Branches Demystified

Paolo Perrotta

@nusco

Git Is..

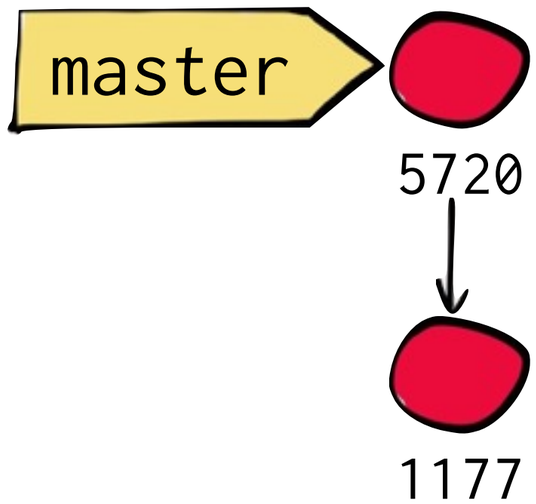
…a Stupid Content Tracker

Git Is..

…a Revision Control System

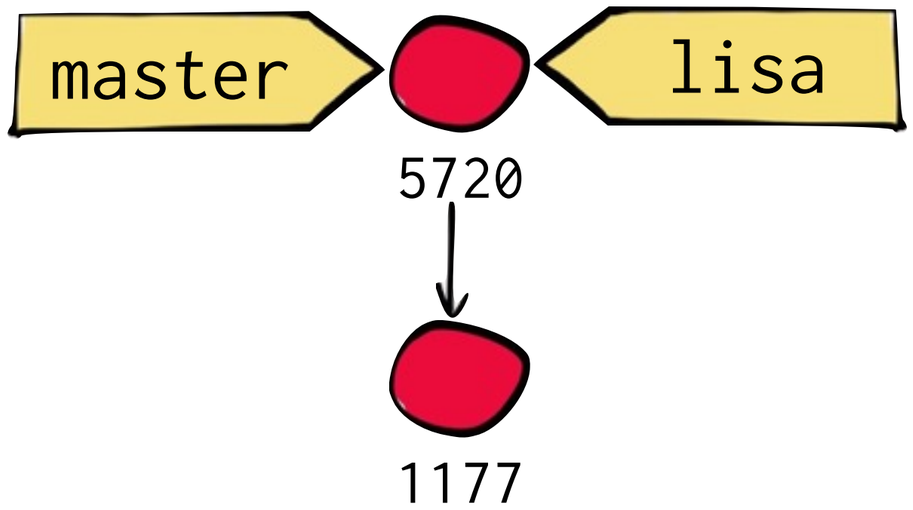
Git branches might not
be what you think they are.

The Master Branch

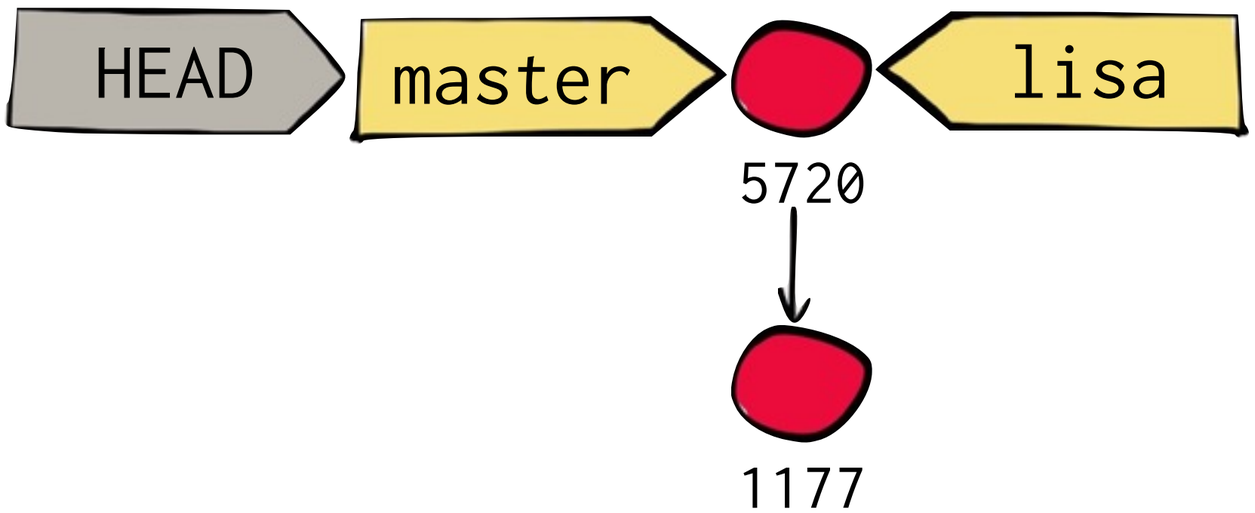


A branch is just a
reference to a commit.

