

Mastering Git

Version Check

Version Check



This training was created by using:

- Git 2.23

Version Check



This course is applicable to:

- Any version of Git

Relevant Notes



If you're on Git 2.24 or later:

- The *switch* and *restore* commands aren't experimental anymore.
- The main branch is often called *main*, not *master*.

Mastering Git

THE FOUR AREAS: INTRODUCTION



Paolo Perrotta

FREELANCE DEVELOPER

@nusco

Git Commands

git filter-branch
git commit
git add
git bisect
git grep
git status
git mv
git fetch
git diff
git log
git clean
git help
git clone
git merge
git rebase
git blame
git reflog
git rerere
git clean
git help
git clone
git merge
git reset
git push
git remote
git init
git branch
git rm
git cherry-pick
git config
git checkout
git revert

We will focus on the Git
“way of thinking”.

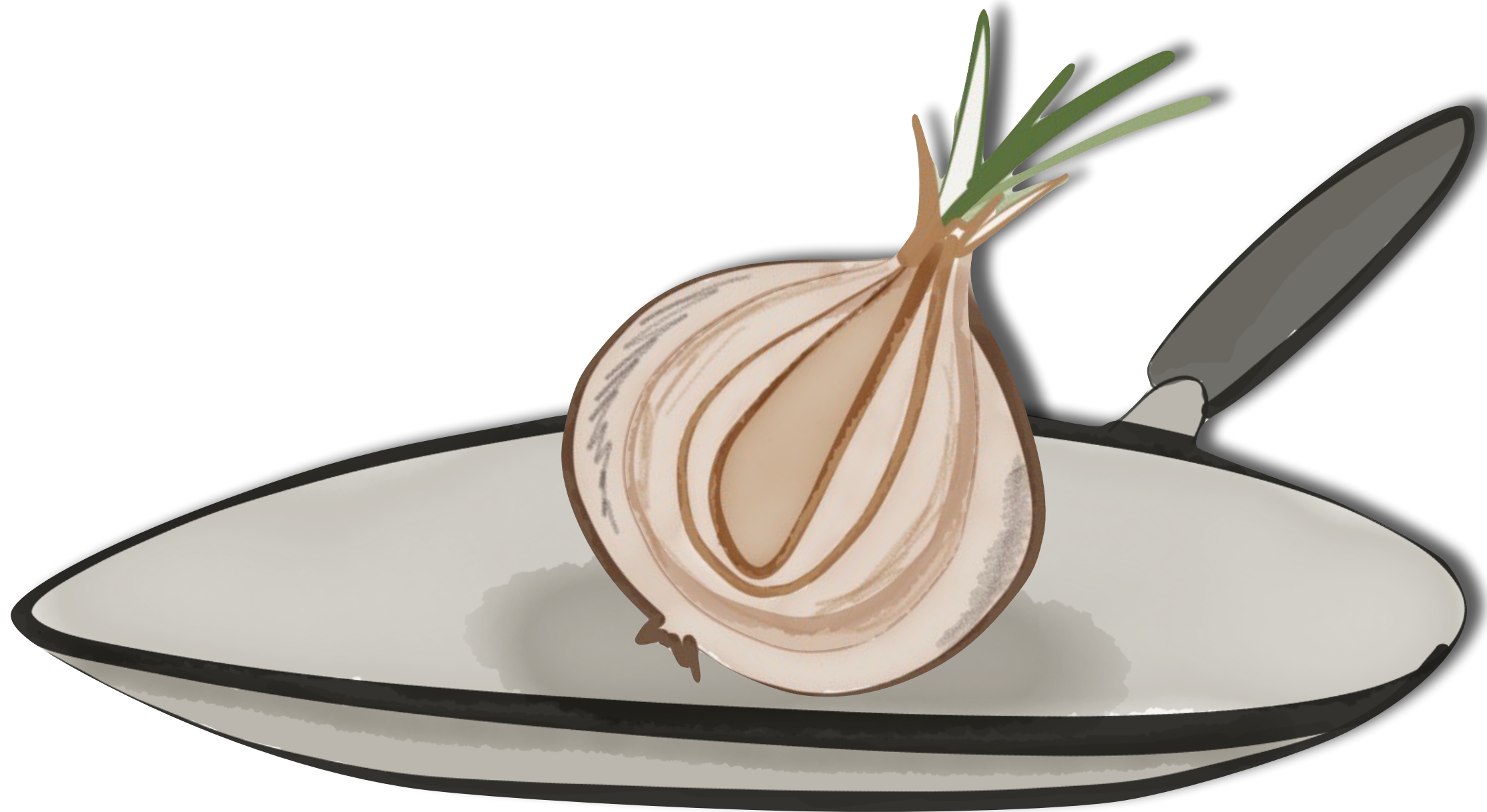
The Previous Training

The screenshot shows the course page for "How Git Works" by Paolo Perrotta. The page includes a navigation bar with icons for Home, Browse, Search, Paths, Channels, Bookmarks, and Q&A. The main content area features the course title and a description: "This course is for developers and system administrators who want to really understand Git. Whether you just started using Git, or you've been using it every day for months - this course will give you the knowledge you need to become a Git master." The course author's name, Paolo Perrotta, is listed, along with a brief bio. The course info section is also visible.

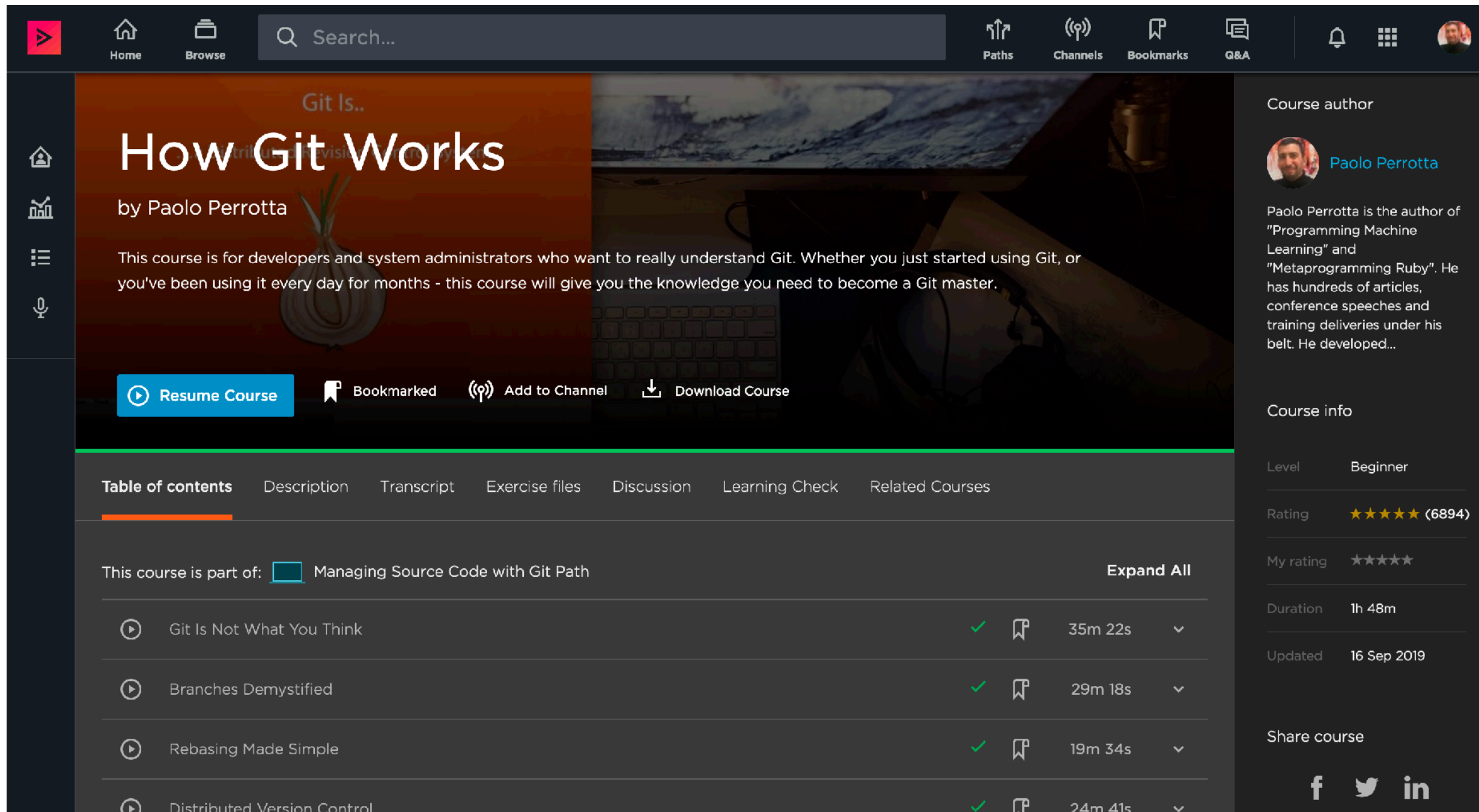
Three hand-drawn diagrams are overlaid on the page:

