

# Branching, Merging, and Pull Requests in GitHub

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# Overview



**An overview of branches**

**Working with branches on GitHub**

**Pull requests and the GitHub flow**



# An Overview of Branches

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# Branching in Traditional Source Management



**Diverging from the main development line**

**Often very expensive**

- Copy of the source directory

# Branching in Git



**Much more lightweight**

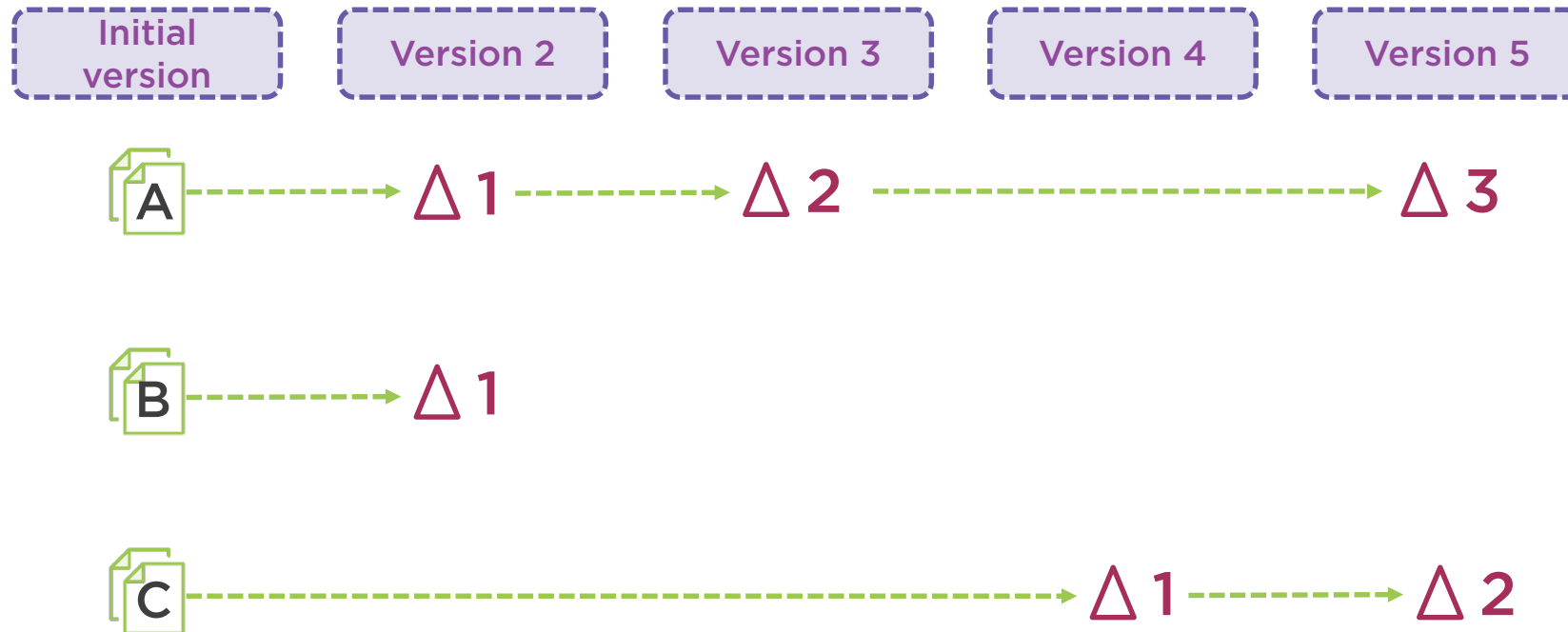
**Branching is very fast**

**Encouraged to be used**

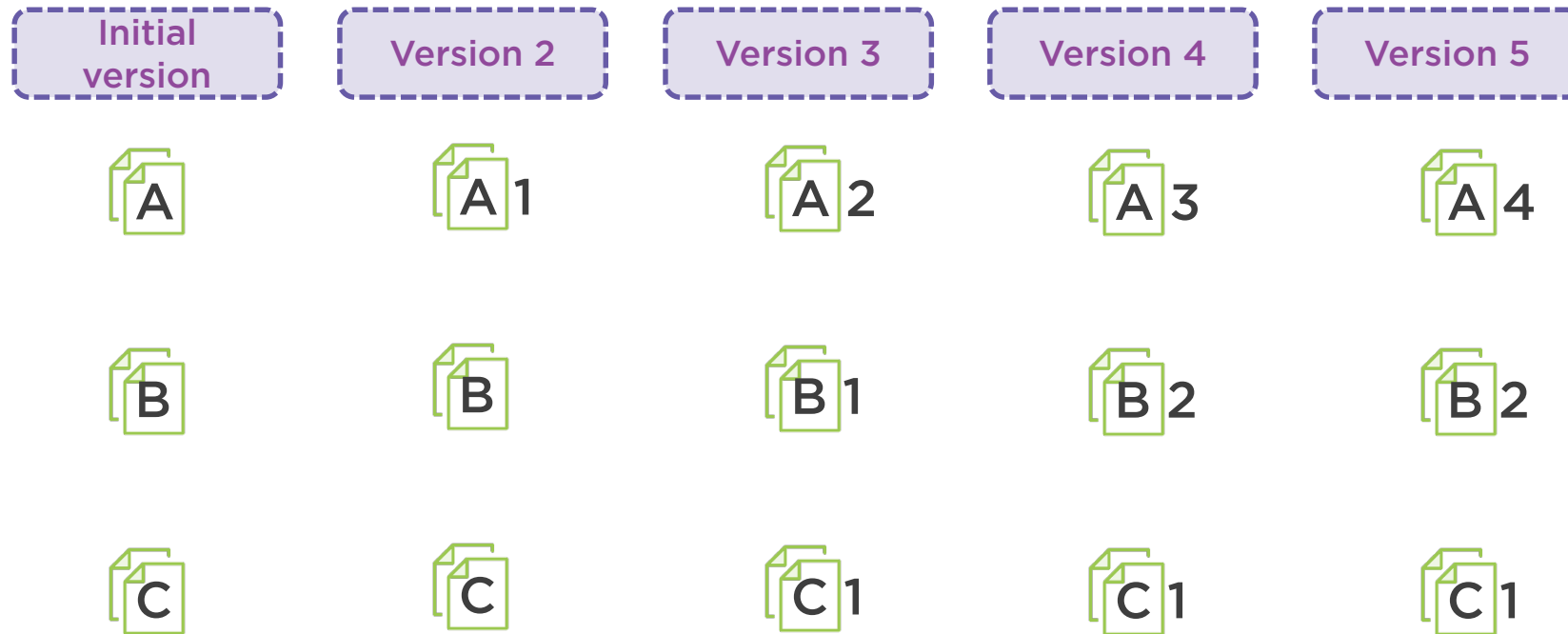
**Works because of the way Git works**

- Snapshots

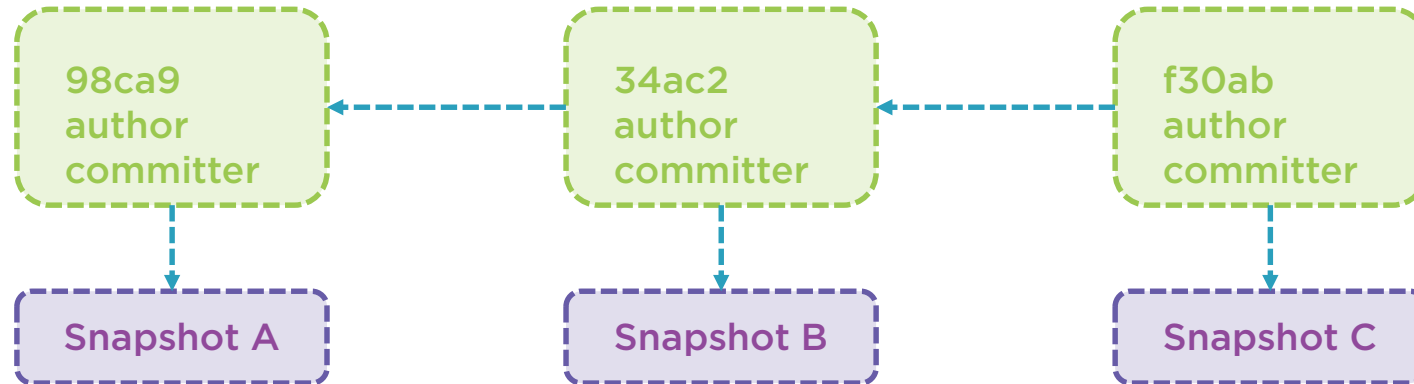
# Traditional Source Management



# The Concept of Snapshots in Git (and