A Second Branch

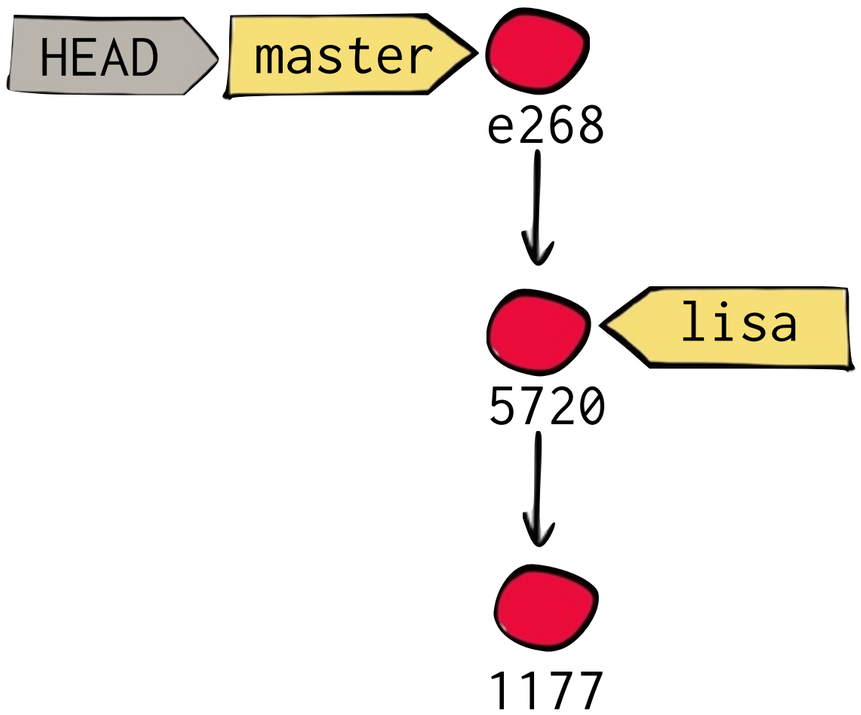


The Current Branch

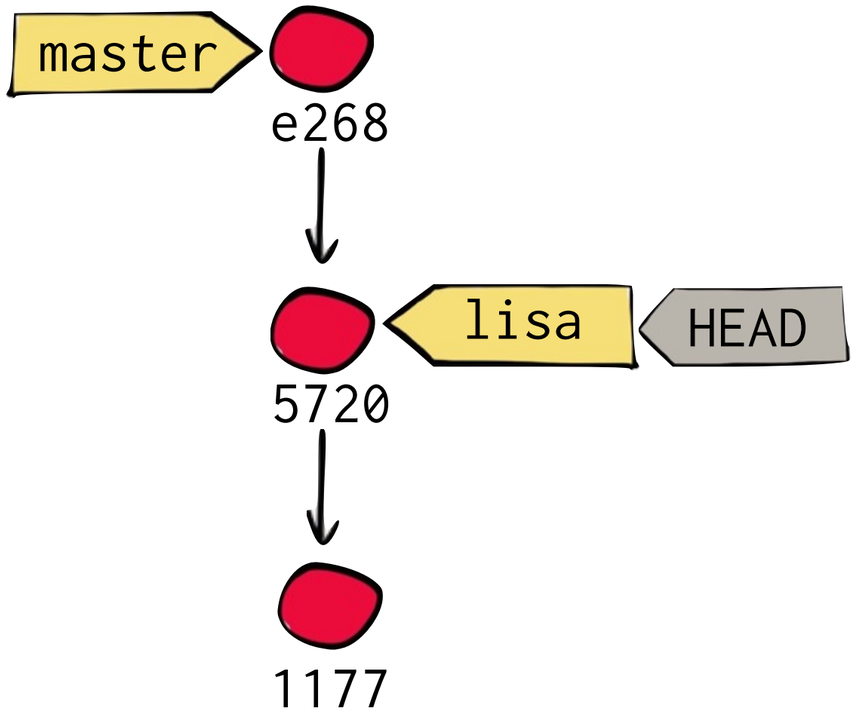


HEAD is just a reference to a branch.

