GIT

Creating a Repository in Gitlab

Some useful notation

Git init - Creates a repository in the folder that the bash window is currently open in

Git add - Adds files, either by specific name or by using the period symbol . to say ‘i am adding every file that has been changed’. This can be dangerous in large projects!!

Git push - Pushes your changes to your remote repository, think of it as updating any old files with your new changes

Git pull - Downloads and merges your files whereas

Git fetch - Downloads changed files without any merging

Git commit - Creates a snapshot of your current repository in case of any problems that need you to revert to an old status of your project

Git stash - Saves / shelves your changes as if to hold them for later if needed.

Git stage - Adds files to the staging area, ready for the next commit

Git diff - Shows the changes between the commits and the working tree

Git checkout - Switch branches that you are working on

Usual flow of a project

Git init - This is if you have code you would like to upload

OR

Git clone <your link> - If you are trying to download a repository

THEN

Git remote add origin <your link> - Connecting the remote repository to your local repository

Git add . - Adding every file

Git commit -m “Your Message” - Committing your changes to be pushed

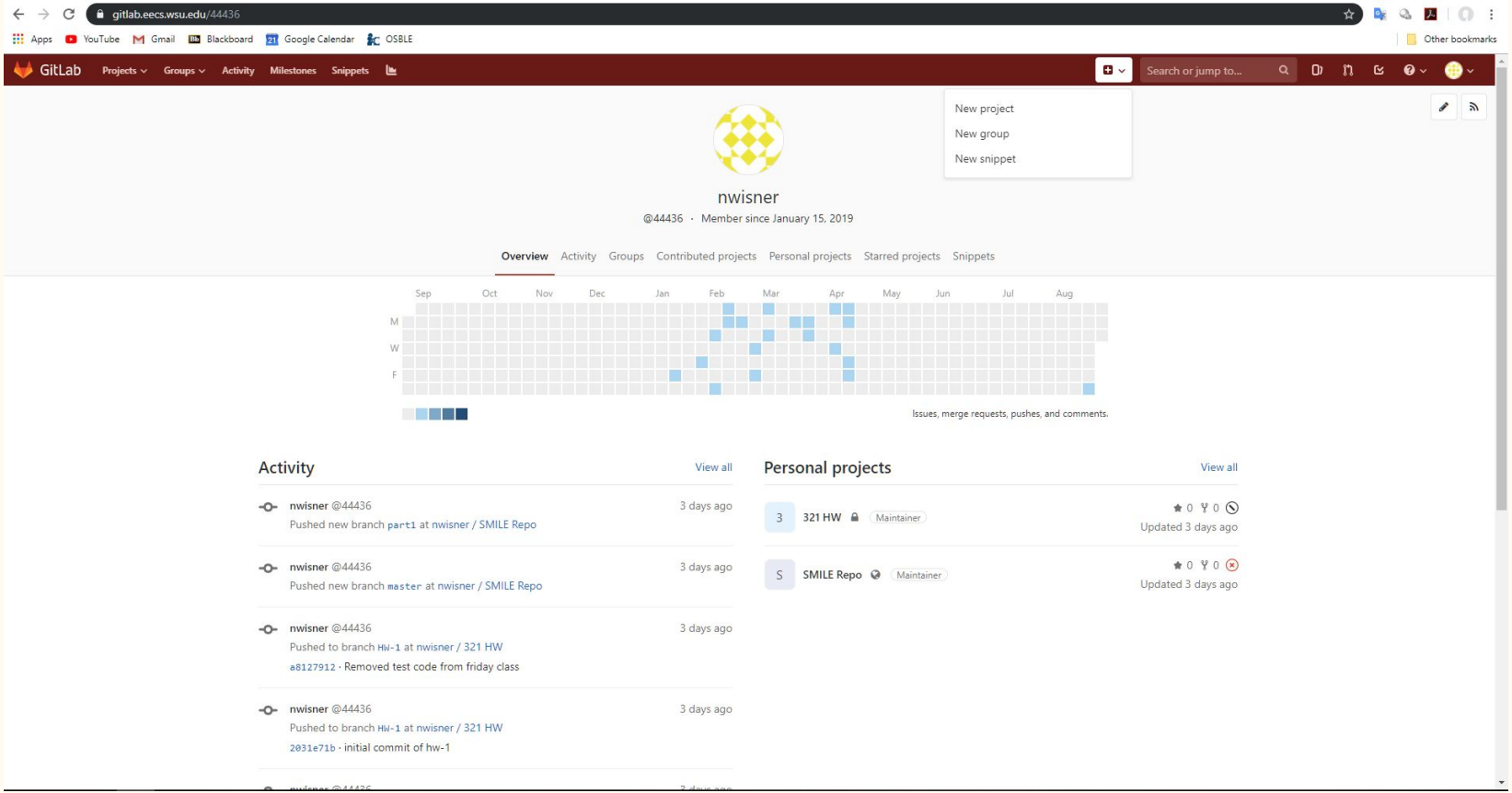
Git push -u origin master - Push your changes to the origin repository in the master branch

Then to update your code you call

Git pull / git fetch - Merges / downloads your current code and the most recent code from the repository

And to update the repository with your new code you would start back at Git add . and the loop continues

General GitLab layout

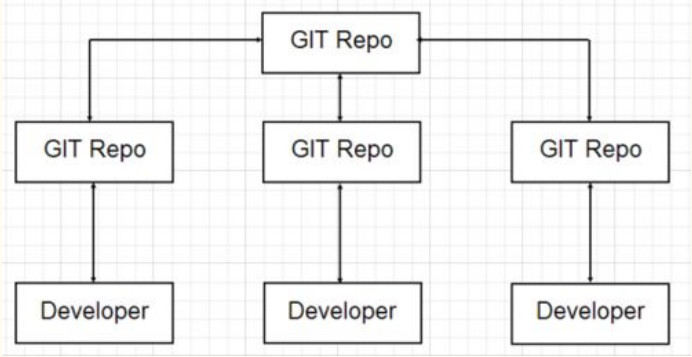


Git vs SVN (Subversion)

Git

Git stores the entire repository and changes onto your local machine

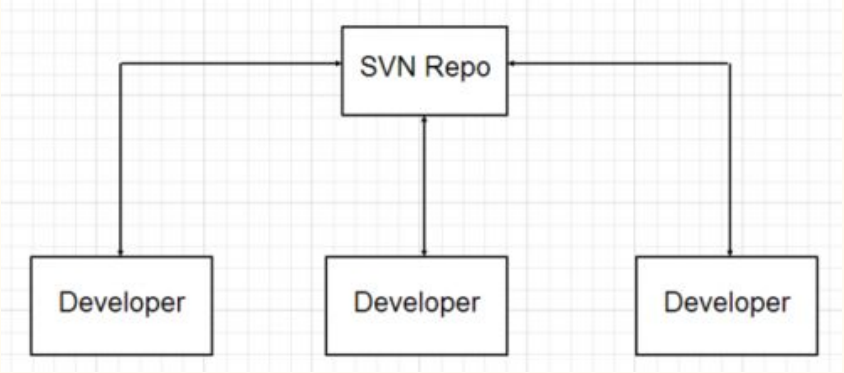
Git commits are local and the pushing is when it has remote updates



SVN

SVN lets users checkout the entire repository or just a branch

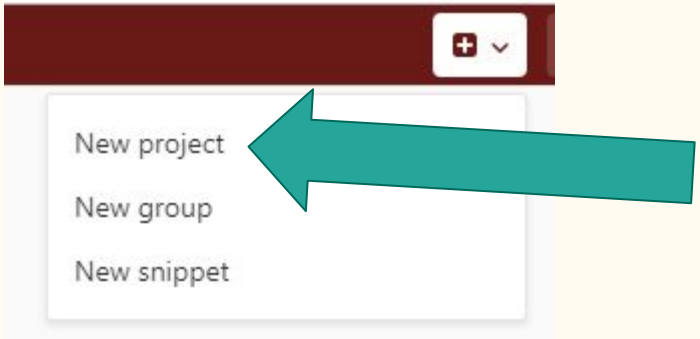
Since the SVN is stored remotely, our commits are not local but in the central server



Click the plus

Then choose New Project for a new repository

We will not cover the others today



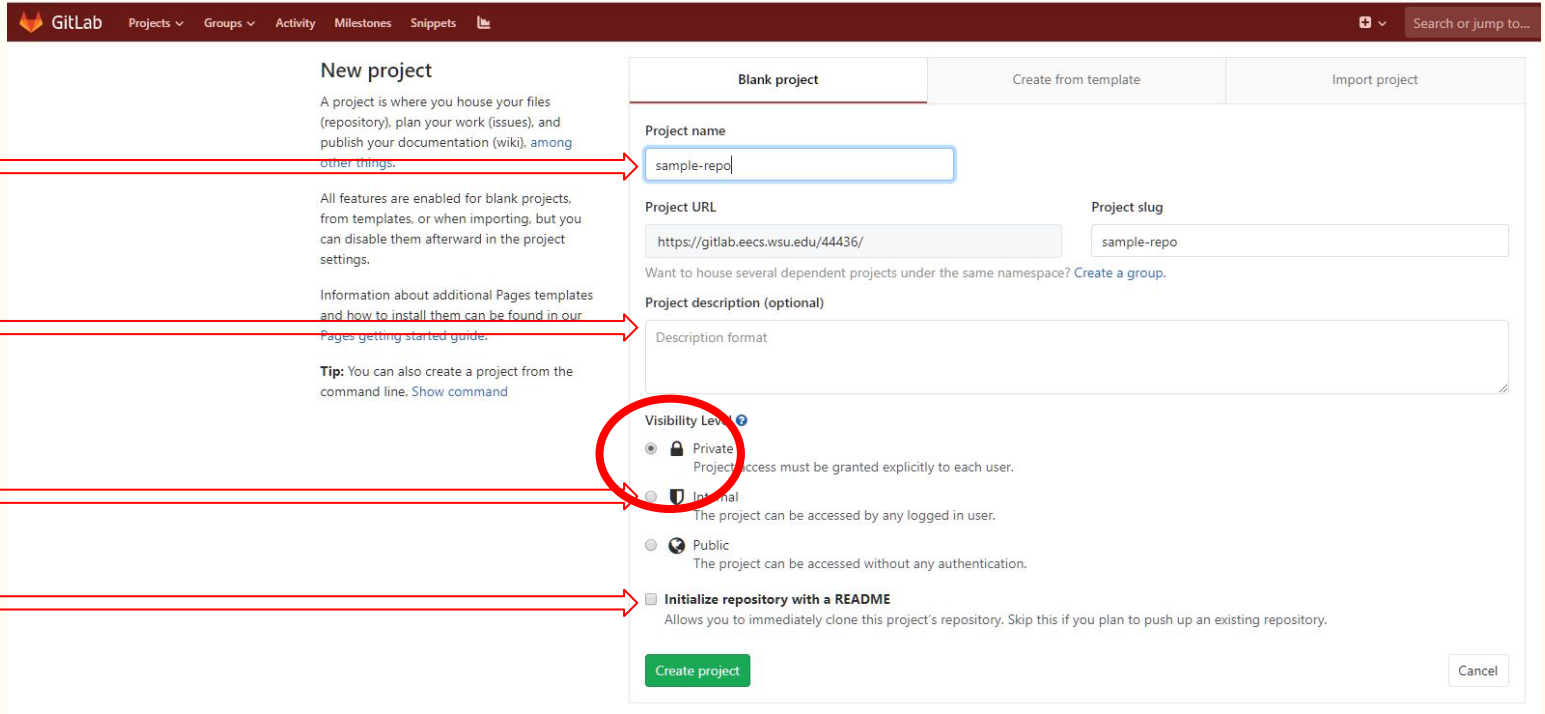
Now this is your screen

Here is your repository name

Here is a description area

Privacy

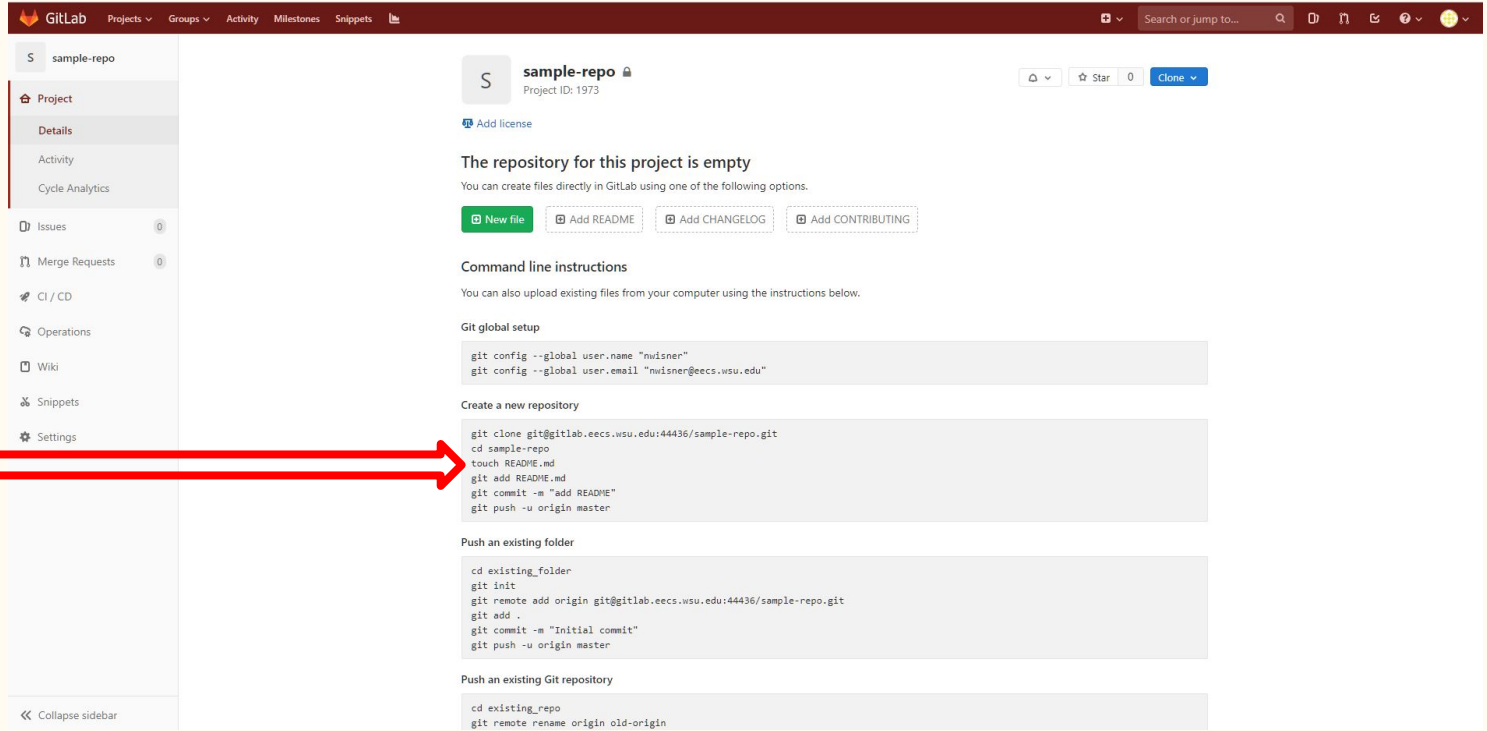
Readme



Always have your HW repositories be private!!

