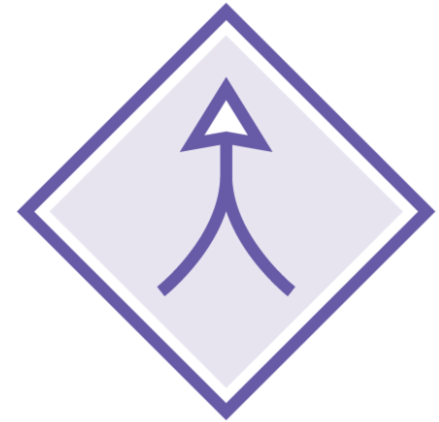
Pull Requests



Announce a push to a
branch



Discuss
Review changes
Add more commits






Merge

GitHub Support for Pull Requests

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](#).

 base: master  compare: title-change ✓ Able to merge. These branches can be automatically merged.



change instructions

Write

Preview

AA B i

“ ”

↔

☰ ☲ ☱

☑

@

★

↶

Leave a comment

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

M+ Styling with Markdown is supported

Create pull request

Reviewers

No reviews

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

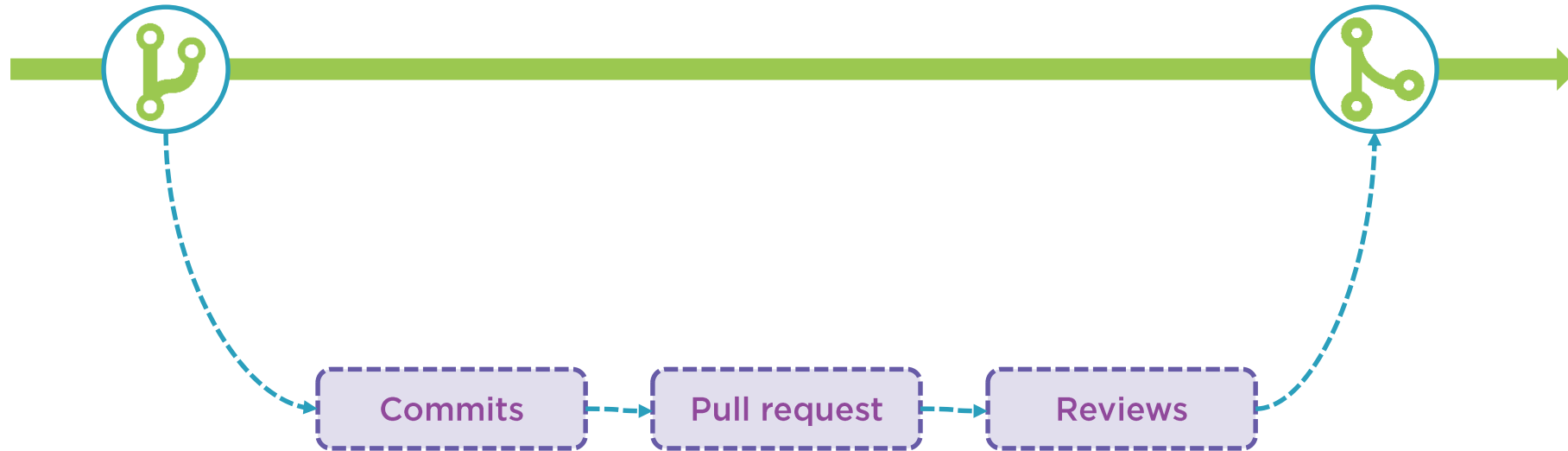
Milestone

No milestone

Helpful resources

[Contributing](#)

GitHub Flow



Demo



Submitting a pull request



Demo



Reviewing the pull request

Attributing the pull request



Sometimes, You'll Have a Merge Conflict

Add more commits by pushing to the **title-change** branch on **gillcleerendemo/improved-memory**.



This branch has conflicts that must be resolved

Use the [web editor](#) or the [command line](#) to resolve conflicts.

Resolve conflicts

Conflicting files

instructions.txt

Merge pull request



You can also [open this in GitHub Desktop](#) or view [command line instructions](#).






Typical conflicts

- Editing on the same line
- Editing an already deleted file




Merge conflicts needs to be solved before merge will happen




Merging Inside GitHub



[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)

 [gillcleerendemo / improved-memory](#)


[Watch](#) 1 [Star](#) 0 [Fork](#) 2

[Code](#) [Issues](#) 8 [Pull requests](#) 1 [Projects](#) 2 [Wiki](#) [Insights](#) [Settings](#)

#10: change instructions > **Conflicts**

1 conflicting file

instructions.txt 1 conflict Prev Next Mark as resolved

 instructions.txt instructions.txt

```
1 <<<<<< title-change
2 Instructions go here
3
4 test
5
6 test
7 =====
8 # Here's how everything works!
9
10 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc venenatis rhoncus tempor. Proin nec pharetra enim. Nam at luctus urna,
11
12 Phasellus pharetra mauris eu tortor porta ornare. Phasellus id mi et odio auctor pulvinar. Nullam laoreet sit amet metus eu rhoncus.
13 >>>>>> master
14
```