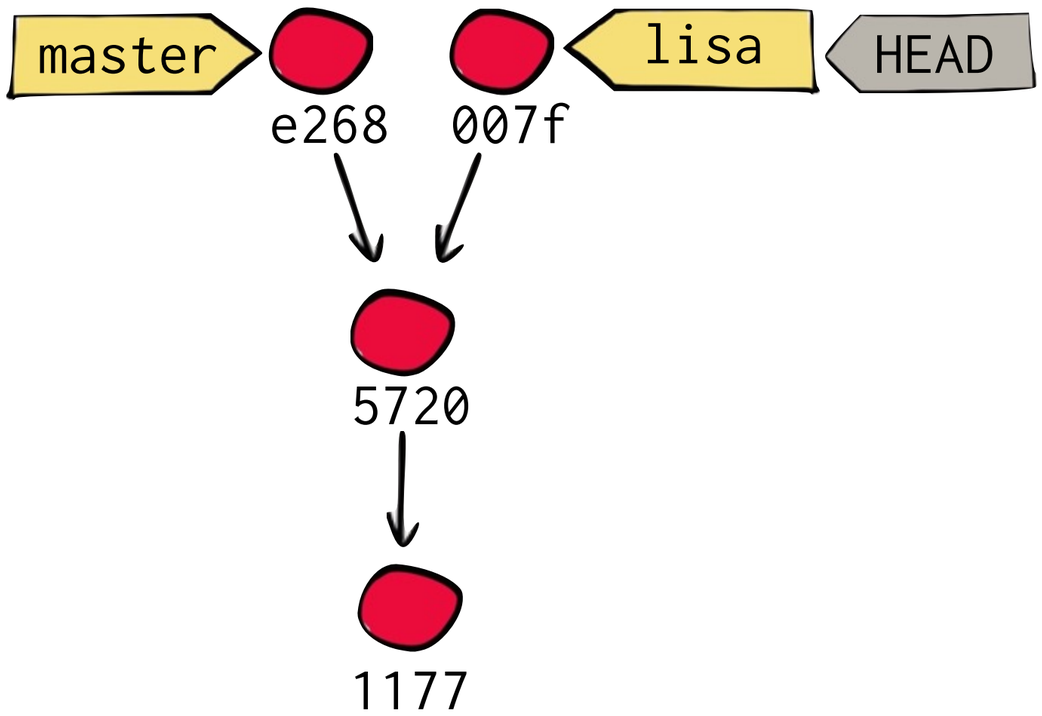
A New Commit



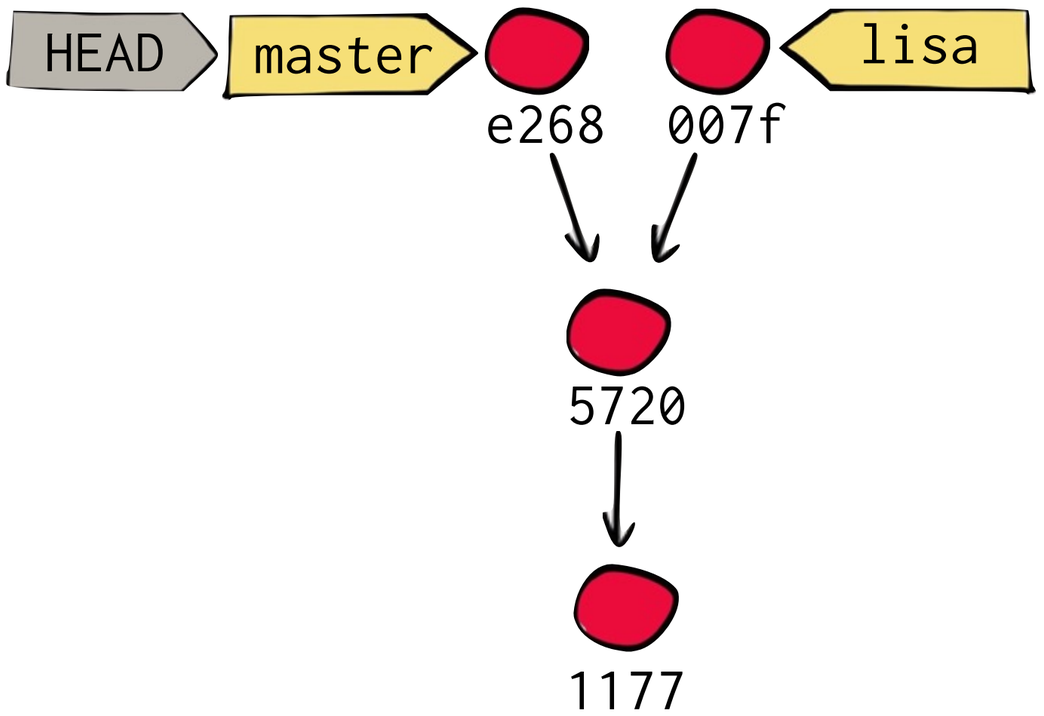
Checkout



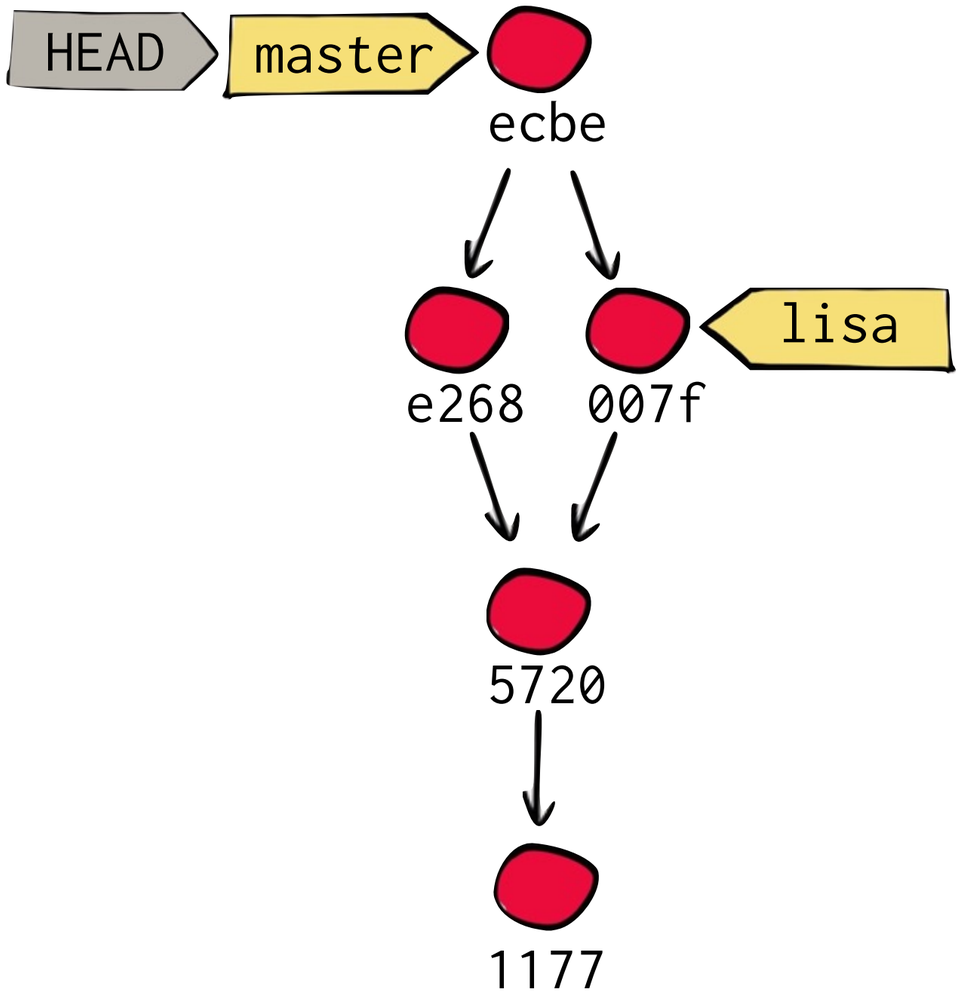