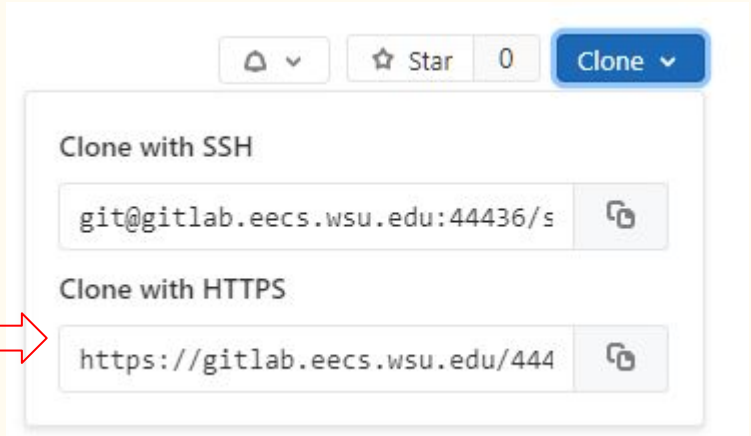
After creation with no readme

Here are the instructions we will cover in detail



Your github link / URL

I recommend using HTTPS, that is what we will use today



We'll want to add our Gitlab link to connect our repositories

```
wisne@NWDell MINGW64 ~/Documents/Programming/Projects/Git Demo (master)
$ git remote add origin https://github.com/Nathan-Wisner/testing-Repo.git
```

Think of this as adding a connection called origin where pushing and pulling will get or give the latest code

I created a simple document to add

Think of this as your code, this can be one or one hundred files that can be added

I then used “git add .”

And yes the . is important

Git add . will add every file ***that has been changed*** inside that folder to your repository.

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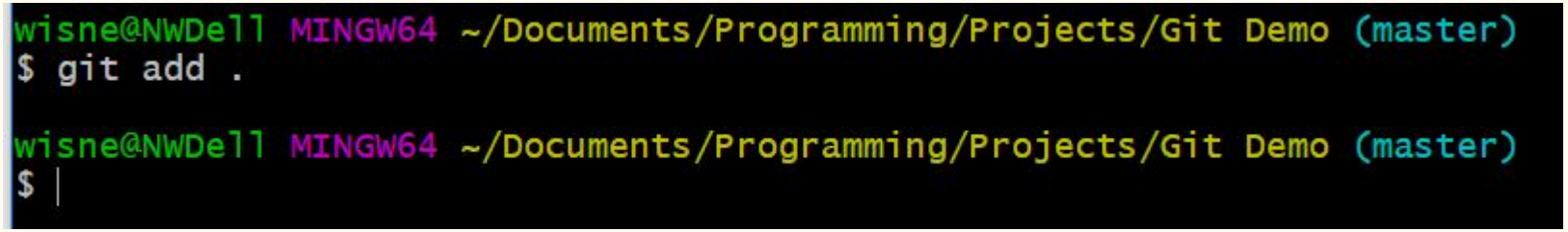
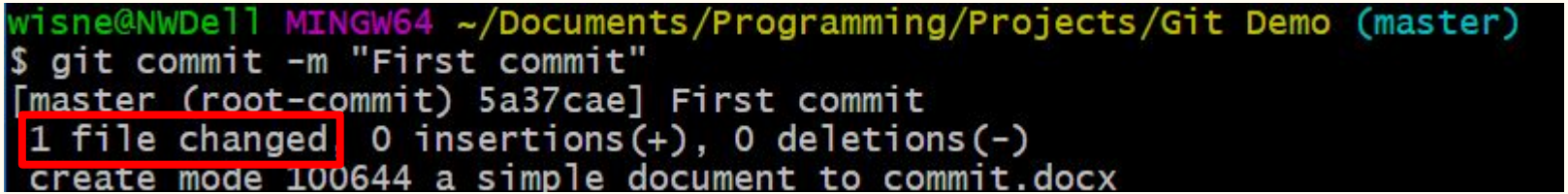
If you have 100 files but only edited one, ***only one file will be added***



Now we can commit this

Committing is basically like saving a copy of your project / repository.

It's as if you take a snapshot of how everything is and it can be uploaded or at least stored in case it is needed to be reverted in instance of a problem



Git commit messages

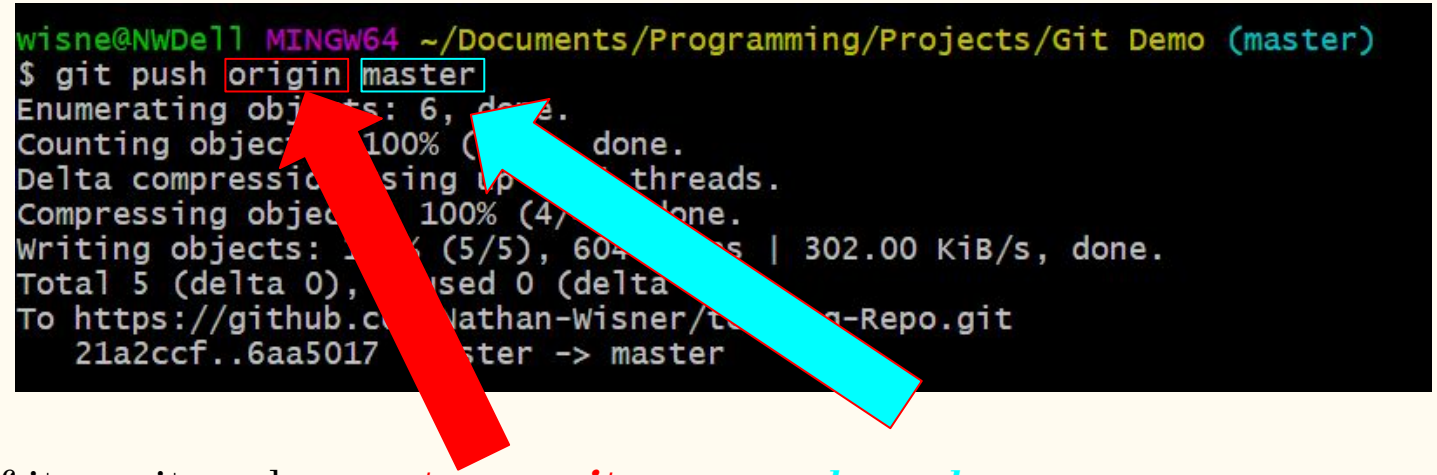
Our messages should always be about the changes made in that commit.

For instance, if we add a function to a file, the commit message should say “Added function x, function x does z”.

This is your way of communicating what was done to inform others and trace bugs and errors quickly

And finally push it to Gitlab

Pushing is simply uploading the changes to your remote repository called origin and the master branch



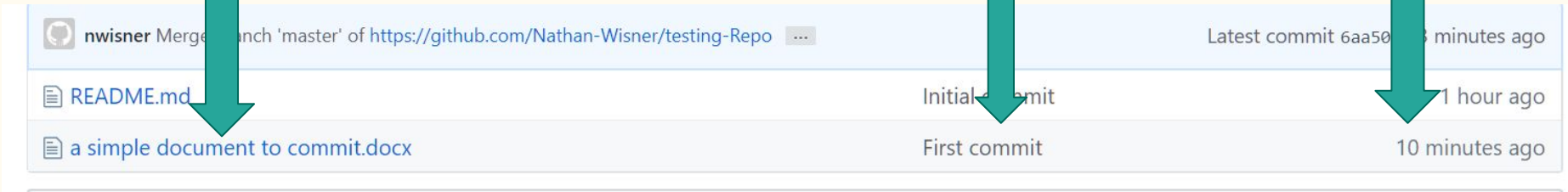
Think of it as git push ***remote repository name*** ***branch name***

Now we can go to Gitlab and see the changes

Our changes

Our commit message

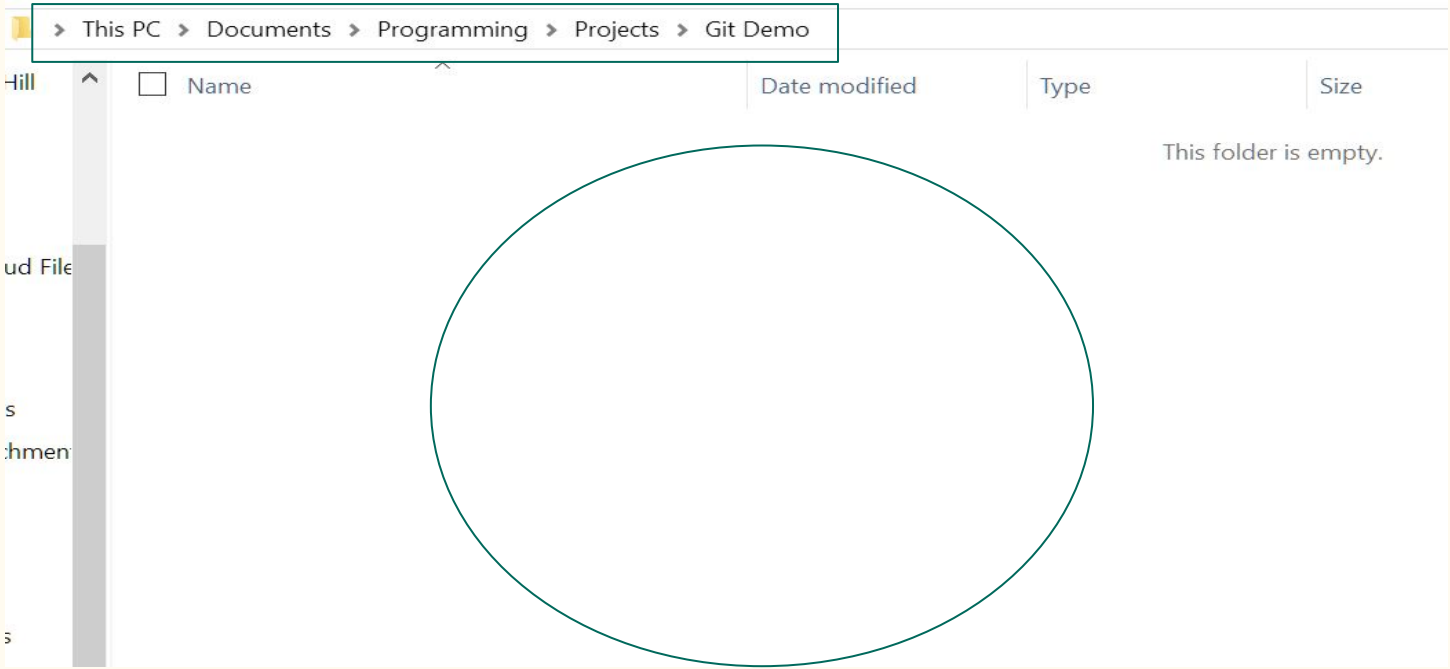
Time since the file was last updated



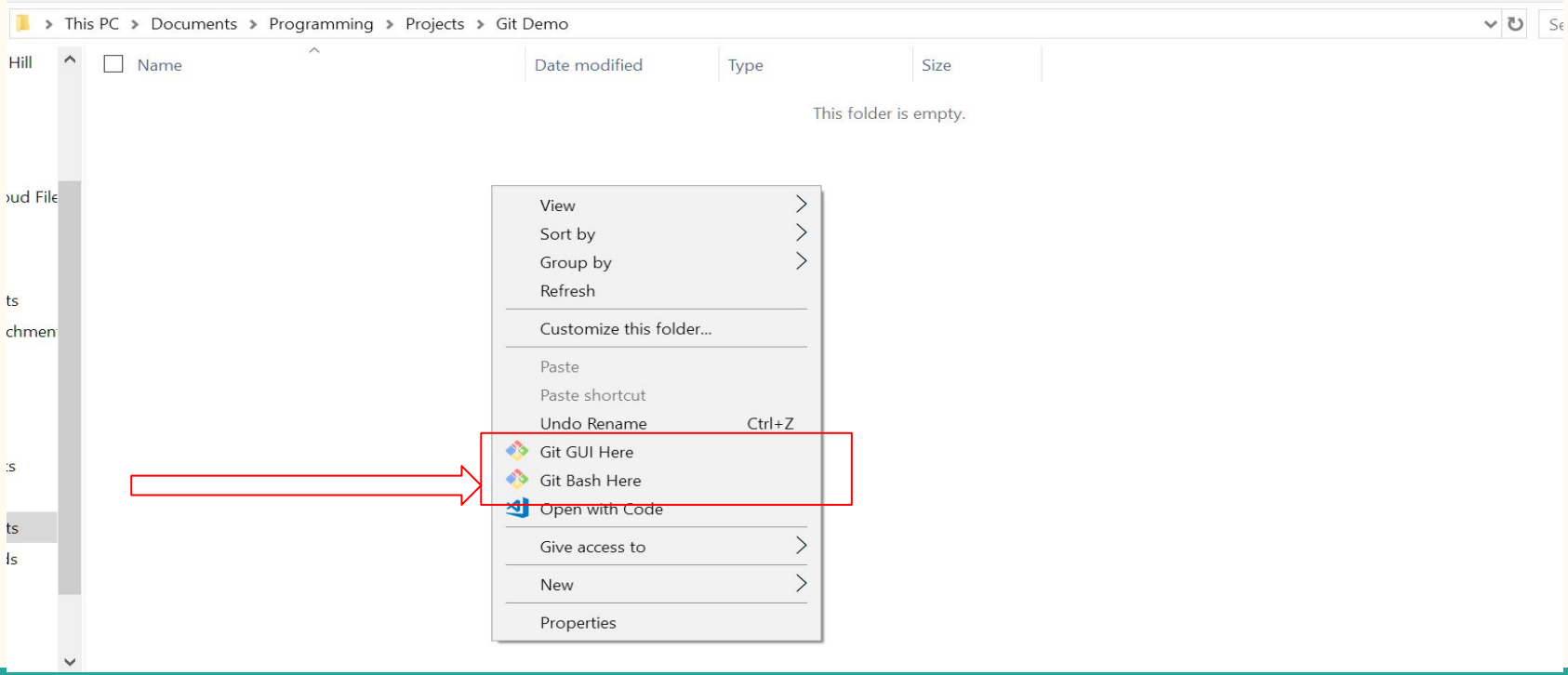
This example was started with a README , so ignore the README