- Diagram 1 (Left):** Illustrates the relationship between commits, trees, and blobs. Two red circles labeled "commit" point to two yellow circles labeled "tree". One "tree" points to a blue circle labeled "blob", and the other "tree" points to another blue circle labeled "blob".
- Diagram 2 (Middle):** Illustrates branching. A vertical sequence of red circles represents a branch. A yellow arrow labeled "branch2" points to a red circle in the middle of the sequence. A yellow arrow labeled "branch1" points to a red circle at the bottom of the sequence. A grey arrow labeled "HEAD" points to the bottom red circle. The sequence of red circles points to a sequence of yellow circles, which in turn points to a sequence of blue circles.
- Diagram 3 (Right):** Illustrates a "spaghetti" merge. A yellow arrow labeled "master" points to a yellow circle. A pink circle points to two blue circles. A green arrow labeled "spaghetti" points to the pink circle. The sequence of circles (yellow, blue, blue, red, blue) represents a complex, non-linear merge history.

The “Onion” Metaphor



The Previous Training (Again)



The screenshot shows the Udacity course page for "How Git Works" by Paolo Perrotta. The page features a dark theme with a large hero image of a desk with a laptop and a cup. The course title "How Git Works" is prominently displayed in white text. Below the title, a description states: "This course is for developers and system administrators who want to really understand Git. Whether you just started using Git, or you've been using it every day for months - this course will give you the knowledge you need to become a Git master." Action buttons include "Resume Course", "Bookmarked", "Add to Channel", and "Download Course". A "Table of contents" section lists four lessons: "Git Is Not What You Think", "Branches Demystified", "Rebasing Made Simple", and "Distributed Version Control", each with a play icon, a green checkmark, a bookmark icon, and a duration. The right sidebar provides course details: author Paolo Perrotta, level "Beginner", a 5-star rating from 6894 users, a duration of 1h 48m, and an update date of 16 Sep 2019. Social sharing icons for Facebook, Twitter, and LinkedIn are at the bottom.

Home Browse Search...

Paths Channels Bookmarks Q&A

Git Is..

How Git Works

by Paolo Perrotta

This course is for developers and system administrators who want to really understand Git. Whether you just started using Git, or you've been using it every day for months - this course will give you the knowledge you need to become a Git master.


Resume Course Bookmarked Add to Channel Download Course

Table of contents Description Transcript Exercise files Discussion Learning Check Related Courses

This course is part of: [Managing Source Code with Git Path](#) **Expand All**

Git Is Not What You Think	✓	🔖	35m 22s	▼
Branches Demystified	✓	🔖	29m 18s	▼
Rebasing Made Simple	✓	🔖	19m 34s	▼
Distributed Version Control	✓	🔖	24m 41s	▼

Course author

 **Paolo Perrotta**

Paolo Perrotta is the author of "Programming Machine Learning" and "Metaprogramming Ruby". He has hundreds of articles, conference speeches and training deliveries under his belt. He developed...

Course info

Level Beginner

Rating ★★★★★ (6894)