Branching



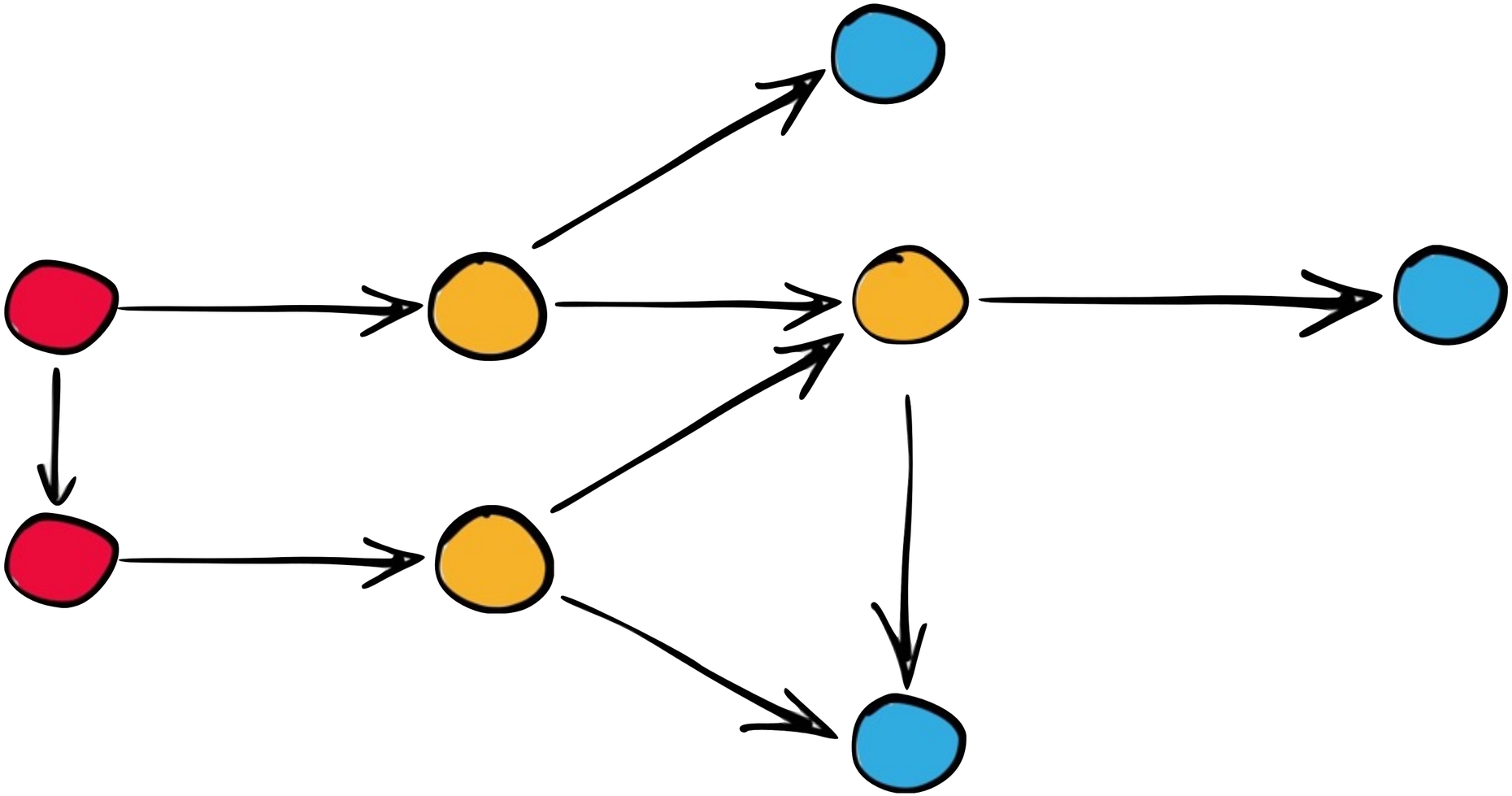
Checkout



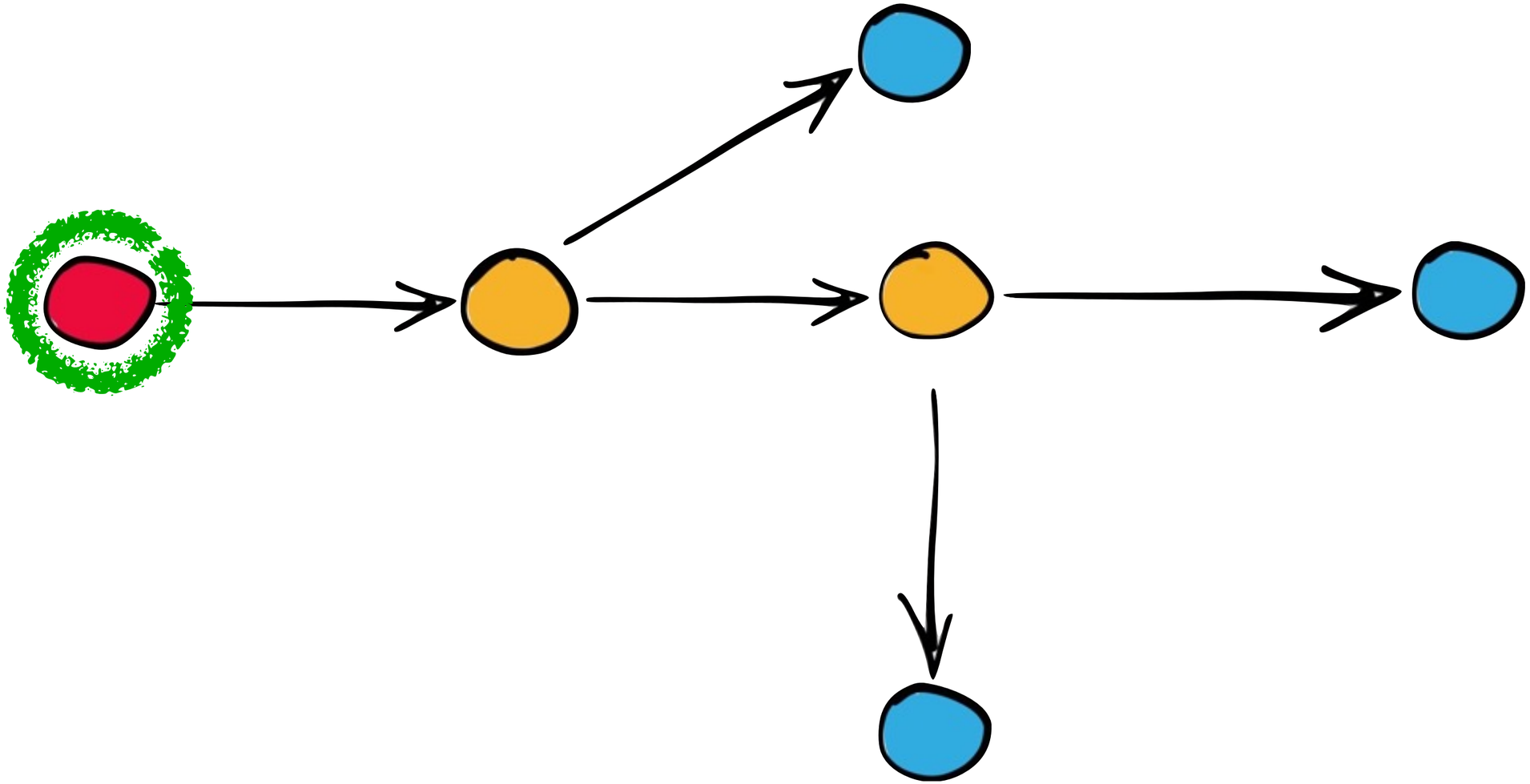
Merging