GitHub)



# Commits in Git





# Branching in Git



**Branch is a pointer to a commit**

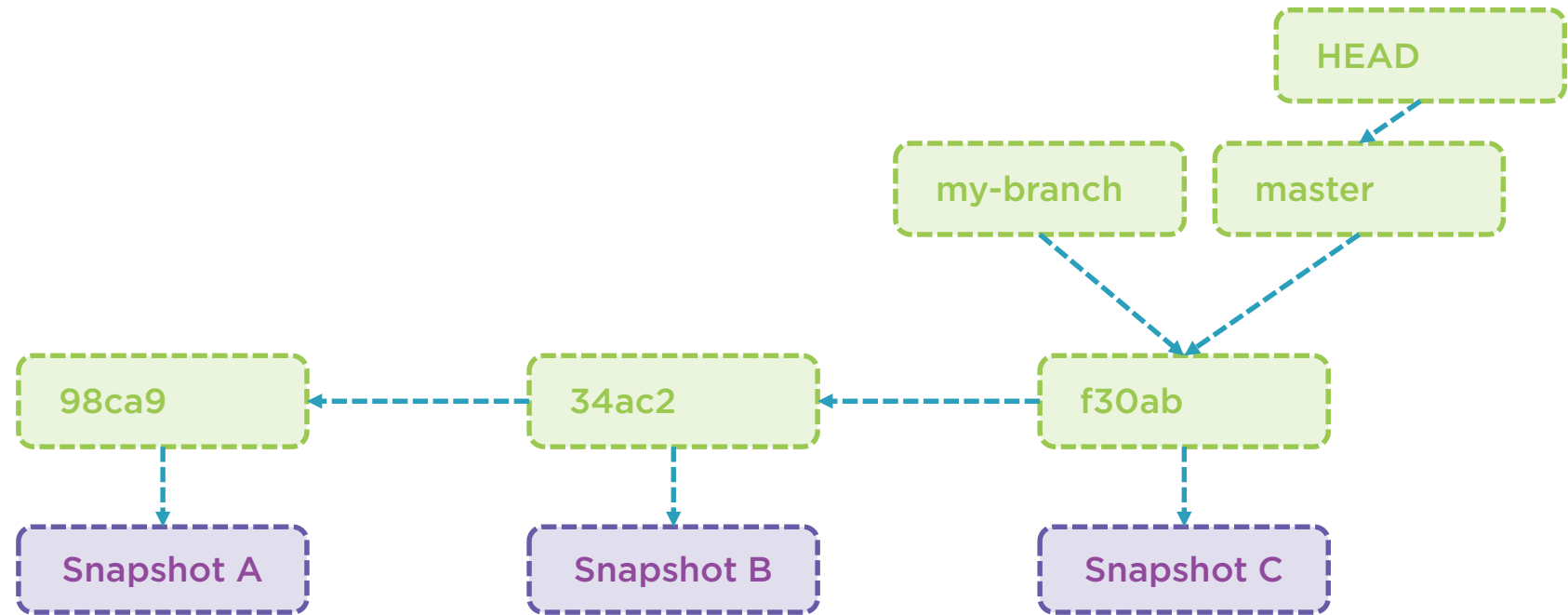
**Default branch is master**

- 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



Local branches

Pushing the branch to GitHub



# Pull Requests and the GitHub Flow

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Tell that you have pushed to a branch of a repo