My rating ★★★★★

Duration 1h 48m

Updated 16 Sep 2019

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Course Overview

The Four Areas

- Introduction
- Basic Workflow
- *git reset*
- Advanced Tools

Managing History

- Exploring the Past
- Fixing Mistakes

Git Workflows

- Finding Your Workflow

The Command Line



The Four Areas

Stash

Working Area

Index

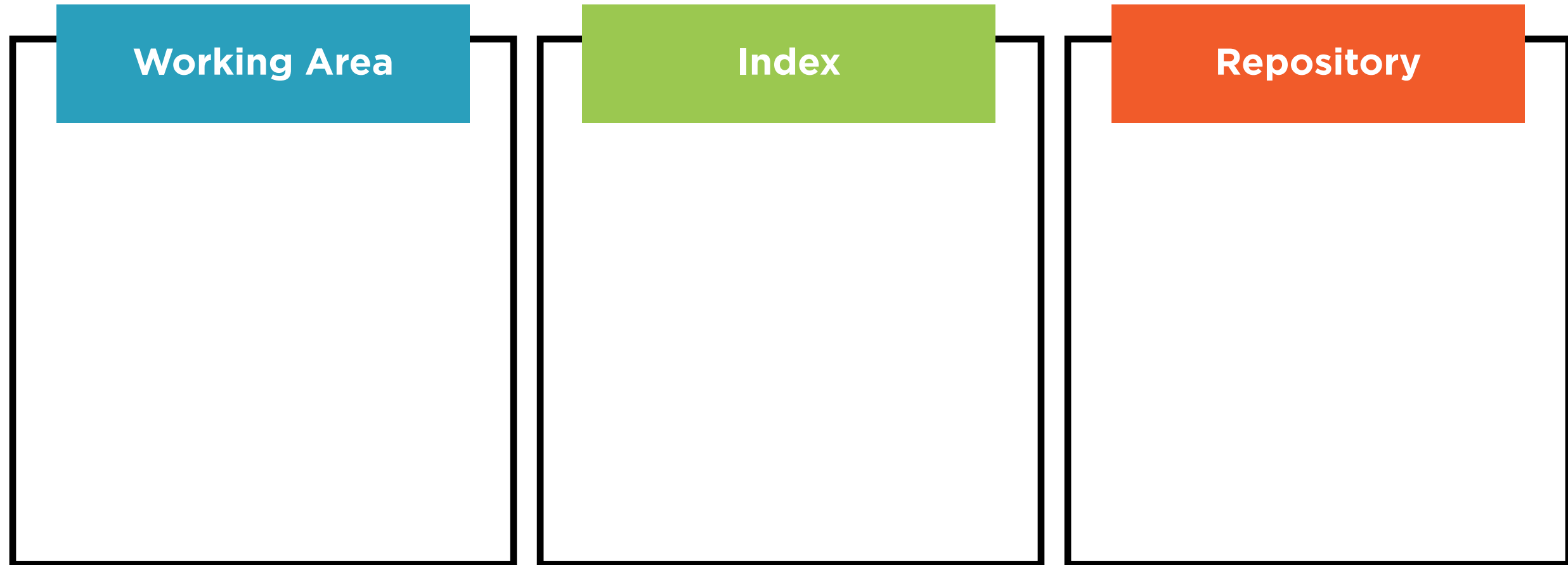
Repository

The Two Questions

**How does this command move
information across the Four Areas?**

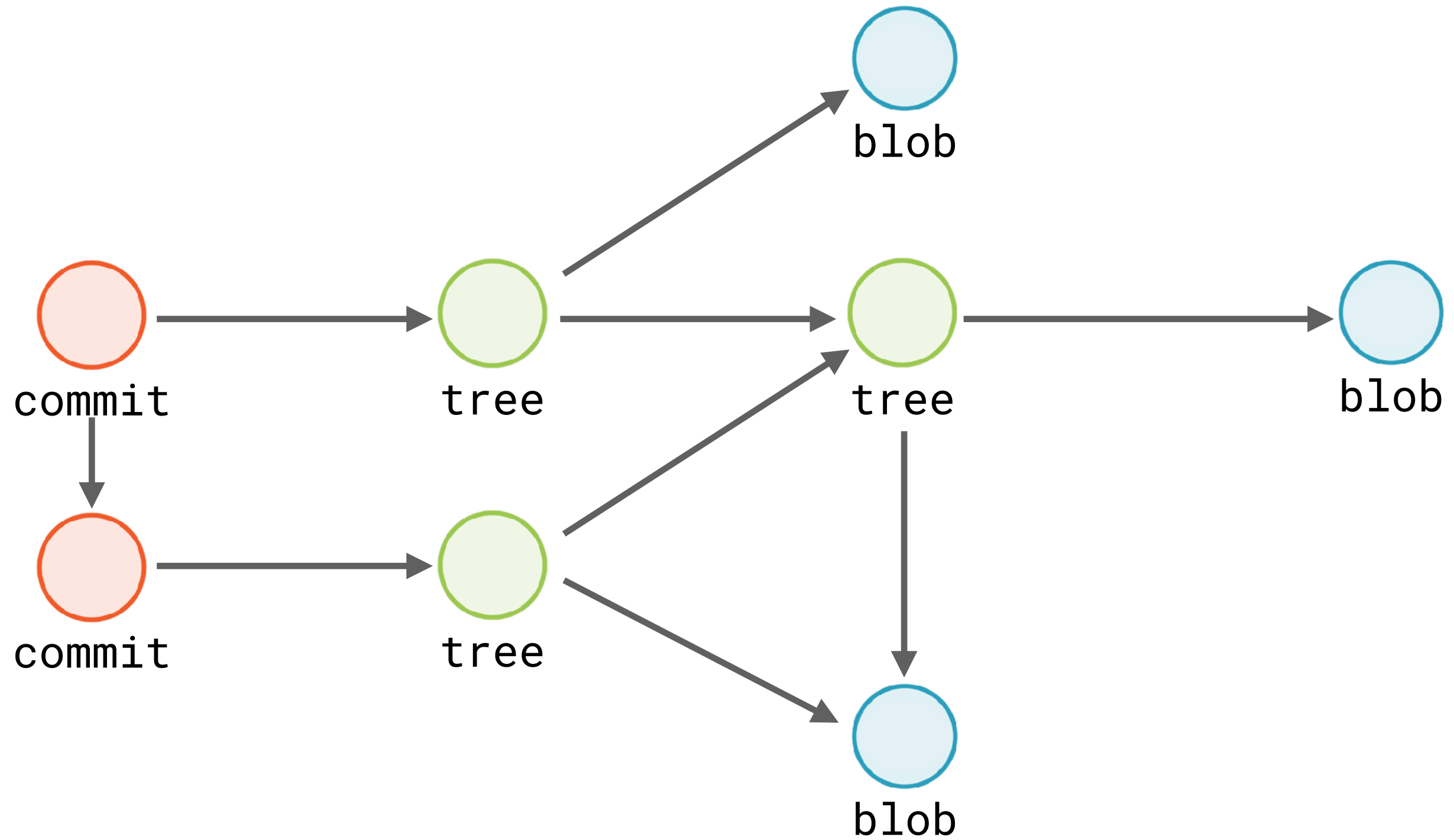
**How does this command change
the Repository?**