Creating a repository in Git Bash - For individual review

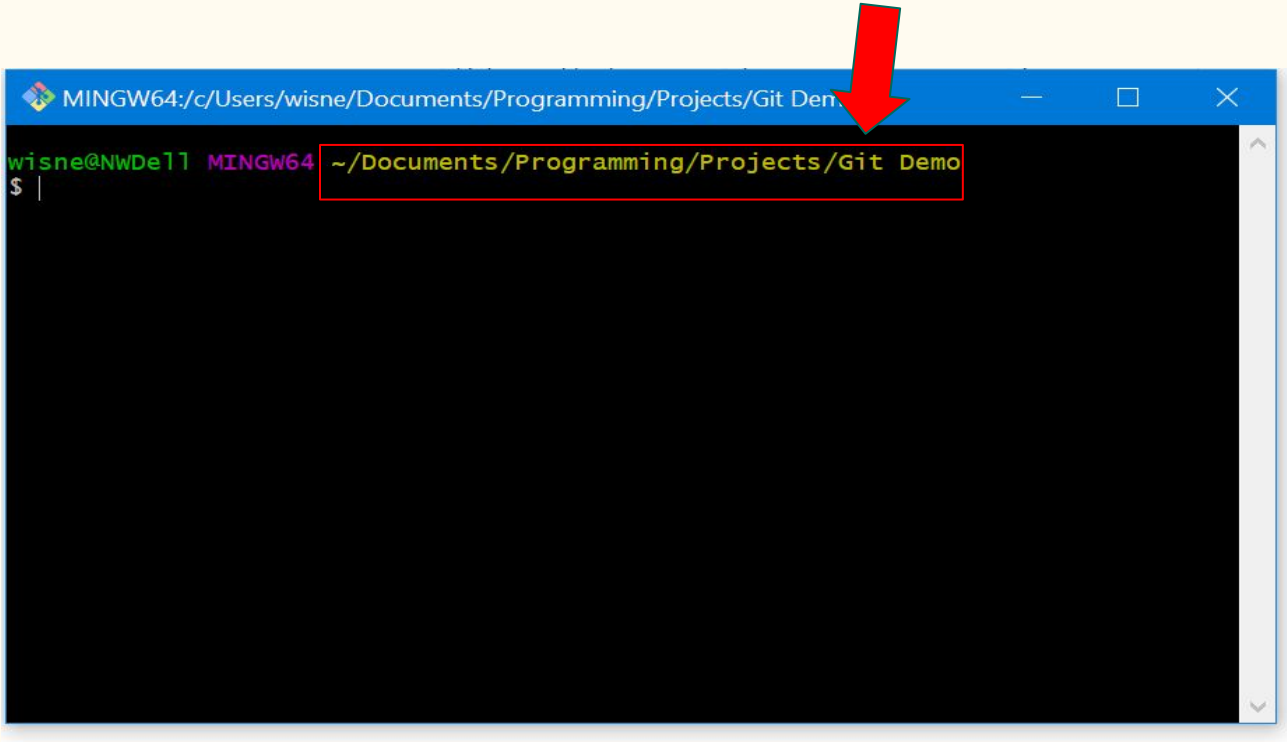
Click anywhere inside your project folder



Click “Git Bash Here”

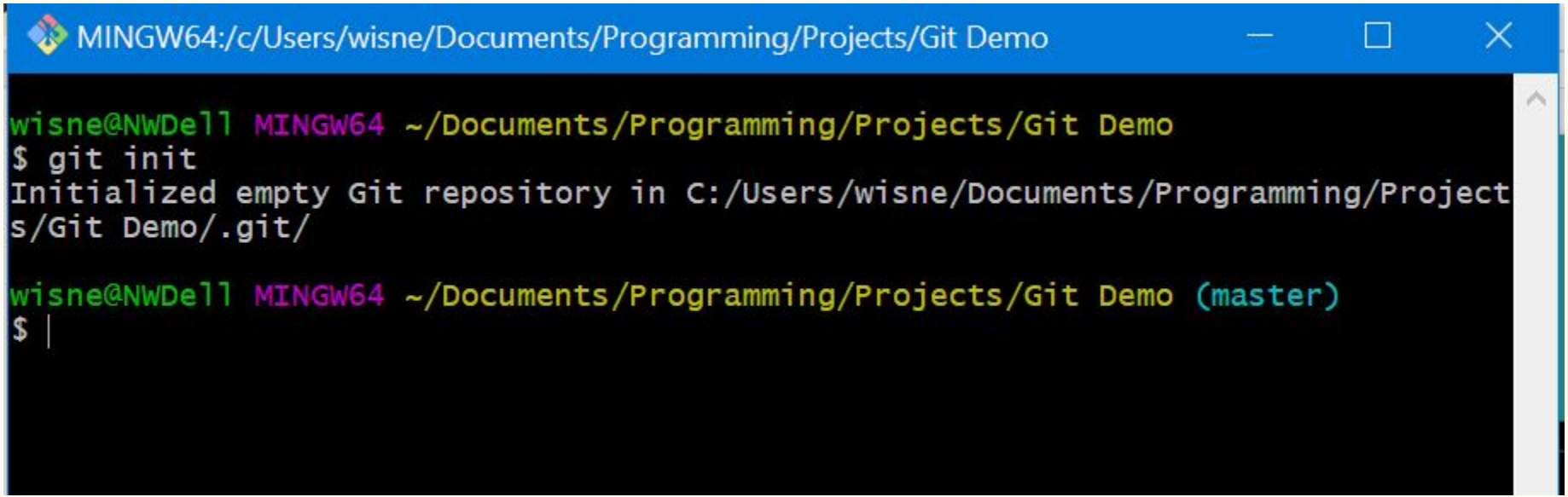


This is what is created, note the path here



Typing git init creates this repository locally on your machine

This is created in the area that you right clicked so keep that in mind!



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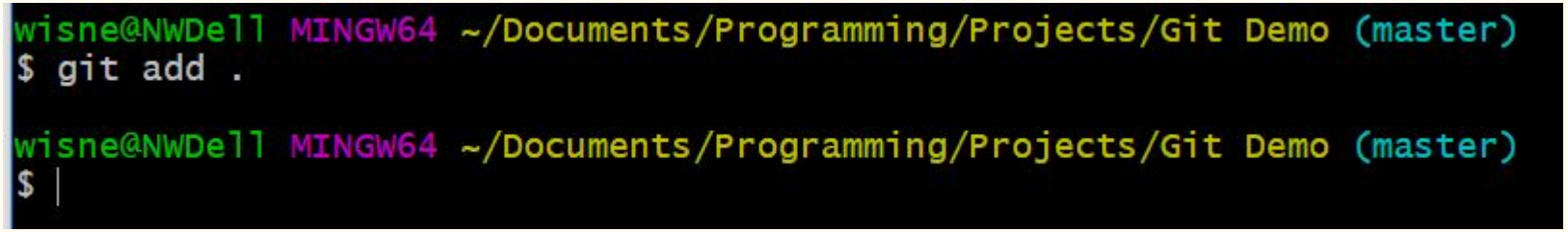

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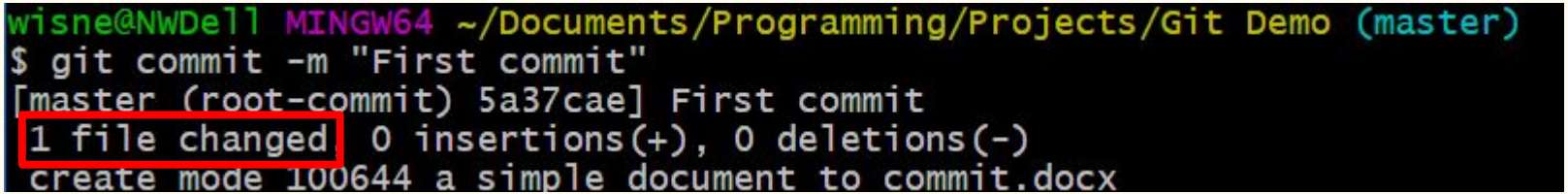

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```
Added addHikes in SplashActivity to move hikes to FireStore
```

And finally push it to Gitlab

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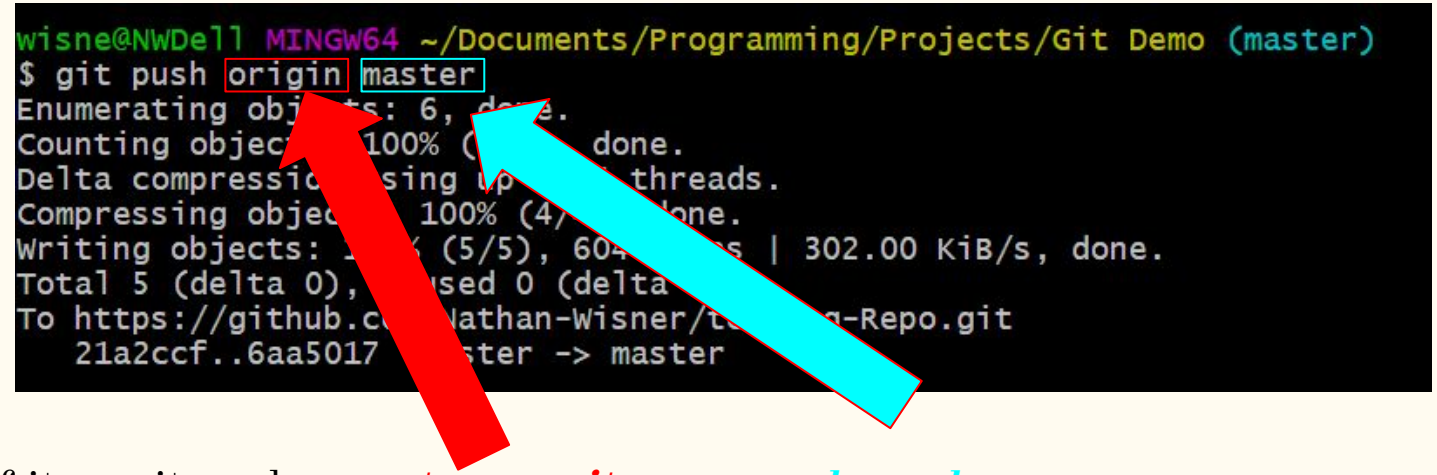

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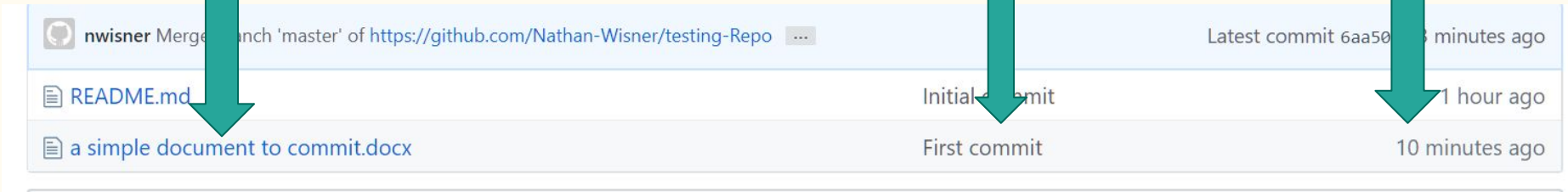

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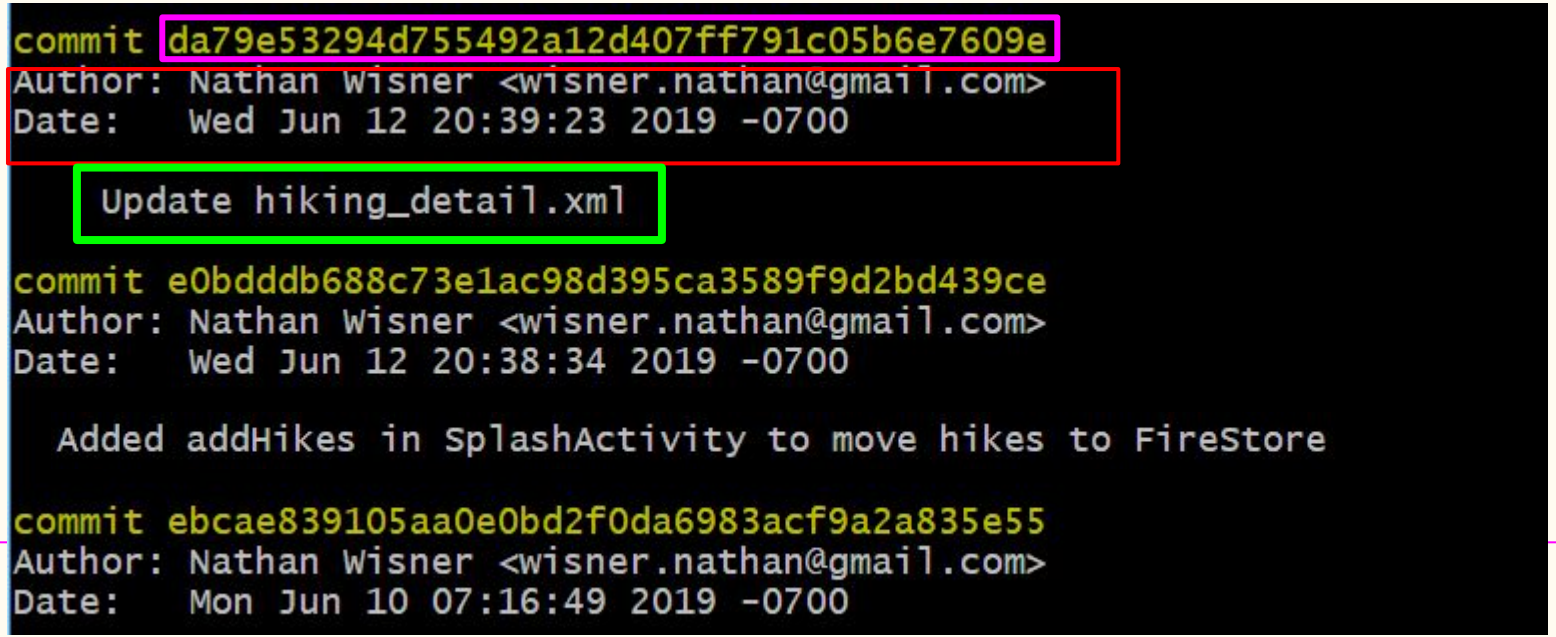
Git log

This is the result of calling “Git log” on a repository with 2 commits

We have our head hash name in pink, general notes in red and the commit message in green



Git log notes

Commits have the most recent commit at the top

This can be reversed if desired with “Git log --reverse”

With this they will display with the first commit at the top

Commits

What is a Commit?

- A “snapshot” of your current state
- Add, commit, push
- Use helpful commit messages!

