



# Branches

Become introduced to the concept of “branches” in Git.

We'll cover the following



- What are branches?
  - Repository with no branch
  - Adding branch to a repository

## What are branches? #

In case you have not looked at a source control tool before, “branching” is a core concept.

## Repository with no branch #

A series of changes to a repository might look like this:



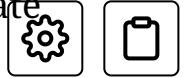
Three commits to a repository

### Direction of arrows in Git diagrams

The arrows in the above diagram point *backward* in time. This is a convention standard in Git diagrams. It indicates that each commit depends on the previous commit back to the initial commit. In the above diagram, the last change c depends on b which in turn is dependent on a.



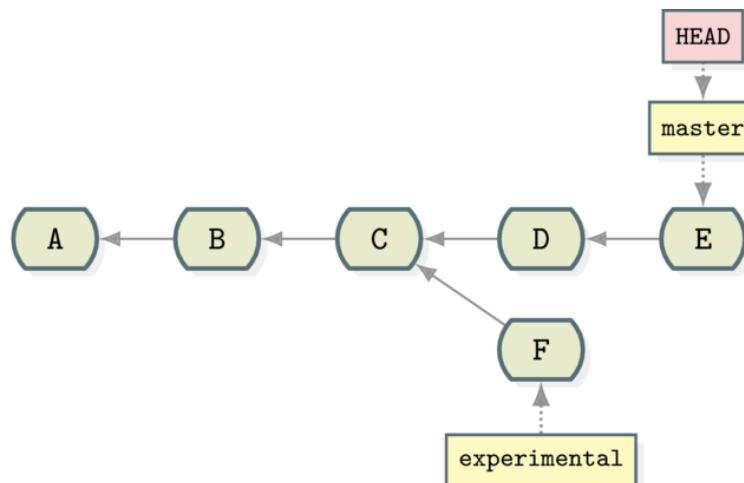
The letters do not have a specific meaning here. They simply indicate multiple changes to lines that are grouped together.



Here, change A is made, then B, and then C. This might be informally called the *main line*. Most of the time, it's called the “master” in Git.

## Adding branch to a repository #

But let's say someone wants to make an experimental change but does not want to affect the *main line*. They might *branch* the code at point C :



Study the above diagram, and make sure you understand it.

While the main line has continued with changes D and E, another branch has been created from C that has one change: F made to it. This *experimental* branch does not include the D and E changes, and the *master* branch does not include the *experimental* changes.

That way, users can choose to get a view of the source on the *main line* branch or the *experimental* one.

That's all a branch is: a set of changes from a specific point in time.



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