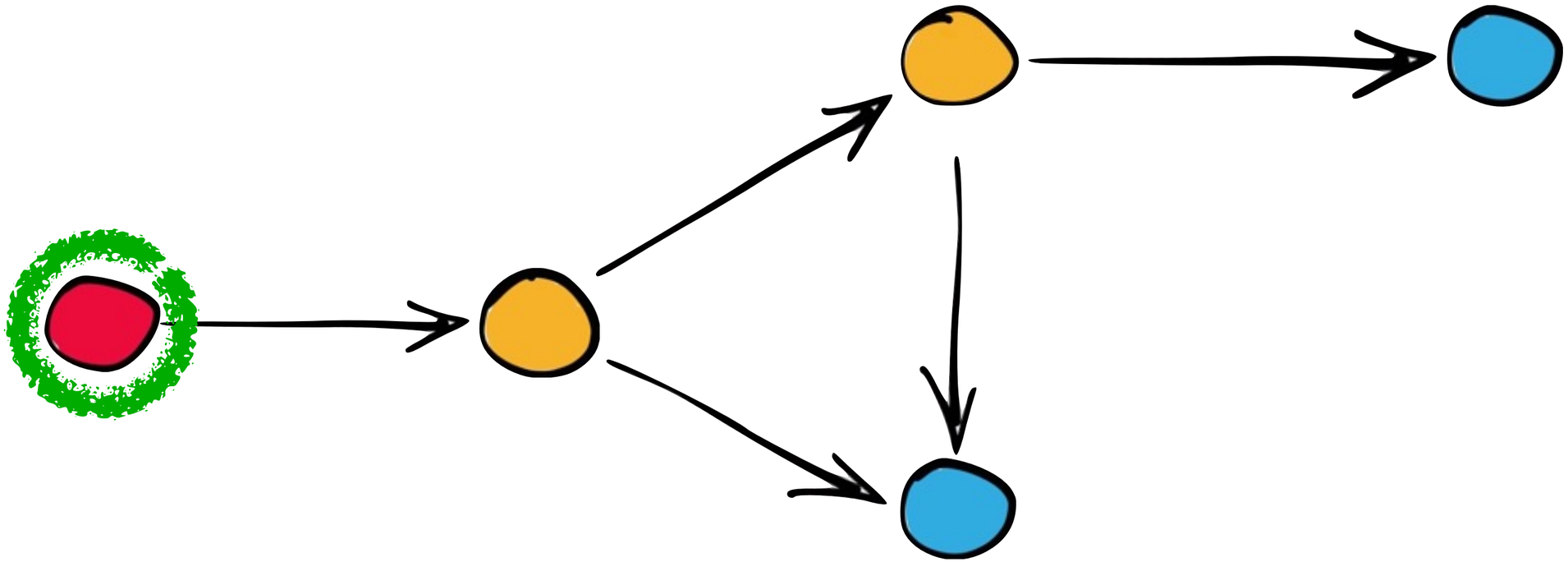
History and Content



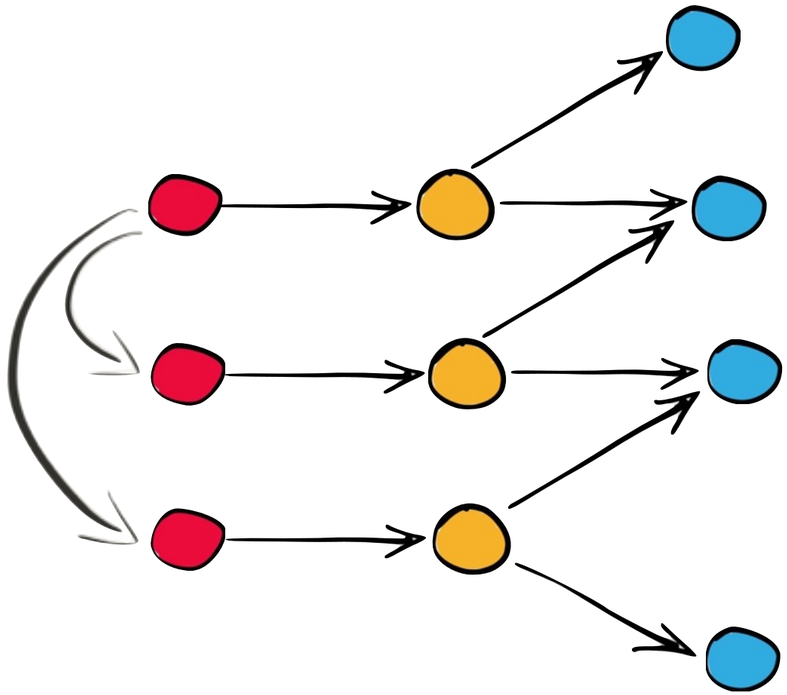
History and Content



History and Content