```
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git status
On branch part2
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   create.html
        modified:   index.html
        modified:   styles/main.css
```

```
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git diff create.html
diff --git a/static/create.html b/static/create.html
index 0f7fd0f..6e41924 100644
--- a/static/create.html
+++ b/static/create.html
@@ -29,11 +29,10 @@
           <select class="happiness-level-input" name="happiness-level">
             <option value="1">Happy</option>
             <option value="2">Really happy</option>
-            <option value="3">so estatic, I can't stop smiling!</option>
+            <option value="3">so exstatic, I can't stop smiling!</option>
           </select>
           <input type="submit" value="Post" class="submit-input my-button" />
-          <input class="cancel-button my-button" value='Cancel'>
-          <!-- FINISH ME: add the rest of the form fields -->
+          <button class='my-button'>Cancel</button>
         </form>
       </div>
     </section>
madeline@Madeline-MacBookAir ~/my-smile-app/static $
```

```
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git add create.html
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git status
On branch part2
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   create.html

Changes not staged for commit:
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  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   index.html
        modified:   styles/main.css
```
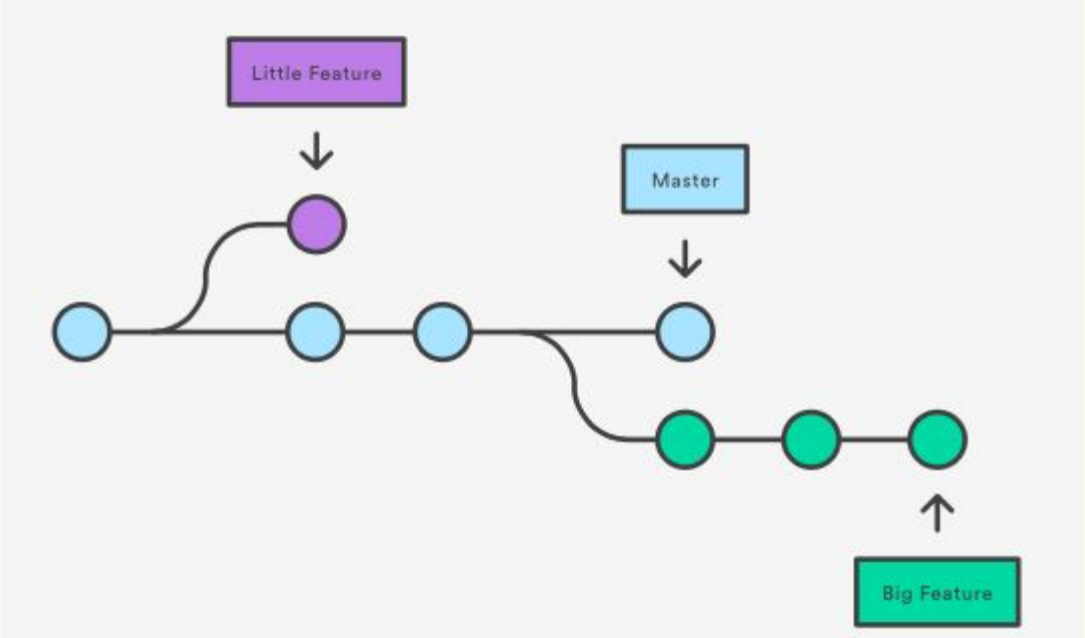

```
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git commit -m "Added compatibility for different browsers"
[part2 5eb8bc4] Added compatibility for different browsers
 1 file changed, 2 insertions(+), 3 deletions(-)
madeline@Madeline-MacBookAir ~/my-smile-app/static $ git push
```

Branching,
Merging,
Tagging,

Branching

- A pointer to a ‘snapshot’ of your changes
- When you want to work on a specific task, you branch
- Checkout, Branch, then Checkout
- Updates files in working directory



```
git branch <branch>
```

Create a new branch

```
git checkout <branchname>
```

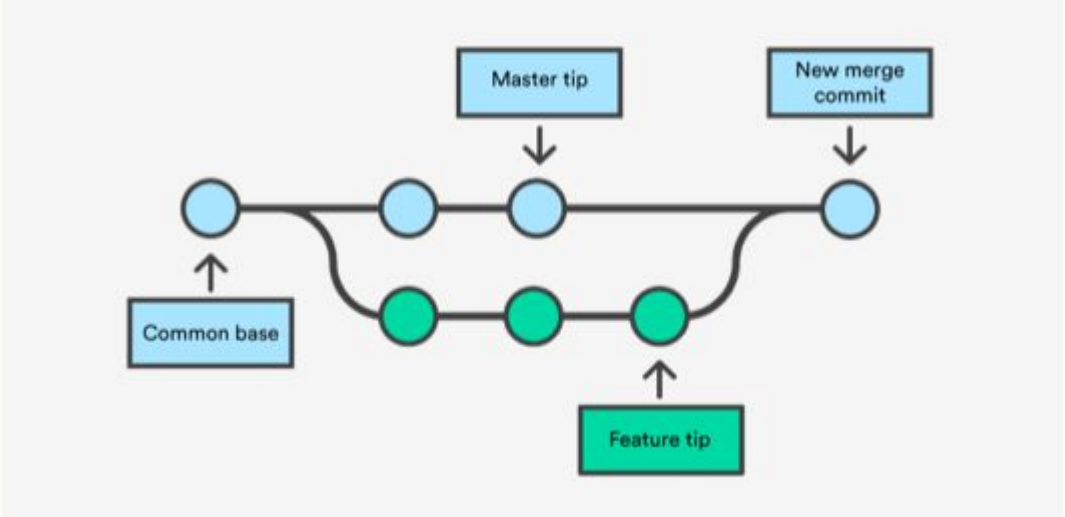
Checkout an existing branch

```
git branch -m <branch>
```

Rename a branch

Merging

- Puts forked history back together again
- Checkout the branch you want to be in and then merge the other branch in
- Git branch -d to delete target branch
- Git will try to resolve conflicts automatically



Merge Conflicts

- Git status to see which files you should manually update
- Git add git commit

```
<<<<<<< HEAD
=======
>>>>>>> new_branch_to_merge_later
```

Tagging

- Reference that points to a specific point in Git history
- git tag <tag name>
- A tag is a branch that doesn't change
- By default, git tag will tag whatever commit HEAD is referencing

```
$ git push origin v1.4
Counting objects: 14, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (12/12), done.
Writing objects: 100% (14/14), 2.05 KiB | 0 bytes/s,
Total 14 (delta 3), reused 0 (delta 0)
To git@bitbucket.com:atlasbro/gittagdocs.git
* [new tag] v1.4 -> v1.4
```

```
$ git log --pretty=oneline
15027957951b64cf874c3557a0f3547bd83b3ff6 Merge branch
a6b4c97498bd301d84096da251c98a07c7723e65 add update me
0d52aaab4479697da7686c15f77a3d64d9165190 one more thin
6d52a271eda8725415634dd79daabbc4d9b6008e Merge branch
```

Tag a non-head commit

```
git tag -a v1.2 15027957951b64cf874c3557a0f3547bd83b3f
```

```
git checkout v1.4
```

Checkout a tag

```
$ git tag
v1
v2
v3
$ git tag -d v1
$ git tag
v2
v3
```

Delete a Tag

What a surprise I made a mistake.....

- Git amend
- Git revert
- Git reset

Git Amend

Git Amend

- With `--amend` flag you can edit your most recent commit

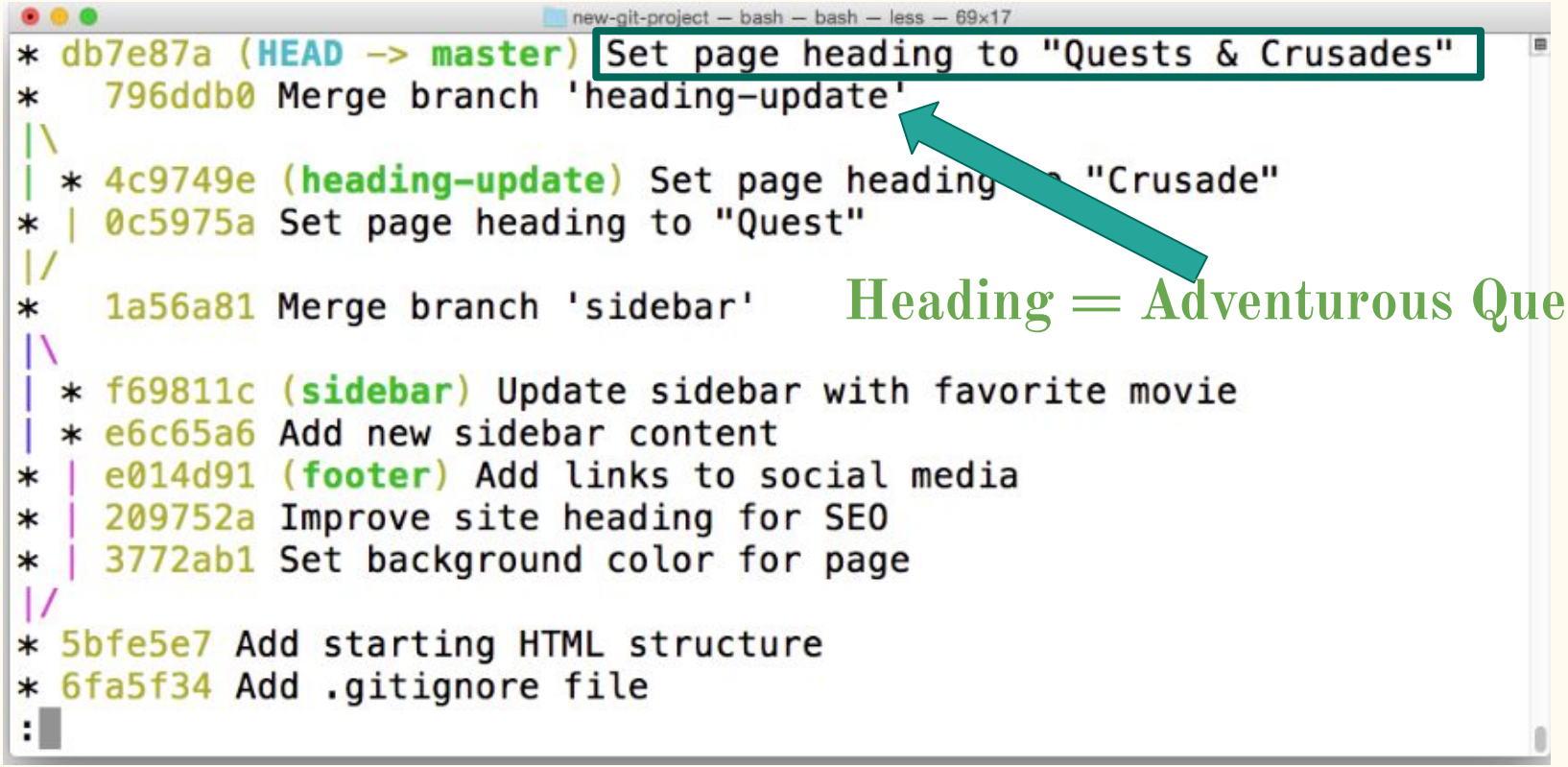
```
$ git commit --amend
```

Add forgotten files to Commit

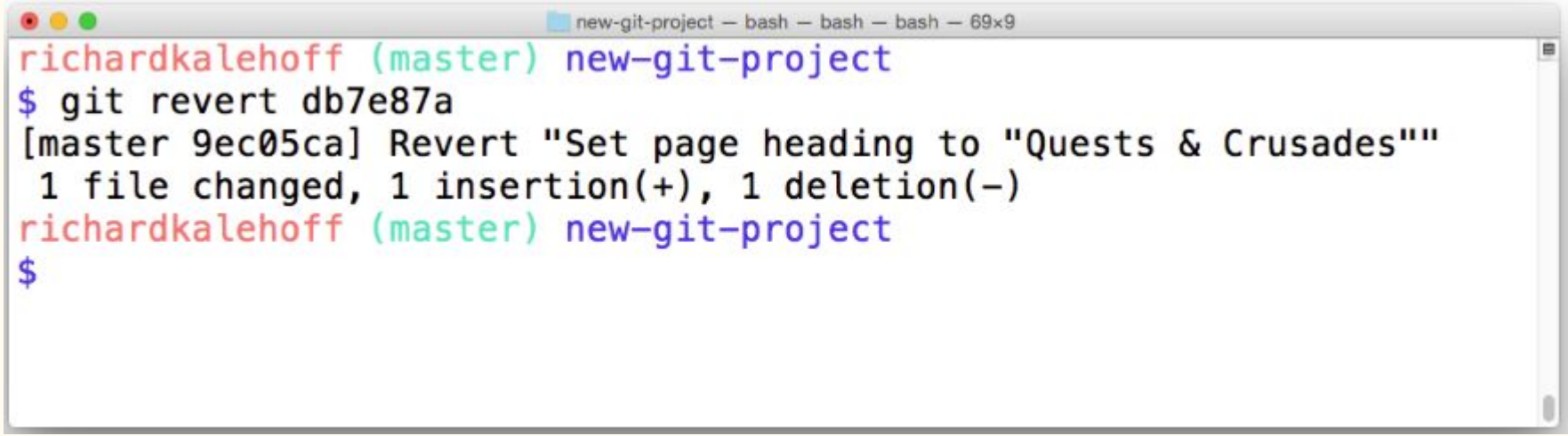
- Edit the file(s)
- Save the file(s)
- Stage the file(s)
- Run `git commit --amend`

Git Revert

- Git revert takes the changes in the most recent commit and does the exact opposite
  - Character is added in CommitA
  - Git revert commitA
  - New commit is created and character is deleted
  - Vice versa is true