Discuss, review and add more commits



Merge into base branch




# 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

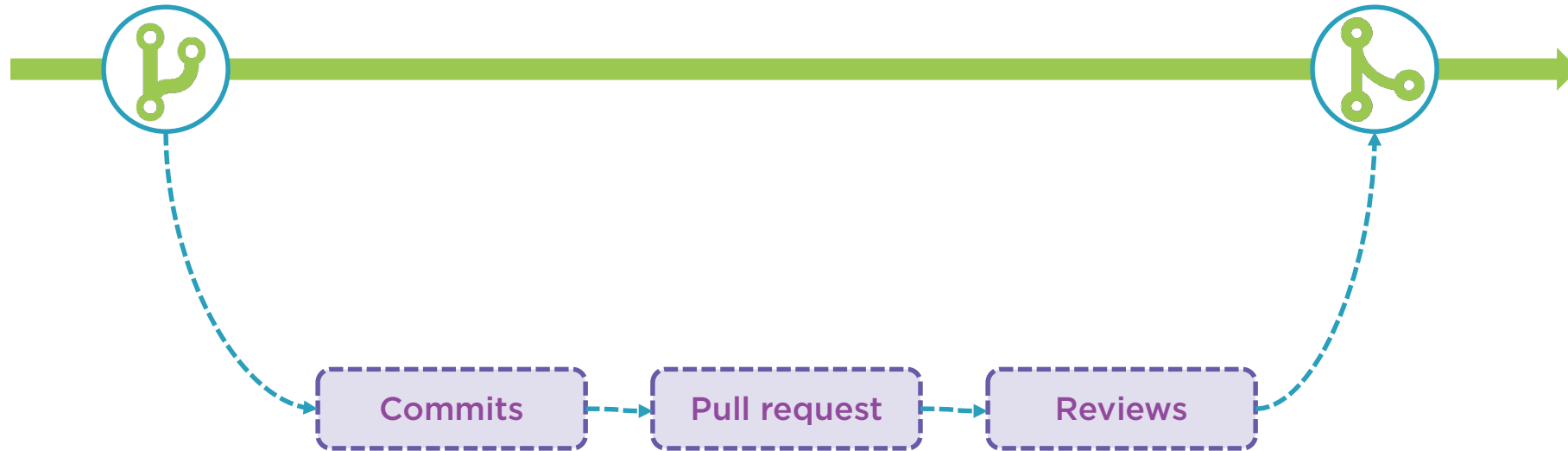
No milestone

Helpful resources

[Contributing](#)



# GitHub Flow



# Demo



Creating a pull request for our branch

Adding more commits

Adding comments

Exploring the files in the PR

Merging the PR into the branch

Deleting a branch



# Demo



## Setting the default branch



# Summary

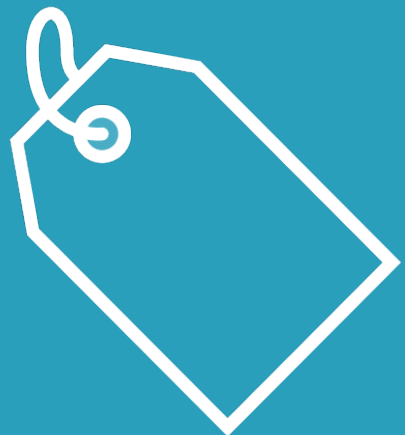


**Git has strong support for branching**

**Made easy on GitHub with branches and pull requests**

**Emphasizes the collaborative part of GitHub**





**Up next:**  
Creating Tags and Releases