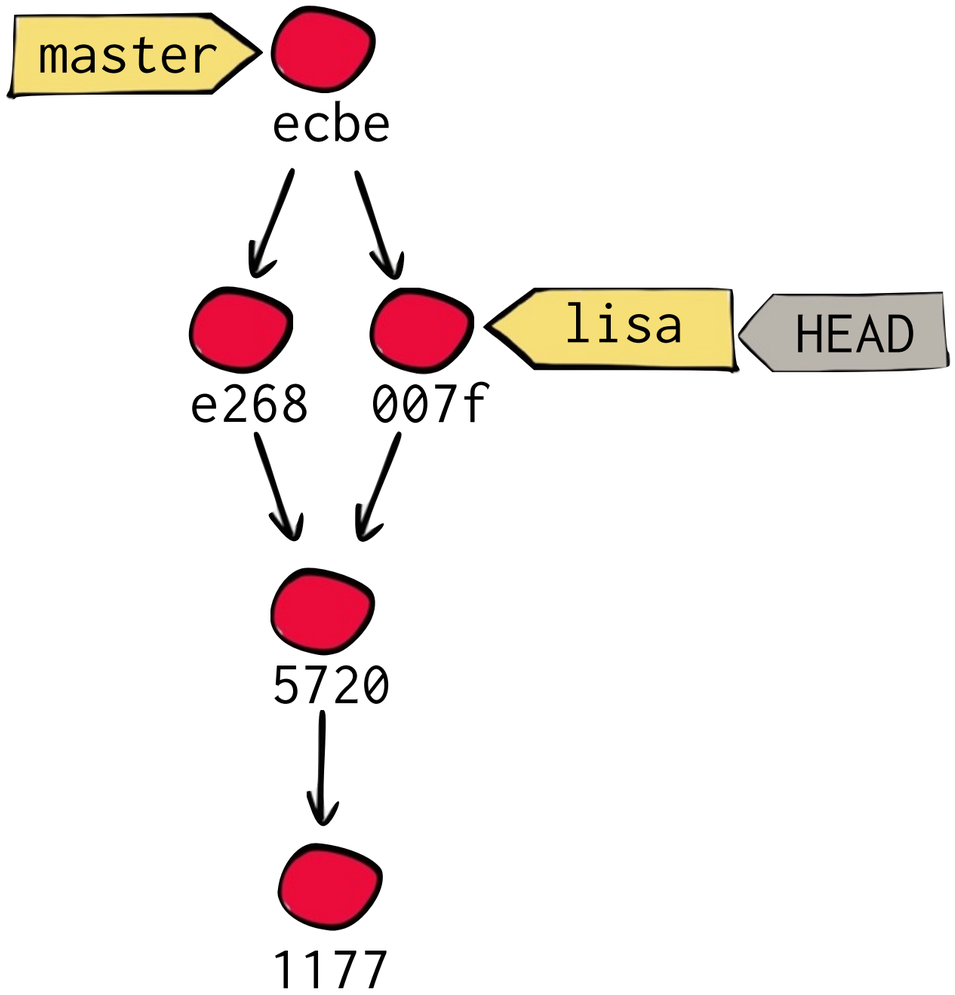


Merge Commits

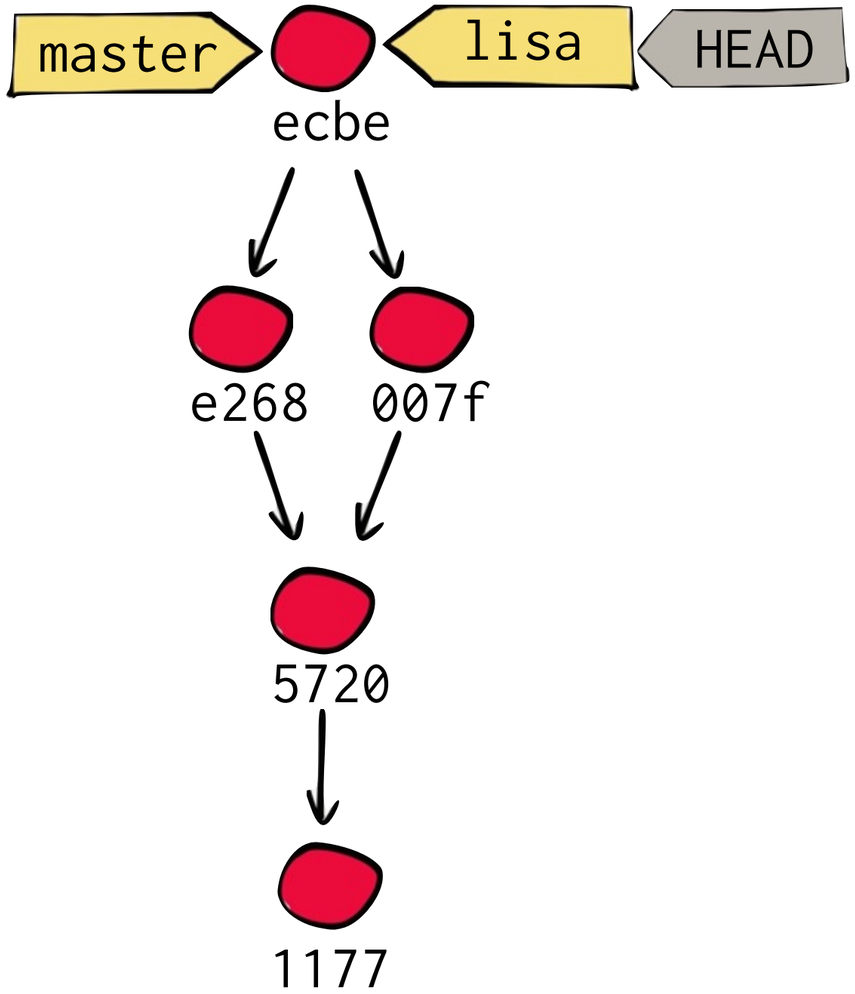


Git content management is simple.