The Three Main Areas

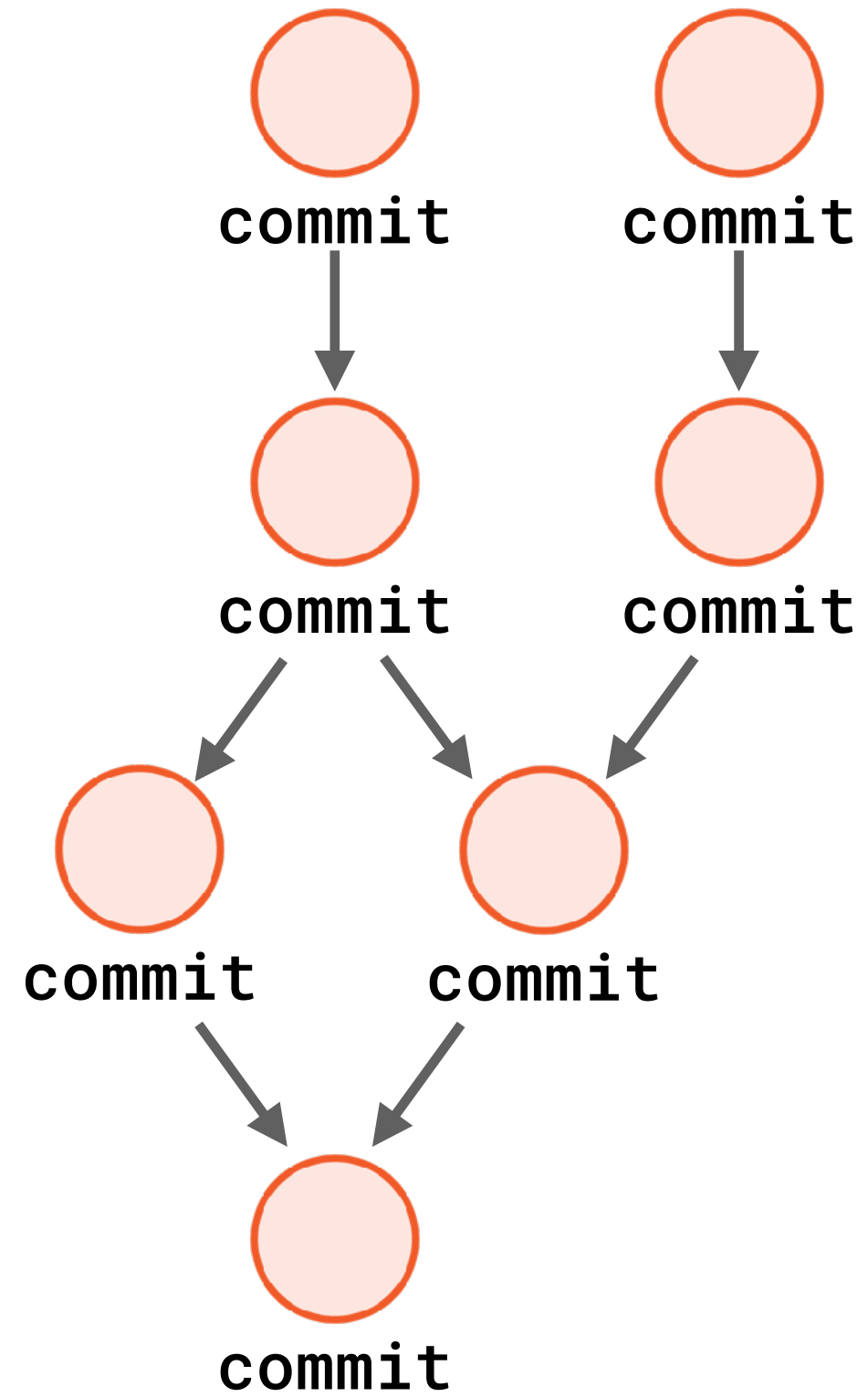


If you have trouble following
this section, then watch
“How Git Works” first.