```
$ git revert <SHA-of-commit-to-revert>
```


new-git-project — bash — bash — bash — 69×9
richardkalehoff (master) new-git-project
$ git revert db7e87a
[master 9ec05ca] Revert "Set page heading to "Quests & Crusades""
1 file changed, 1 insertion(+), 1 deletion(-)
richardkalehoff (master) new-git-project
$

Git Reset

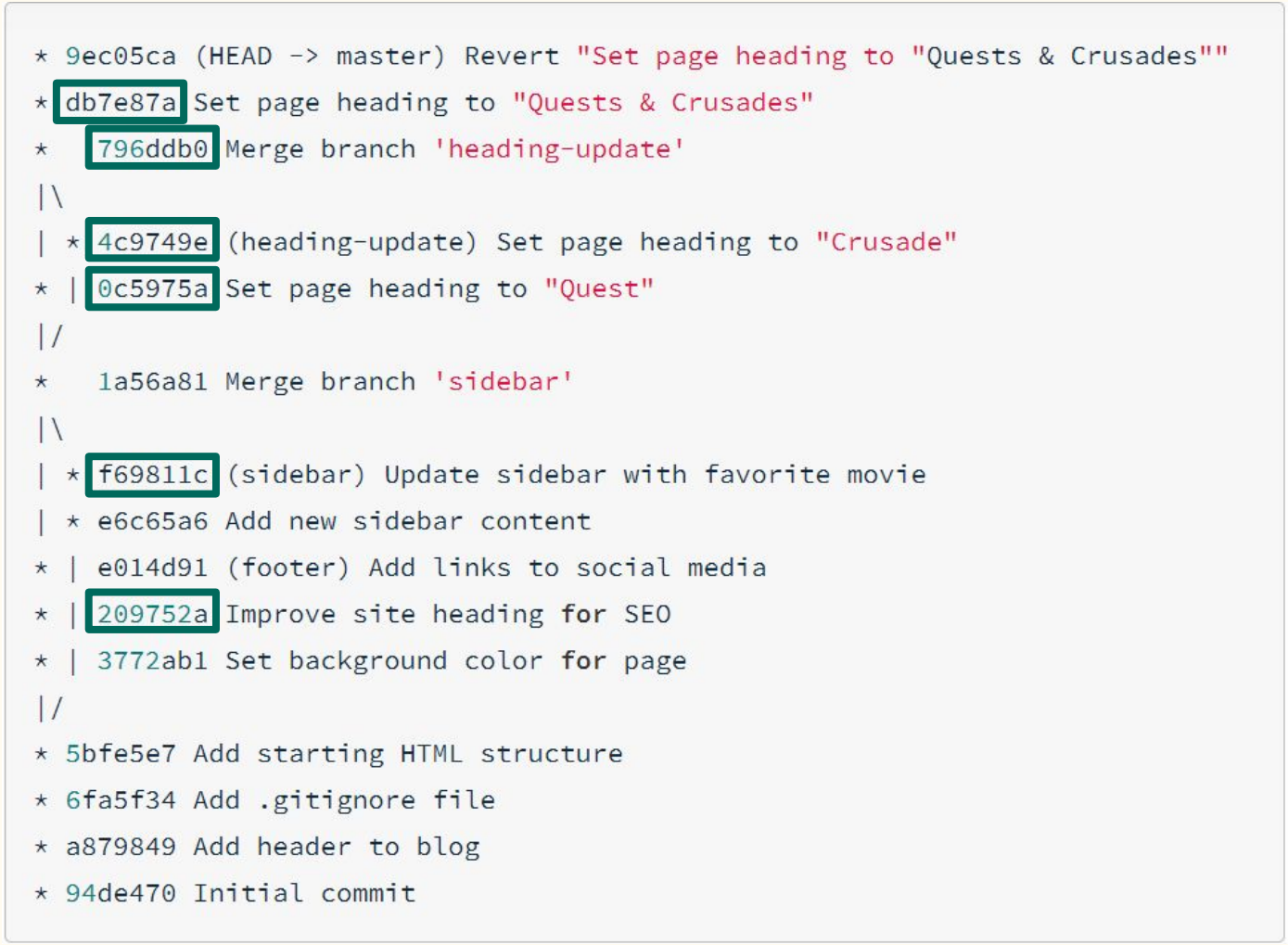
Relative Commit Reference

- Reference commits by - **SHA**, **tag**, **branches** and **HEAD** pointer
- Ancestry Reference
  - ^ - indicates the parent commit
  - ~ - indicates the first parent commit

- The parent commit
  - HEAD^
  - HEAD~
  - HEAD~1
- Grandparent commit
  - HEAD^^
  - HEAD~2
- Great-grandparent commit
  - HEAD^^^
  - HEAD~3

Difference?

- ^ - 1st parent
- ^2 - 2nd Parent



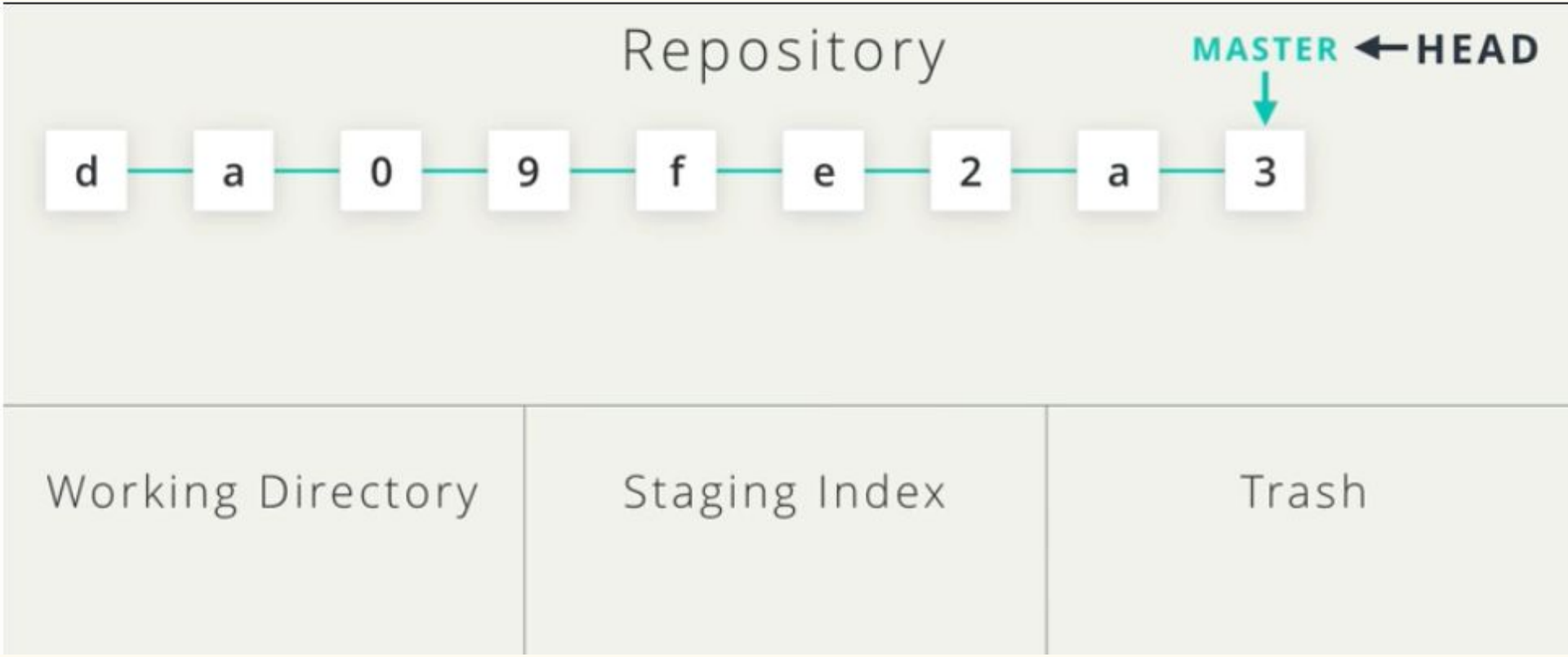
1. HEAD^
2. HEAD~1
3. HEAD^^
4. HEAD~2
5. HEAD^^^
6. HEAD~3
7. HEAD^^^2
8. HEAD~6
9. HEAD~4^2

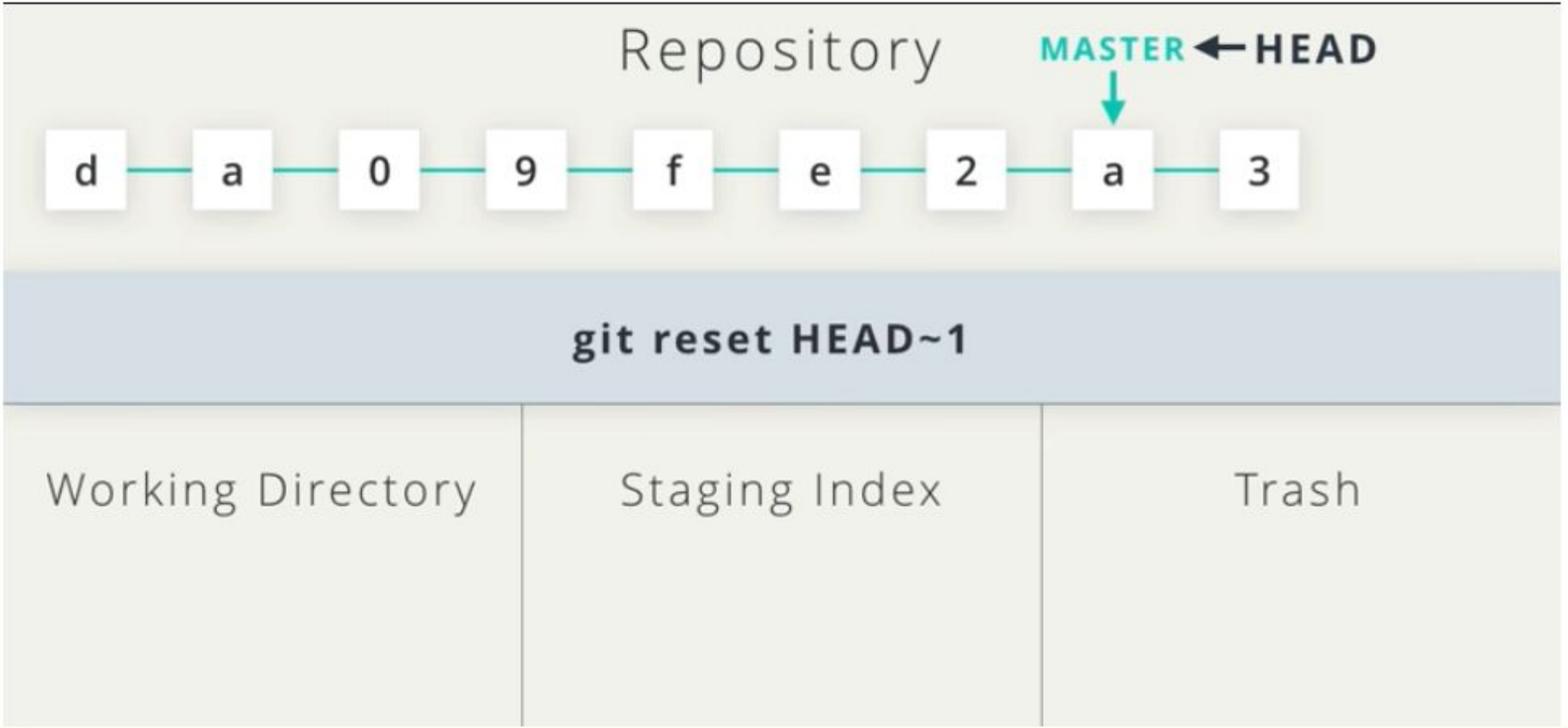
Git Reset Command