Local Diff Tools

KDiff3

vimdiff3

P4Merge

Beyond Compare



Demo



Merging with conflicts using GitHub

Merging locally



Demo



Creating a PR template

Creating a PR based on a template



Demo



Reverting a merged PR

Exploring the history

Using the blame feature on GitHub



Demo



Setting the default branch



Forking a Repository





Copy of a repo

Doesn't impact the original repo

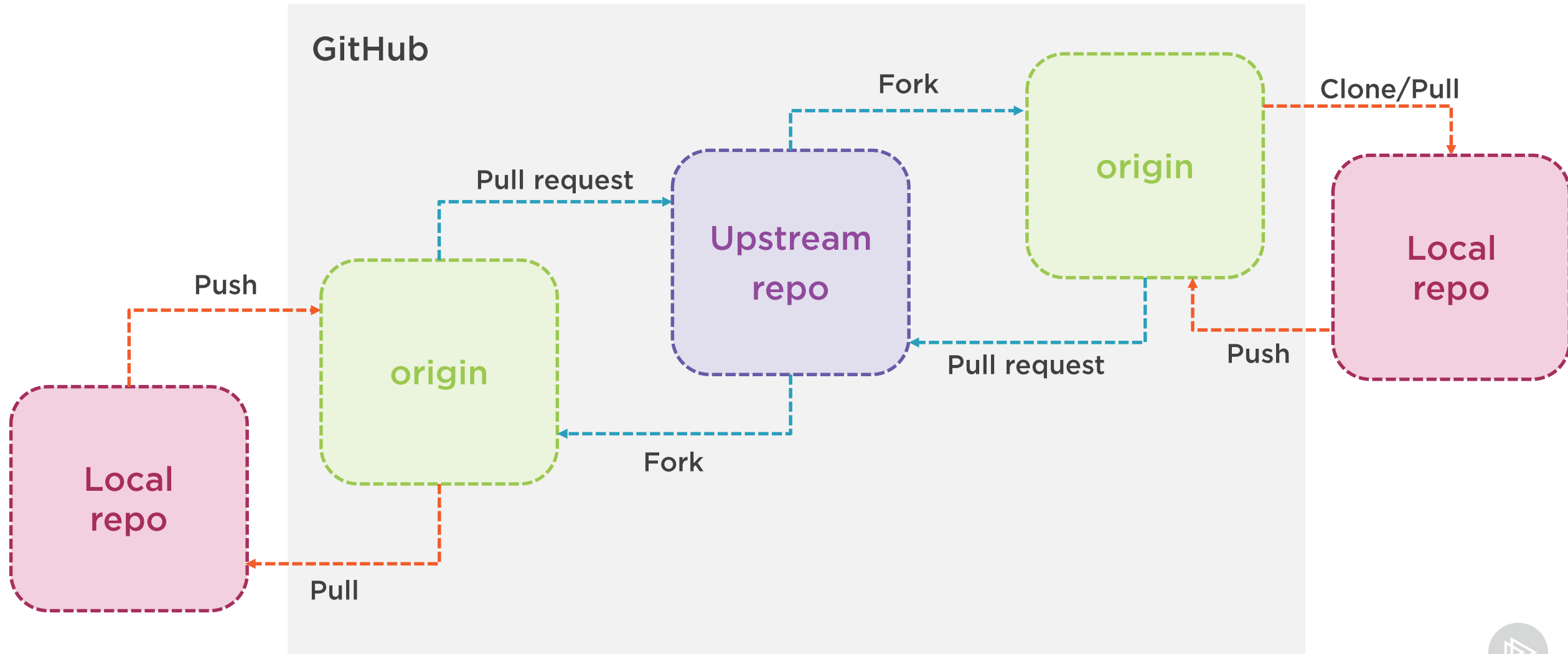
Changes can be merged again via pull requests

Available to do for anyone

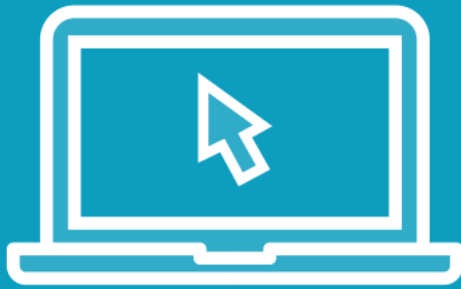
- It's your repository now



Forking on GitHub



Demo



Forking a repository on GitHub

Making changes in your own branch



Summary



Git has baked-in support for easy branching

GitHub Flow is based on branches and pull requests

Emphasizes the collaborative aspect

Forking creates a copy of a repository





Up next:
Managing issues