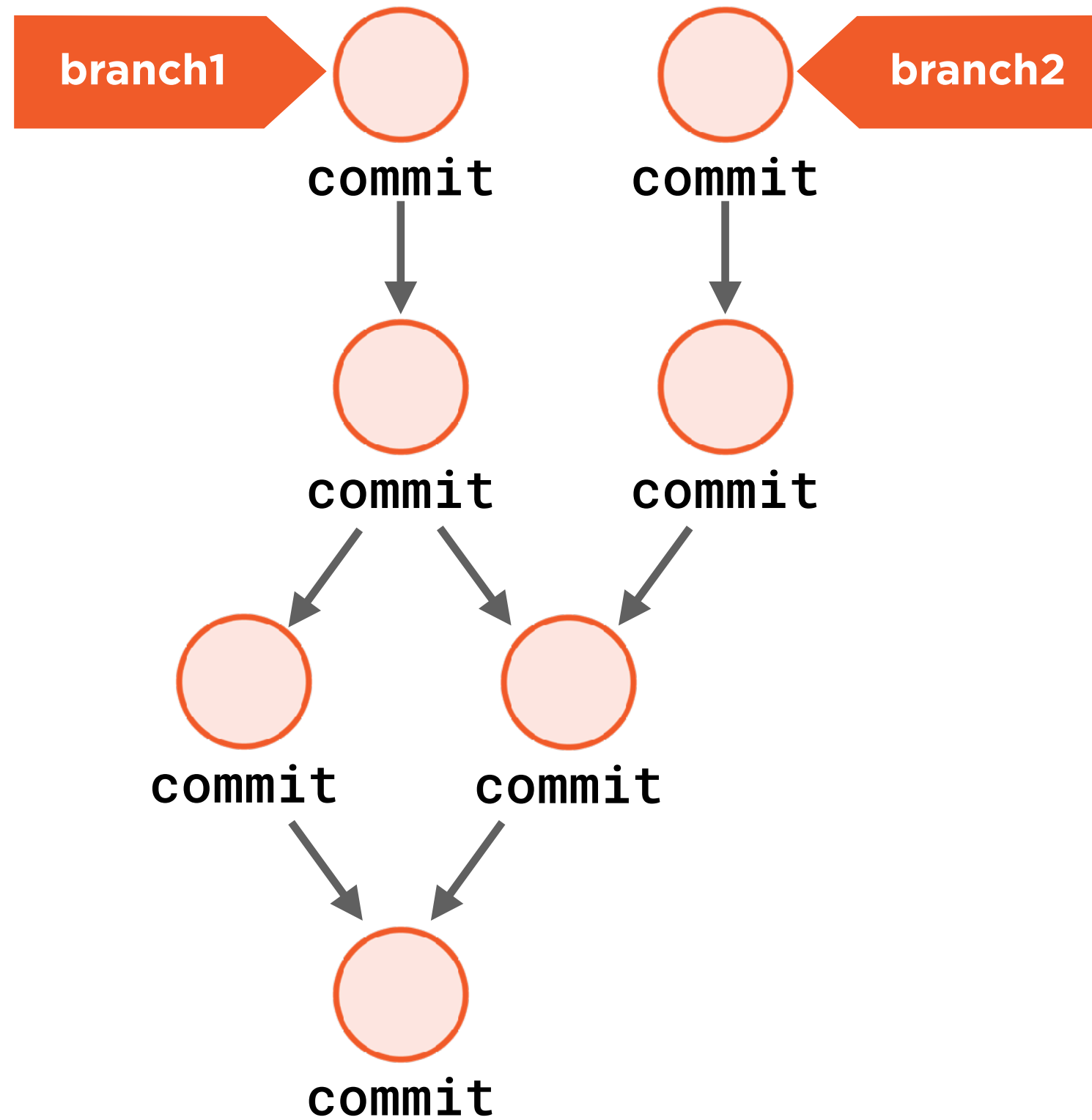
The Project History



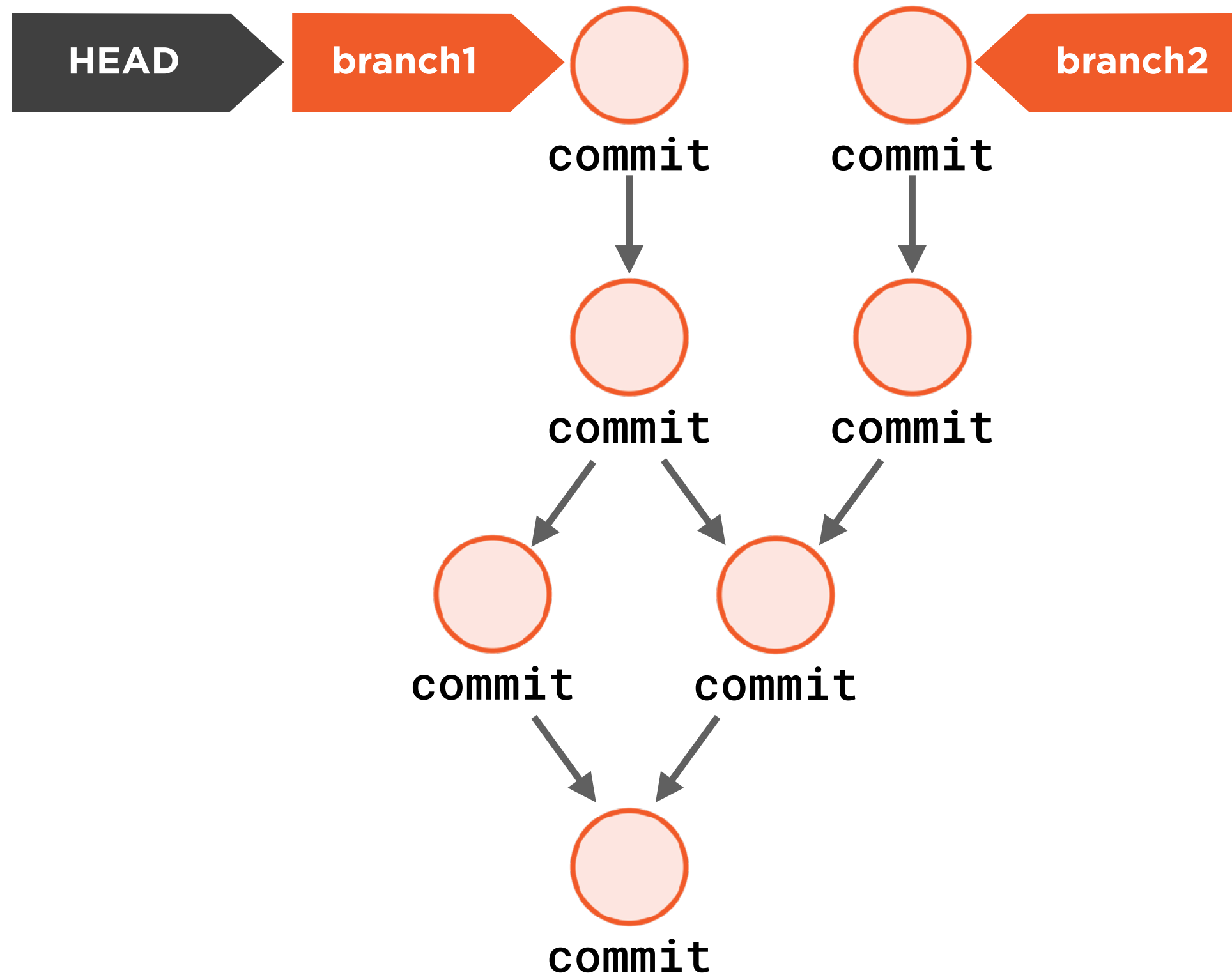
Commits



Branches

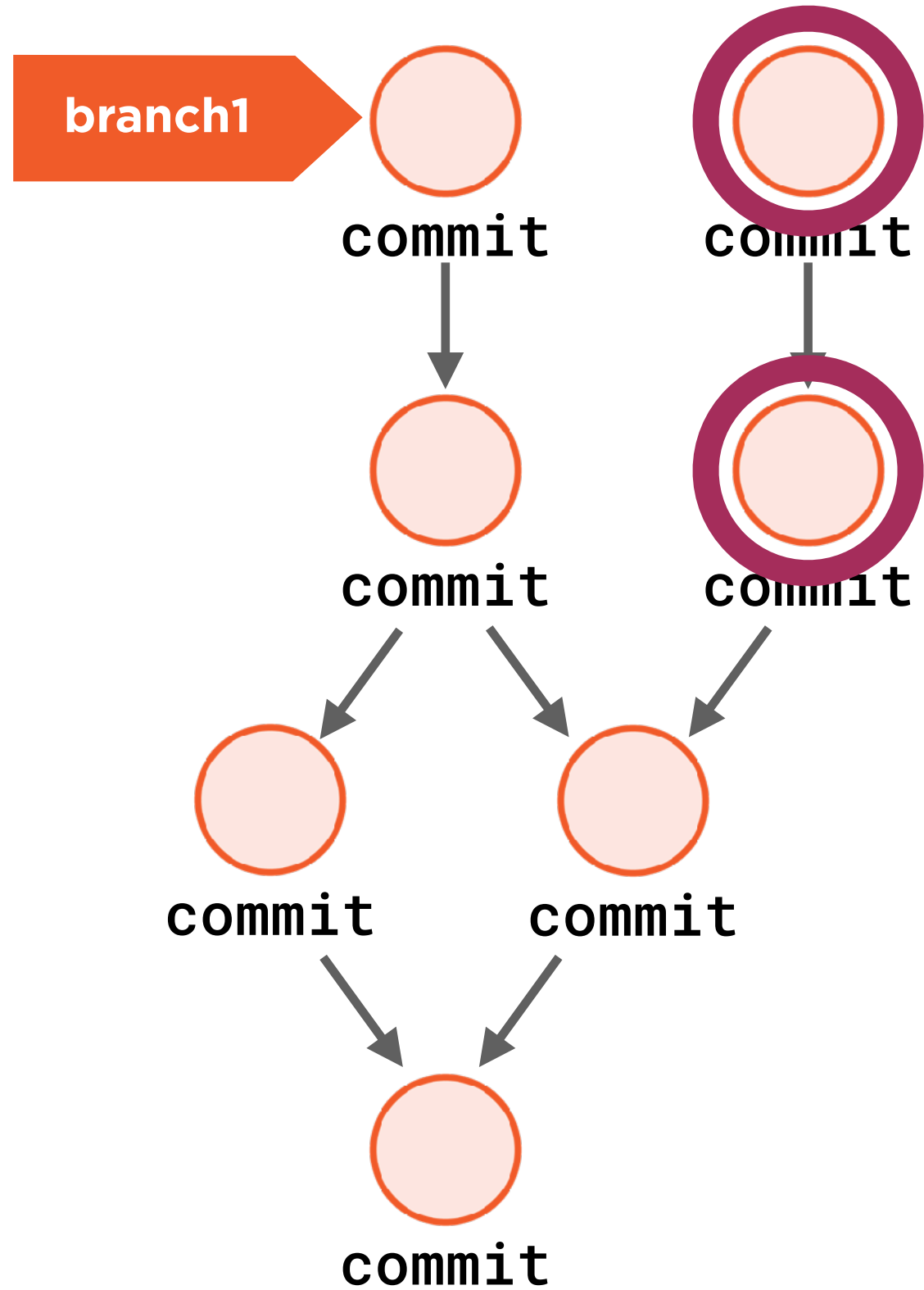


HEAD and the Current Commit



```
graph TD; Main(( )) -- commit --> Main2(( )); Main2 -- commit --> Branch1(( )); Branch1 -- commit --> Branch1_1(( )); Branch1 -- commit --> Branch1_2(( )); Branch1_1 -- commit --> Main3(( )); Branch1_2 -- commit --> Main3;
```

The diagram illustrates a branching strategy in Git. It shows a main branch (blue circle) and a branch1 (orange circle). The main branch has a commit, which leads to a commit on branch1. This commit on branch1 leads to two more commits on branch1, which then merge back into the main branch.



If you could follow this
recap, then move on
with this training.