```
$ git reset <reference-to-commit>
```

Used for:

- Move HEAD to referenced commit
- Erase commits
- Move committed changes to staging index
- Unstage committed changes


Repository
MASTER
HEAD
d
a
0
9
f
e
2
a
3
Working Directory
Staging Index
Trash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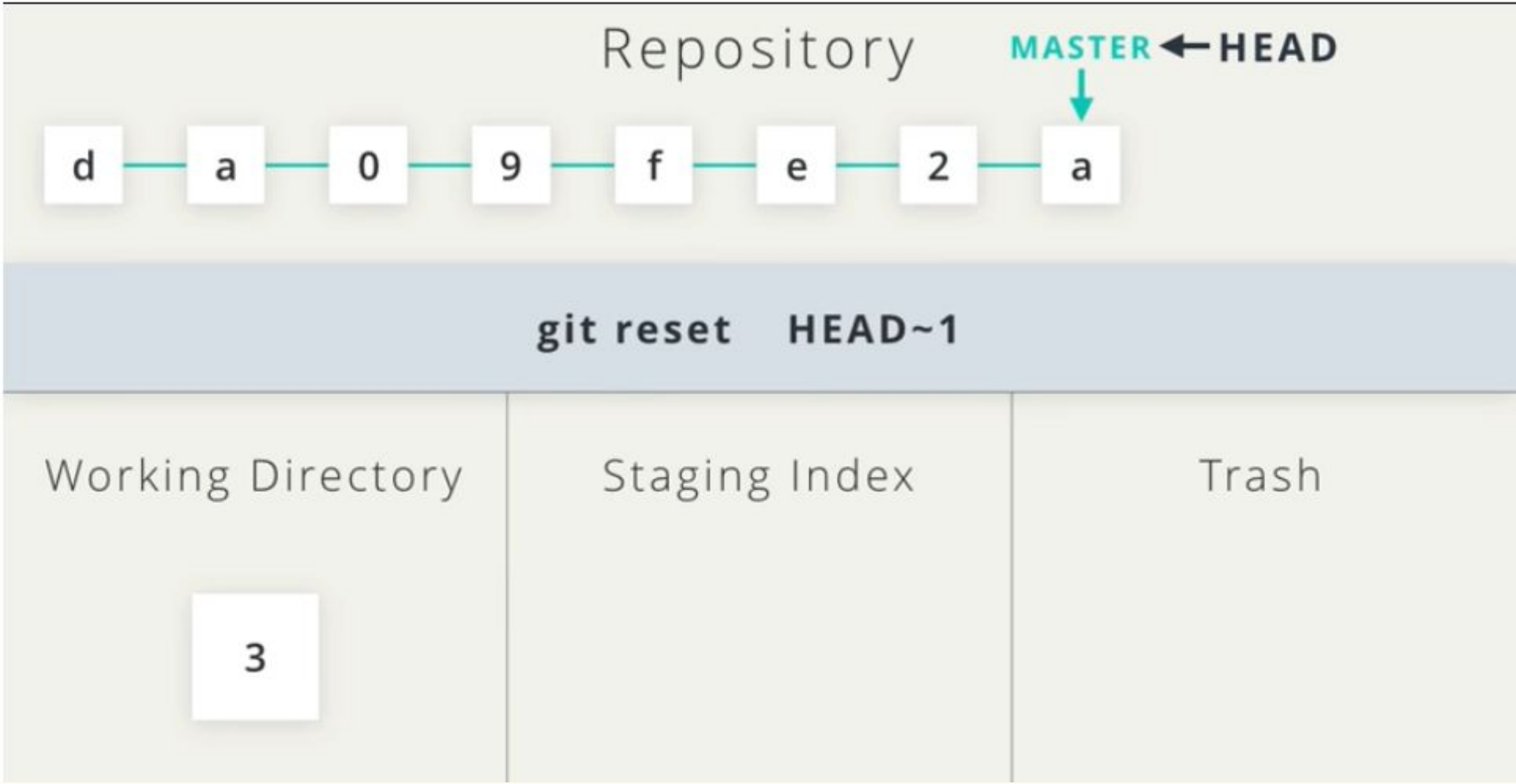
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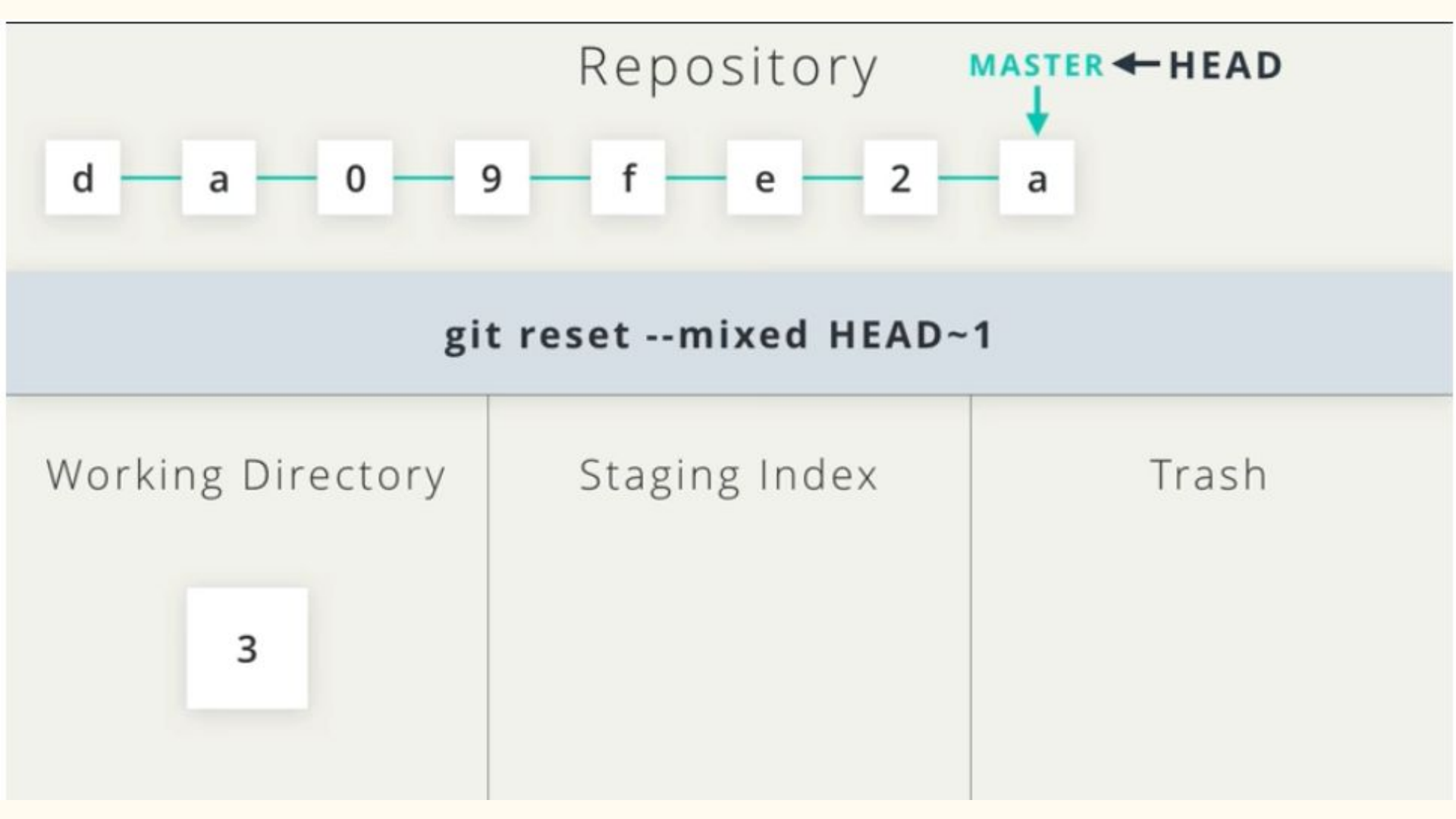
Repository
MASTER
HEAD
d
a
0
9
f
e
2
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git reset --mixed HEAD~1
Working Directory
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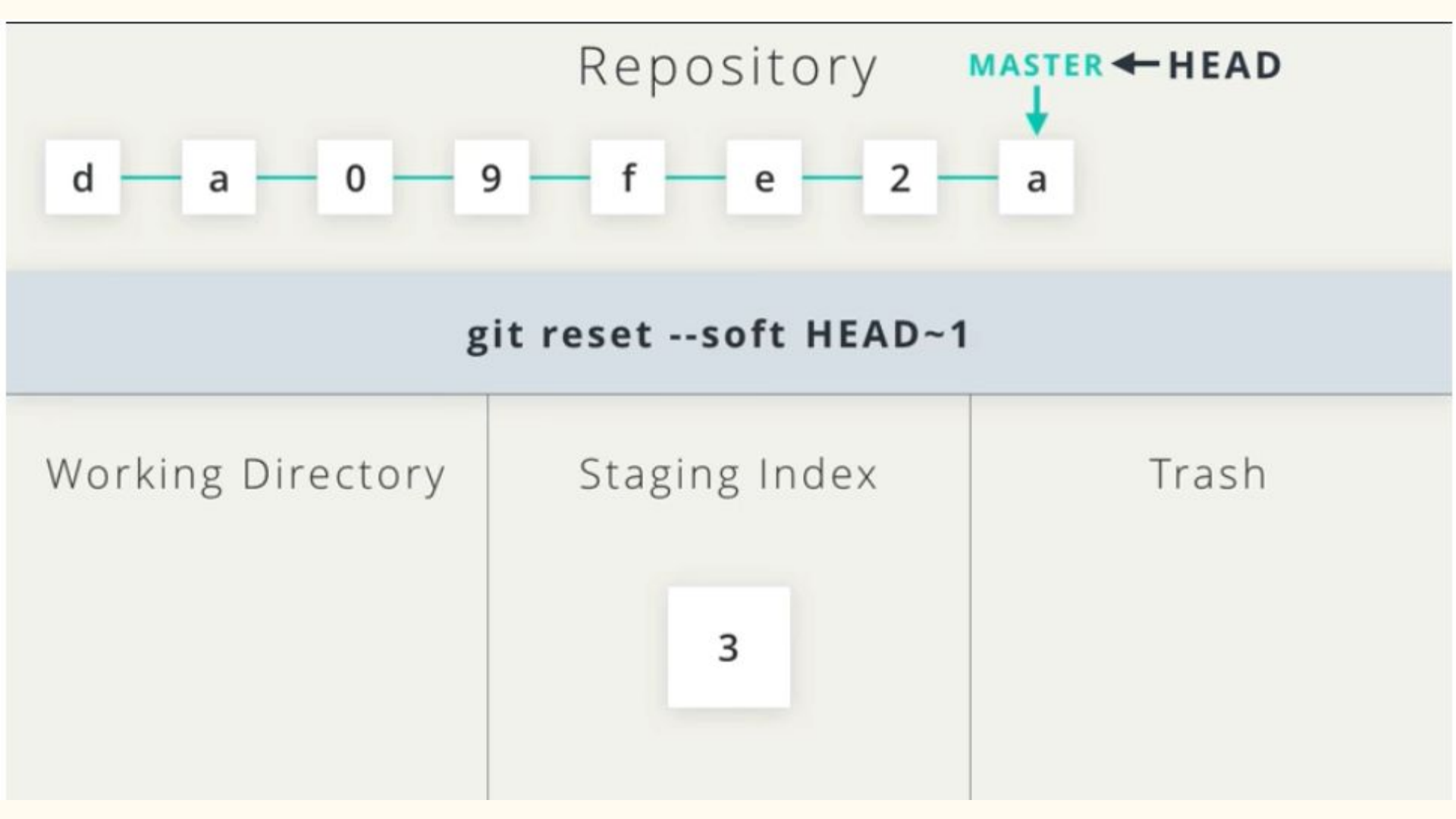
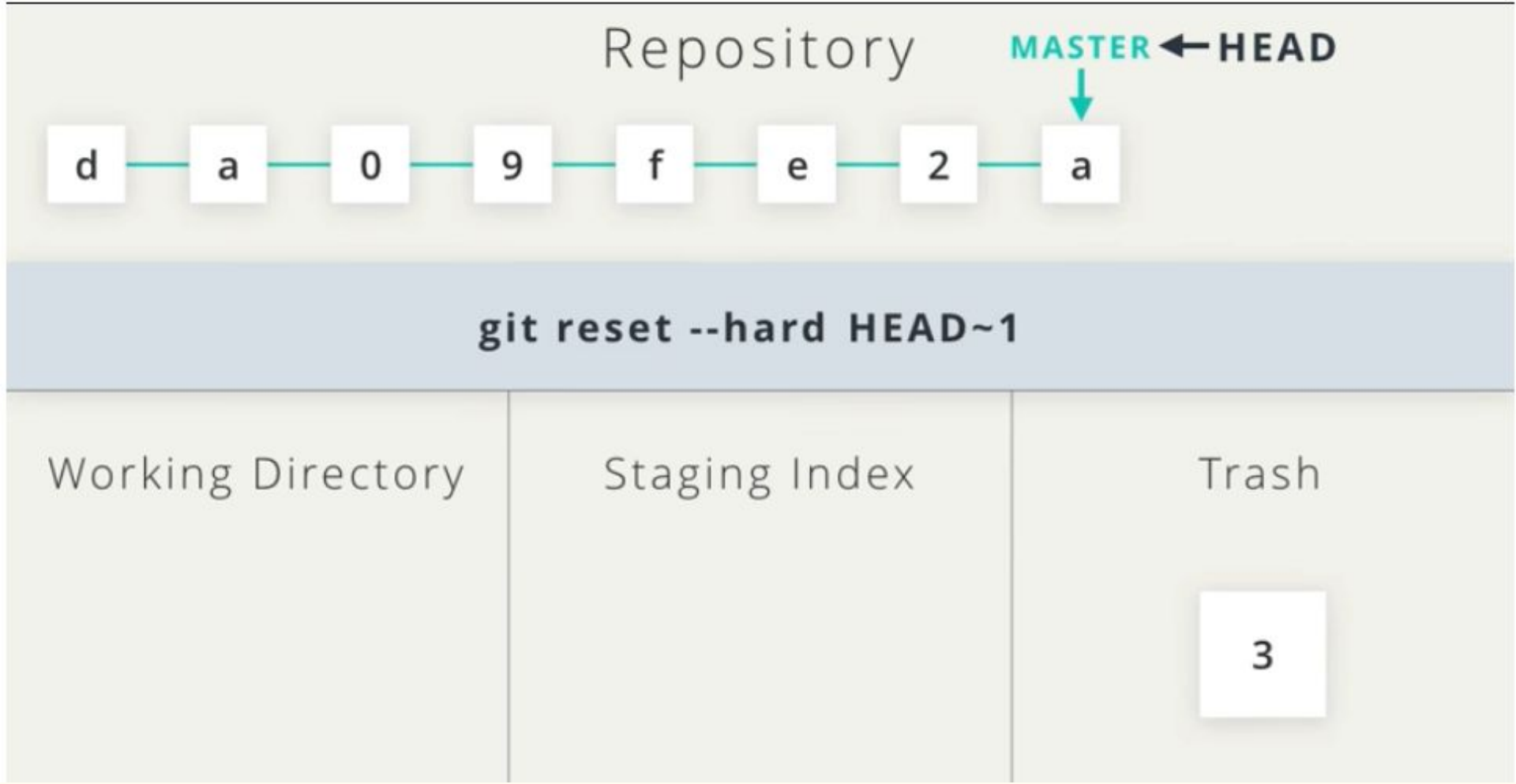
Trash
3


Repository
MASTER
HEAD
d
a
0
9
f
e
2
a
git reset --soft HEAD~1
Working Directory
Staging Index
3
Trash


Repository
MASTER
HEAD
d
a
0
9
f
e
2
a
git reset --hard HEAD~1
Working Directory
Staging Index
Trash
3

Git Reset Flags

- --mixed
- --soft
- --hard

https://www.youtube.com/watch?v=UN7ki2G2yKc

Tips

- Git reflog
- Create a backup branch