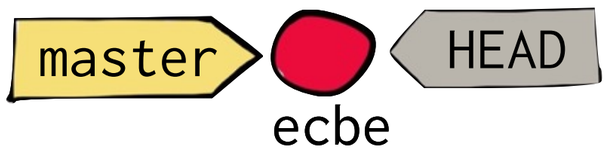
Git (mostly) doesn’t care about
your working directory.


master
ecbe
e268
007f
lisa
HEAD
5720
1177

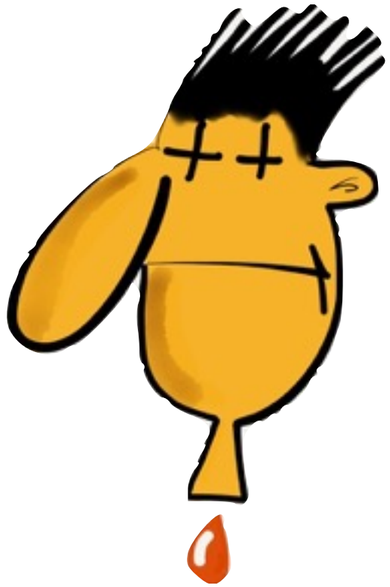
Fast-forward

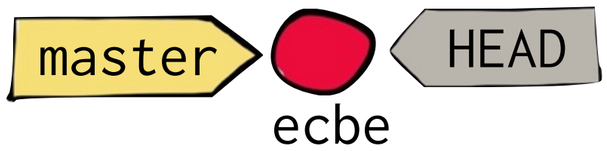


Checkout a Commit

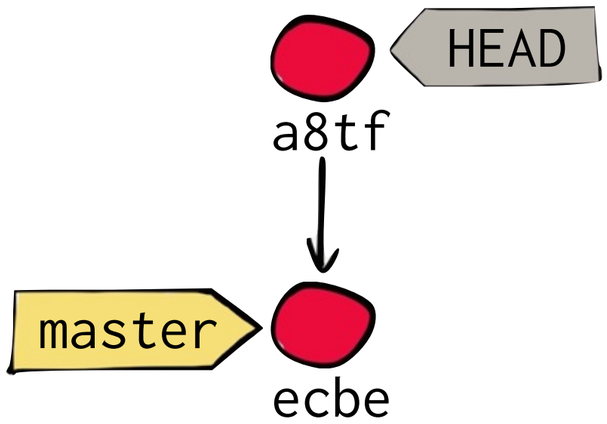


Detached HEAD

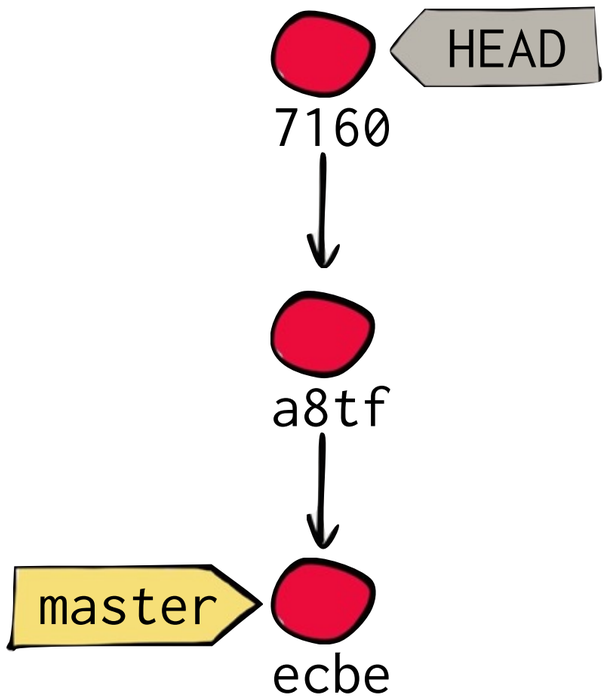


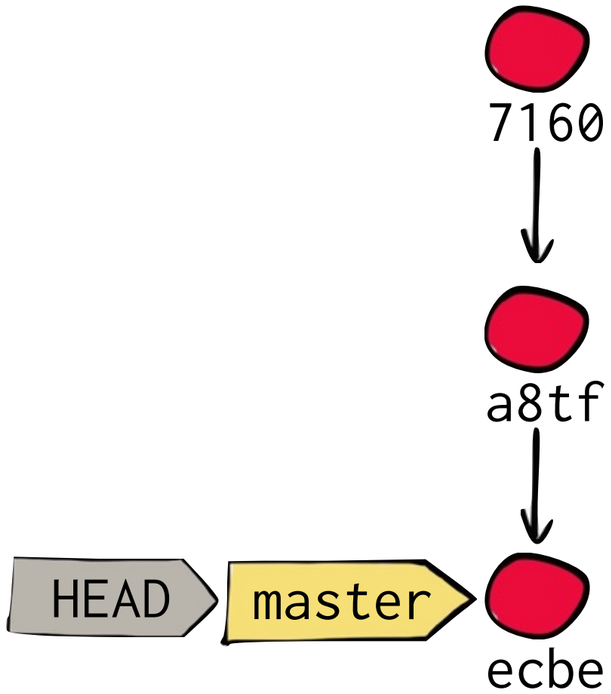


Detached HEAD

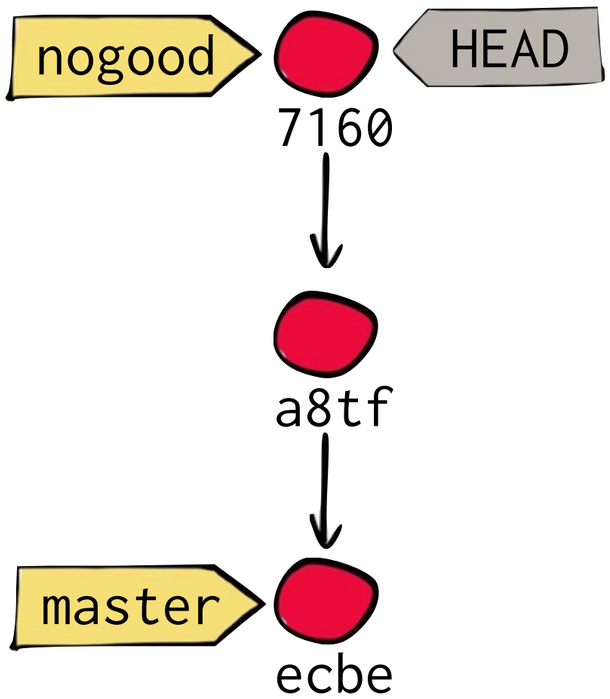