```
* e014d91 (HEAD -> master, footer) Add links to social media
* 209752a Improve site heading for SEO
* 3772ab1 Set background color for page
* 5bfe5e7 Add starting HTML structure
* 6fa5f34 Add .gitignore file
* a879849 Add header to blog
* 94de470 Initial commit
```

- Git reset --hard HEAD~3? What about 3772ab1? Erased
- Git reset --soft HEAD^^? What about 209752a? Staging Index

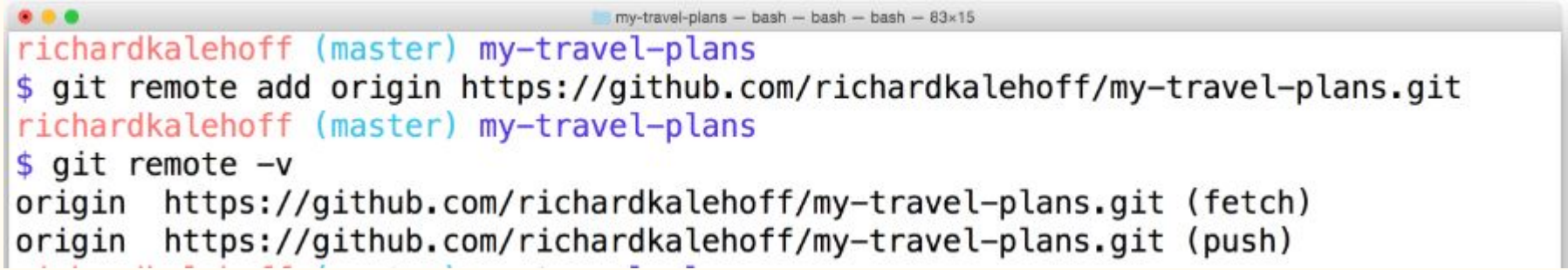
Working with Remotes

- Git remote
- Git push
- Git pull

Git Remote

Intro

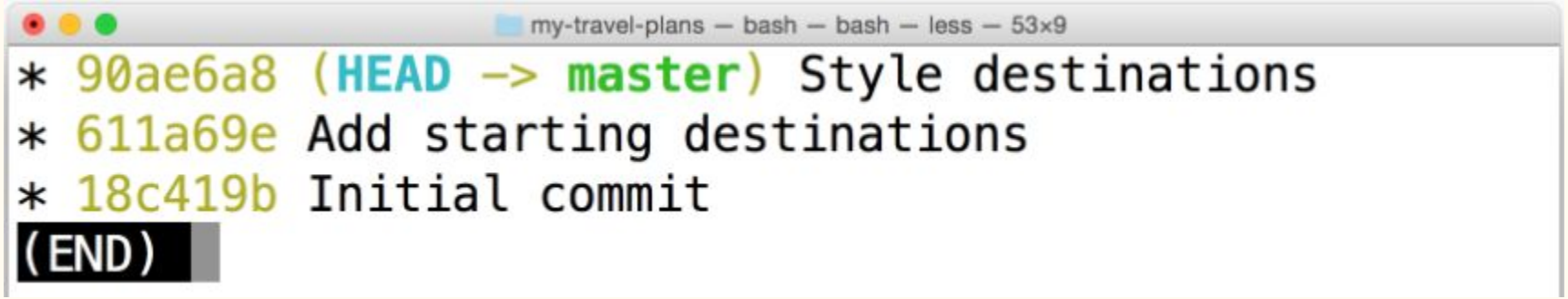
- https://www.youtube.com/watch?v=AnSIYftJnwA
- Git remote add <shortname> <Full path of repo>
- Git remote -v



Git Push

Push changes to a remote

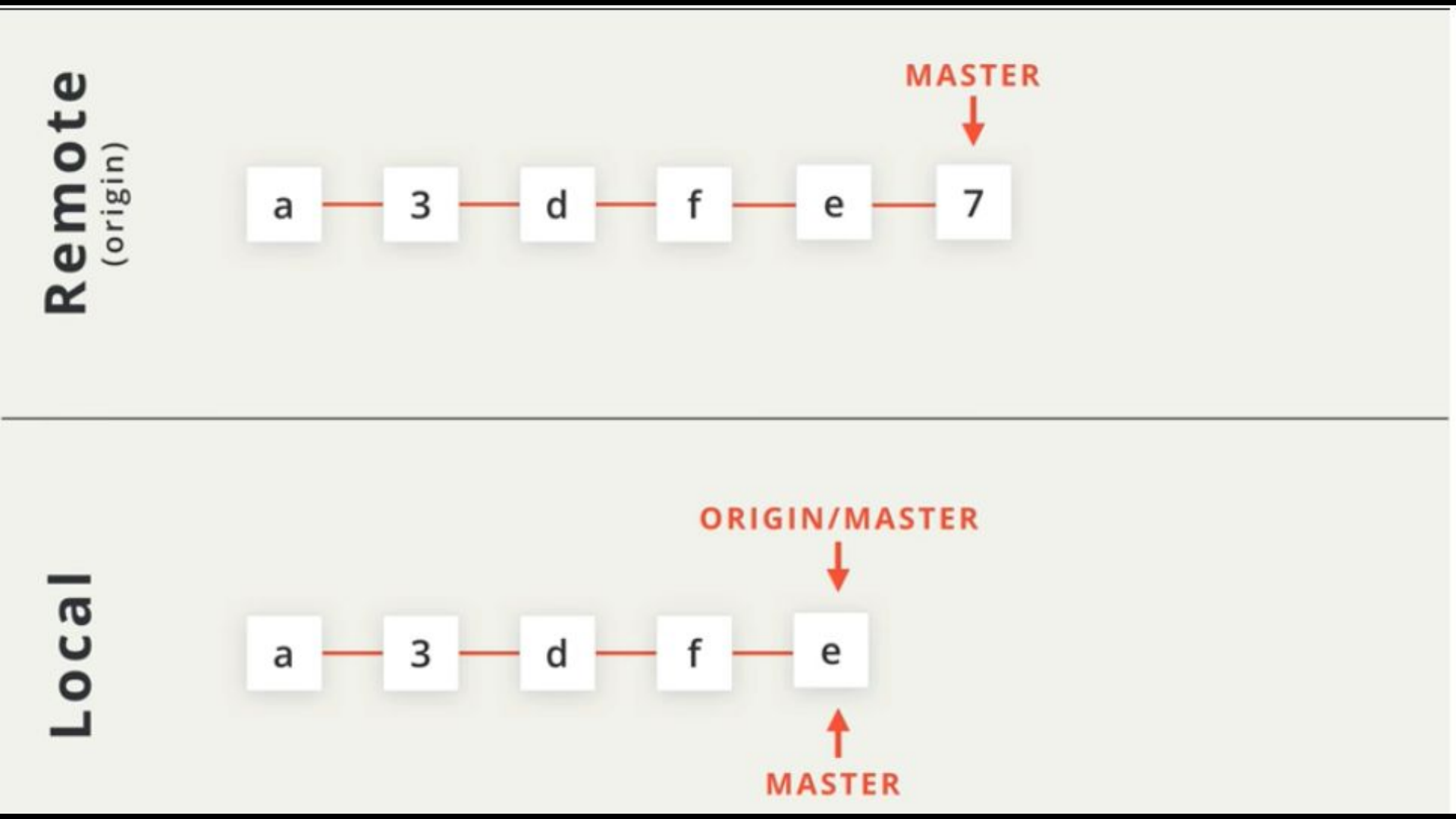
- https://www.youtube.com/watch?v=21TvMEtMRys

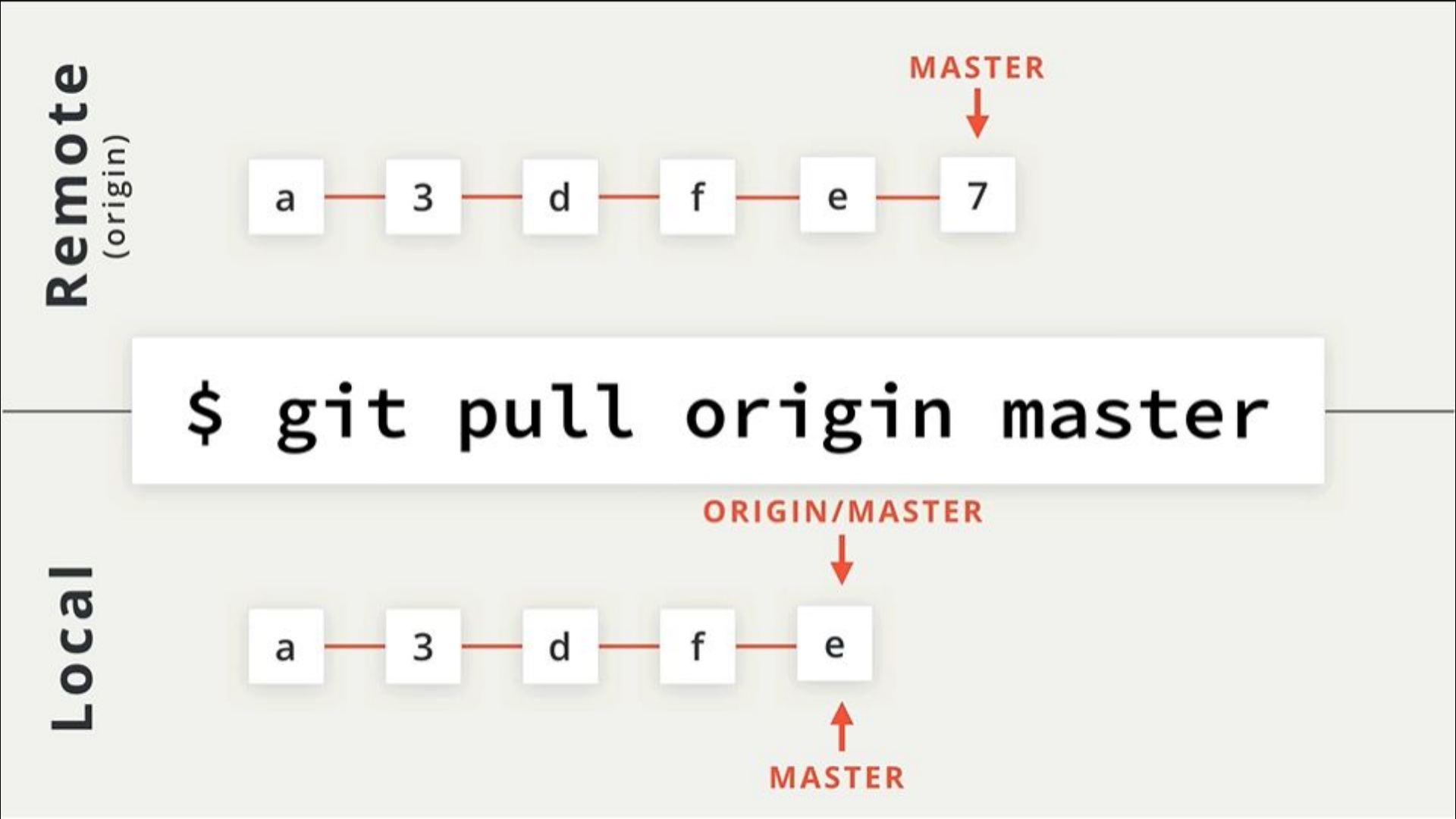


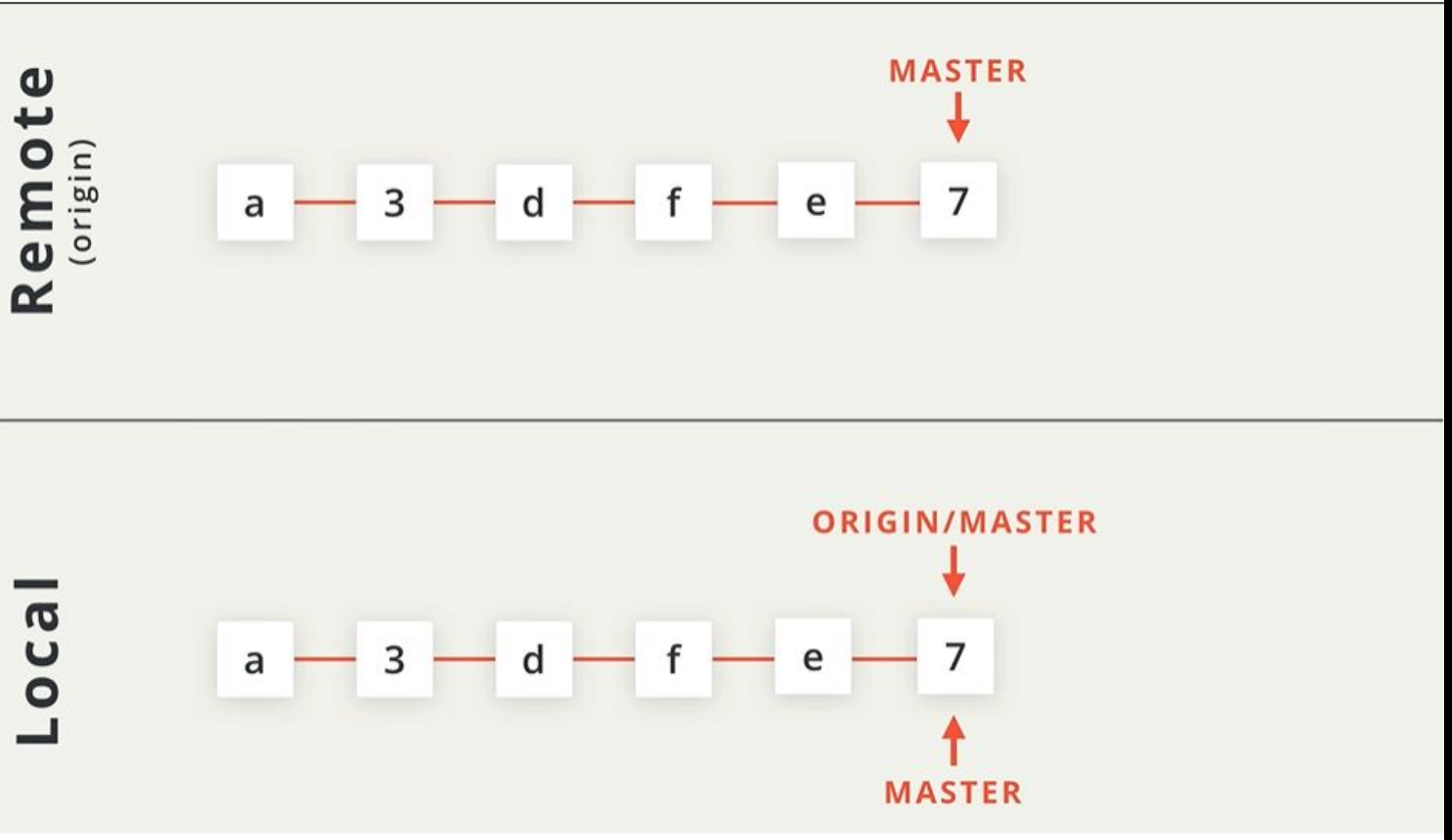
- Git push <short-name> <topic branch>
  - Git push origin master