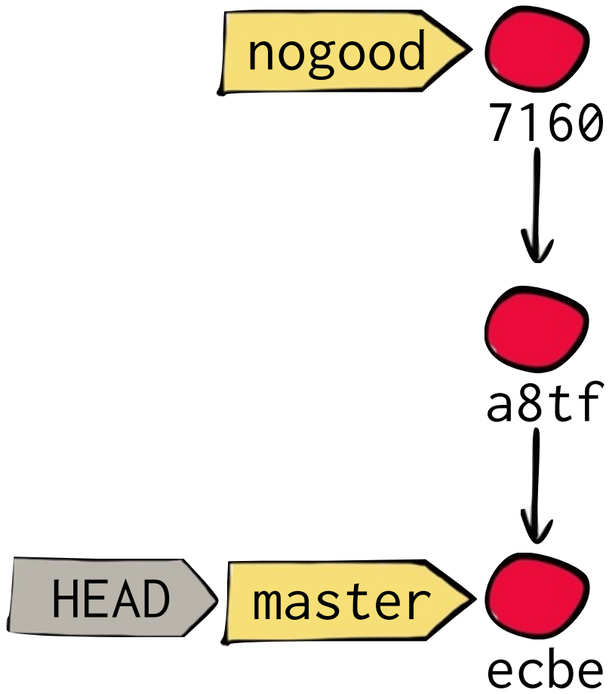
Detached HEAD



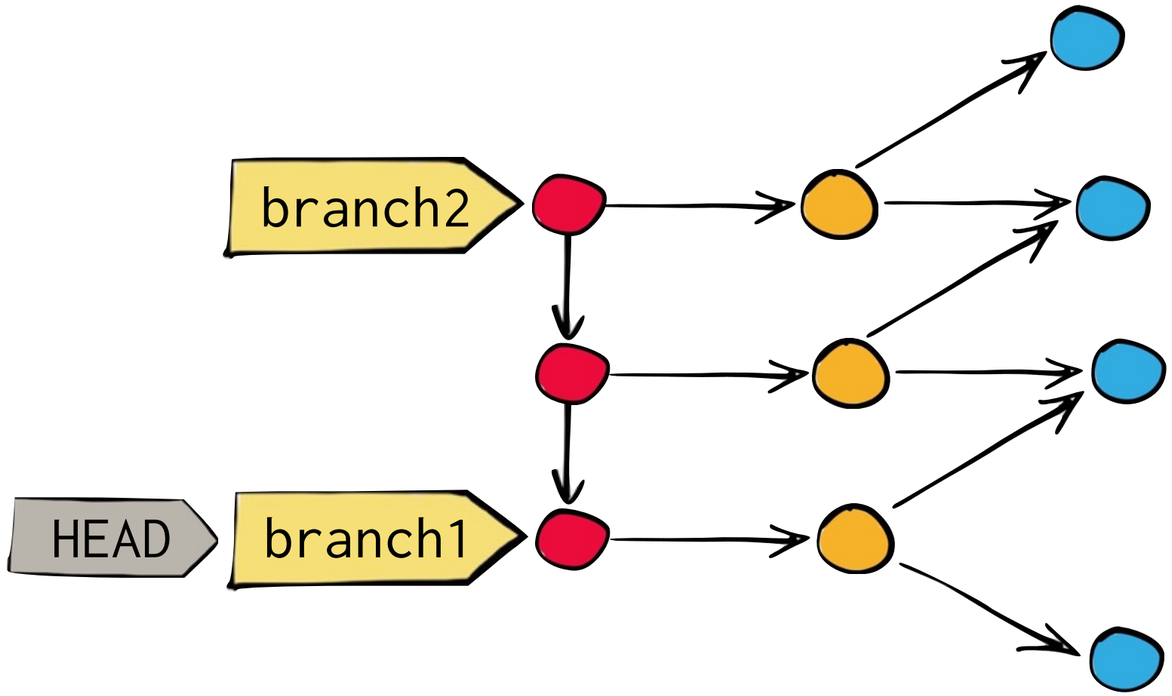

7160
a8tf
HEAD
master
ecbe

HEAD
master
ecbe


nogood
HEAD
7160
a8tf
master
ecbe


nogood
7160
a8tf
HEAD
master
ecbe

The Git Object Model, Extended



Three Rules

1. The current branch tracks new commits
2. When you move to another commit, Git updates your working directory
3. Unreachable objects are garbage collected