```
$ git push origin master
Username for 'https://github.com': richardkalehoff
Password for 'https://richardkalehoff@github.com':
Counting objects: 20, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (18/18), done.
Writing objects: 100% (20/20), 42.31 KiB | 0 bytes/s, done.
Total 20 (delta 4), reused 0 (delta 0)
remote: Resolving deltas: 100% (4/4), done.
To https://github.com/richardkalehoff/my-travel-plans.git
 * [new branch]      master -> master
```

Git Pull


Remote
(origin)
MASTER
a
3
d
f
e
7
Local
ORIGIN/MASTER
a
3
d
f
e
MASTER


Remote
(origin)
MASTER
a
3
d
f
e
7
$ git pull origin master
Local
ORIGIN/MASTER
a
3
d
f
e
MASTER

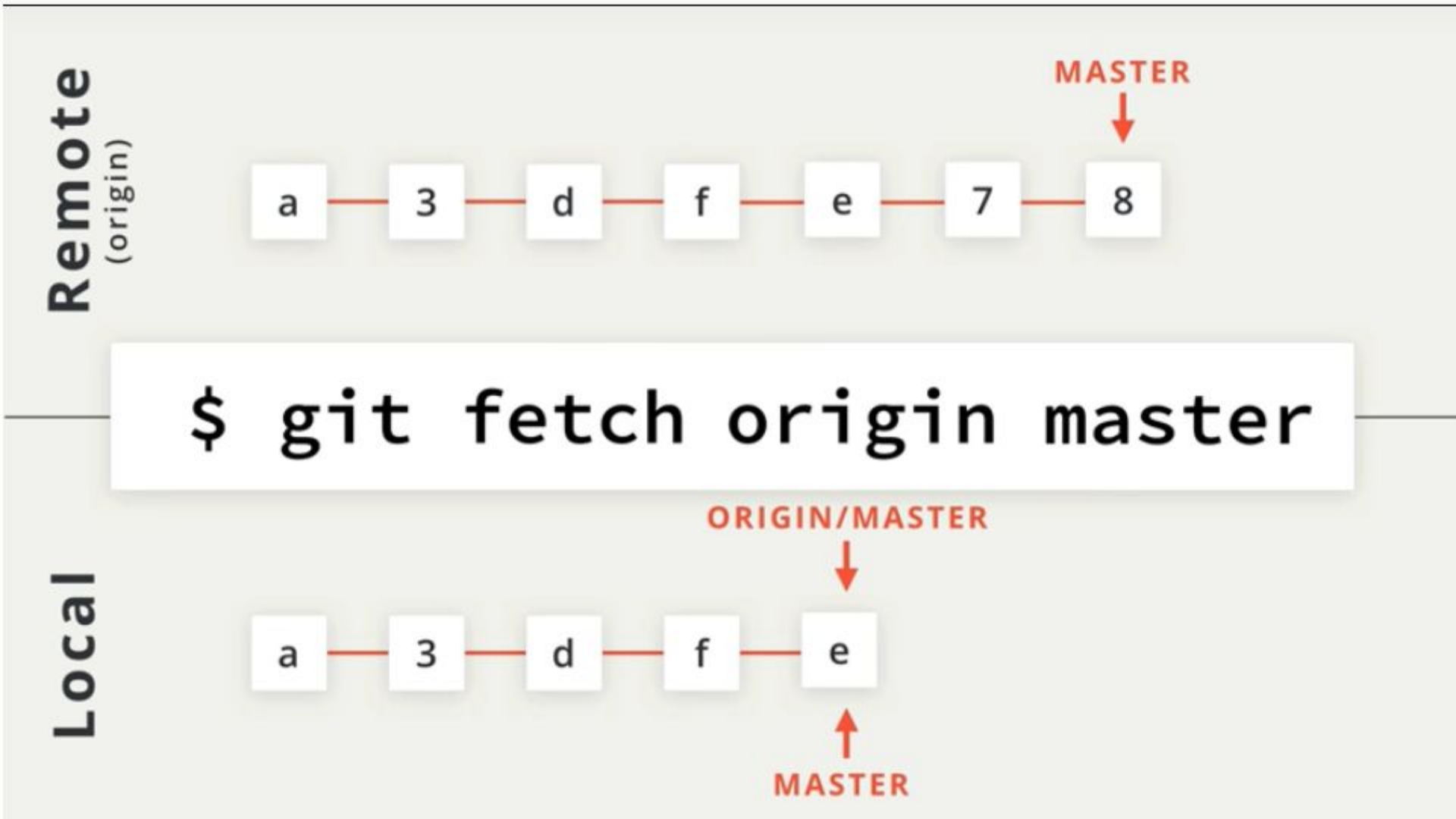

Remote
(origin)
MASTER
a
3
d
f
e
7
Local
ORIGIN/MASTER
a
3
d
f
e
7
MASTER

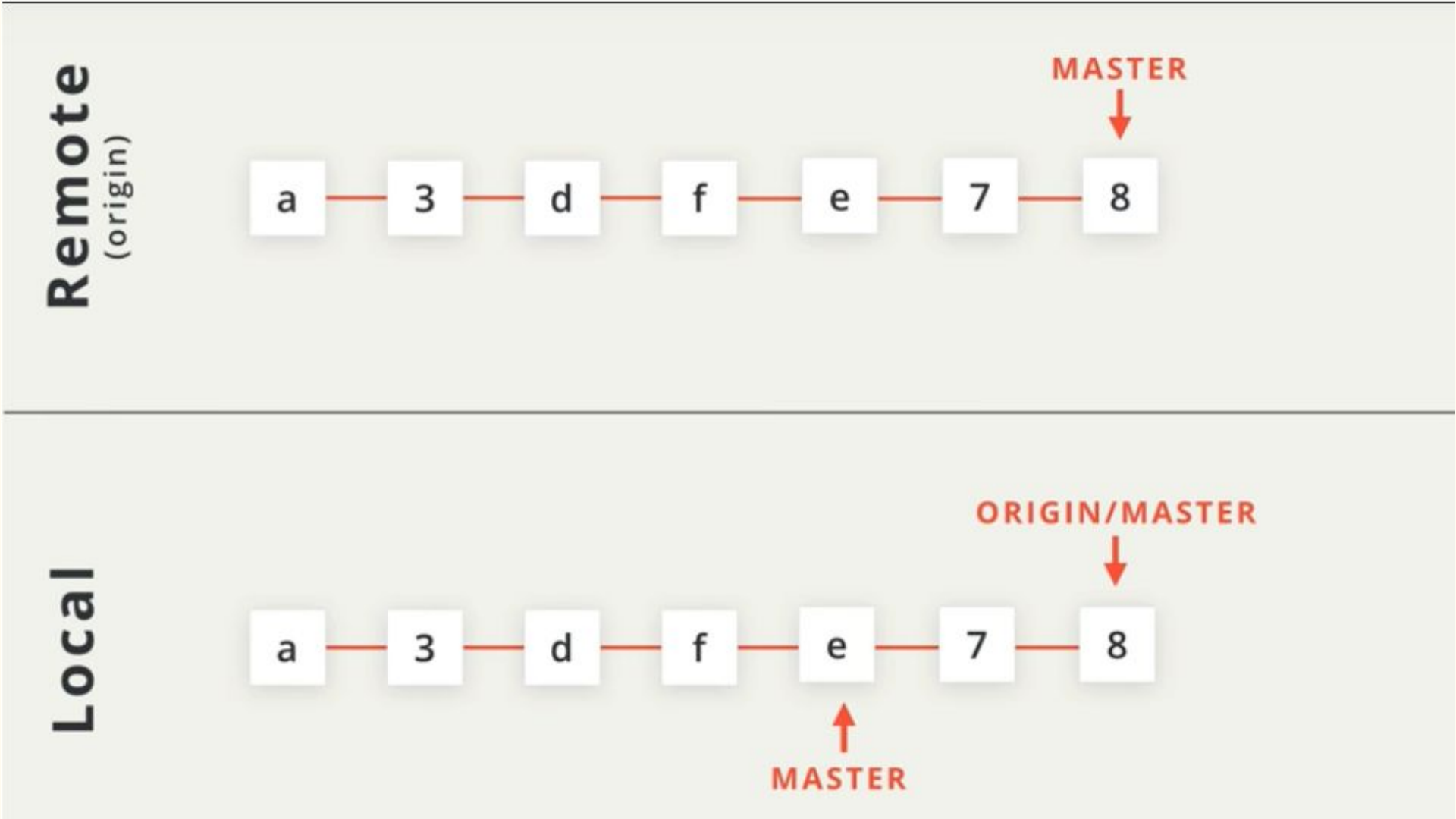
Pull changes from a remote

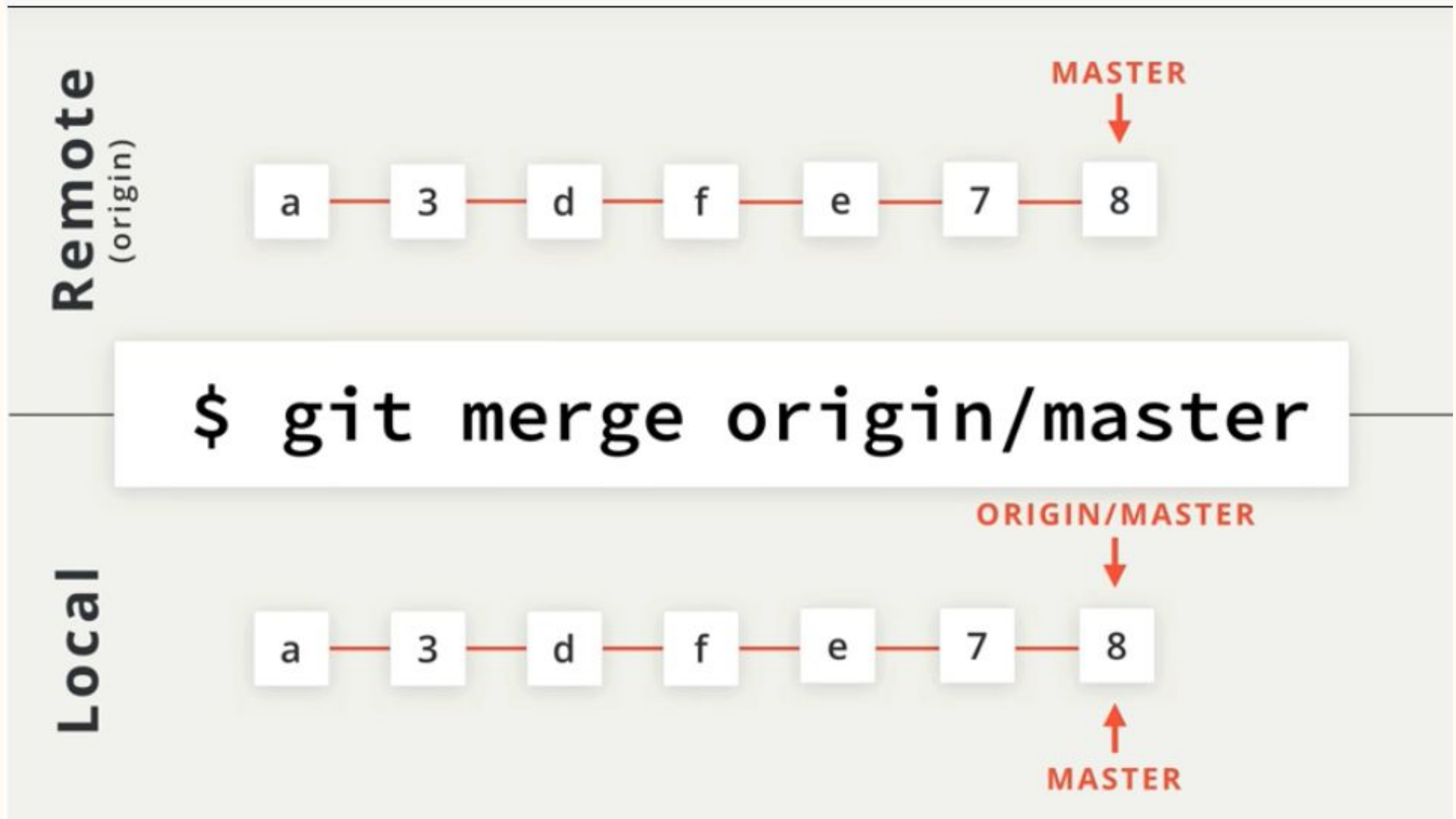
- https://www.youtube.com/watch?v=MjNU2LTDVAA

- Git pull <short-name> <topic branch>
  - Git pull origin master

Git fetch


Remote
(origin)
MASTER
a
3
d
f
e
7
8
$ git fetch origin master
Local
ORIGIN/MASTER
a
3
d
f
e
MASTER


Remote
(origin)
MASTER
a
3
d
f
e
7
8
Local
ORIGIN/MASTER
a
3
d
f
e
7
8
MASTER


Remote
(origin)
MASTER
a
3
d
f
e
7
8
$ git merge origin/master
Local
ORIGIN/MASTER
a
3
d
f
e
7
8
MASTER

Pull v/s Fetch

- https://www.youtube.com/watch?v=kxXdk2HcOBo

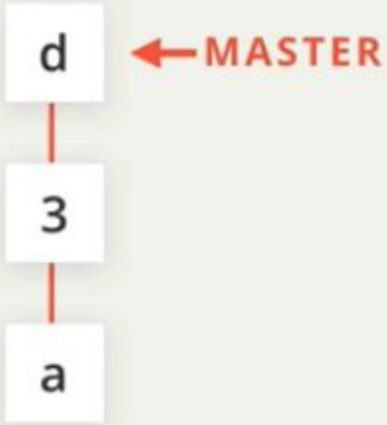
- The reason why - https://www.youtube.com/watch?v=jwyQUfE1Eqw

Staying in Sync with a Remote Repository

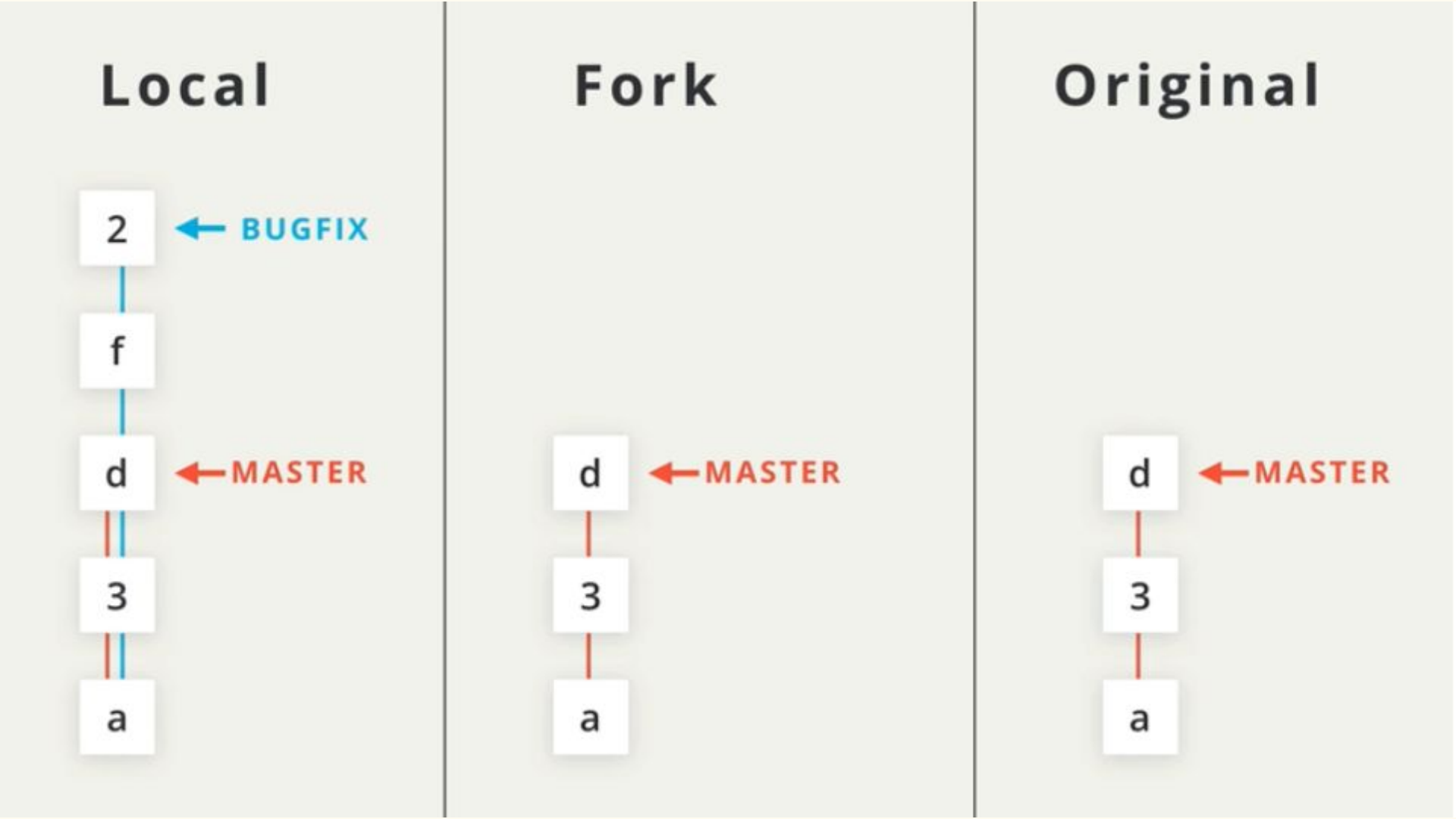
- Create a pull request
- Staying in Sync with Source Repository
- Squashing Commits

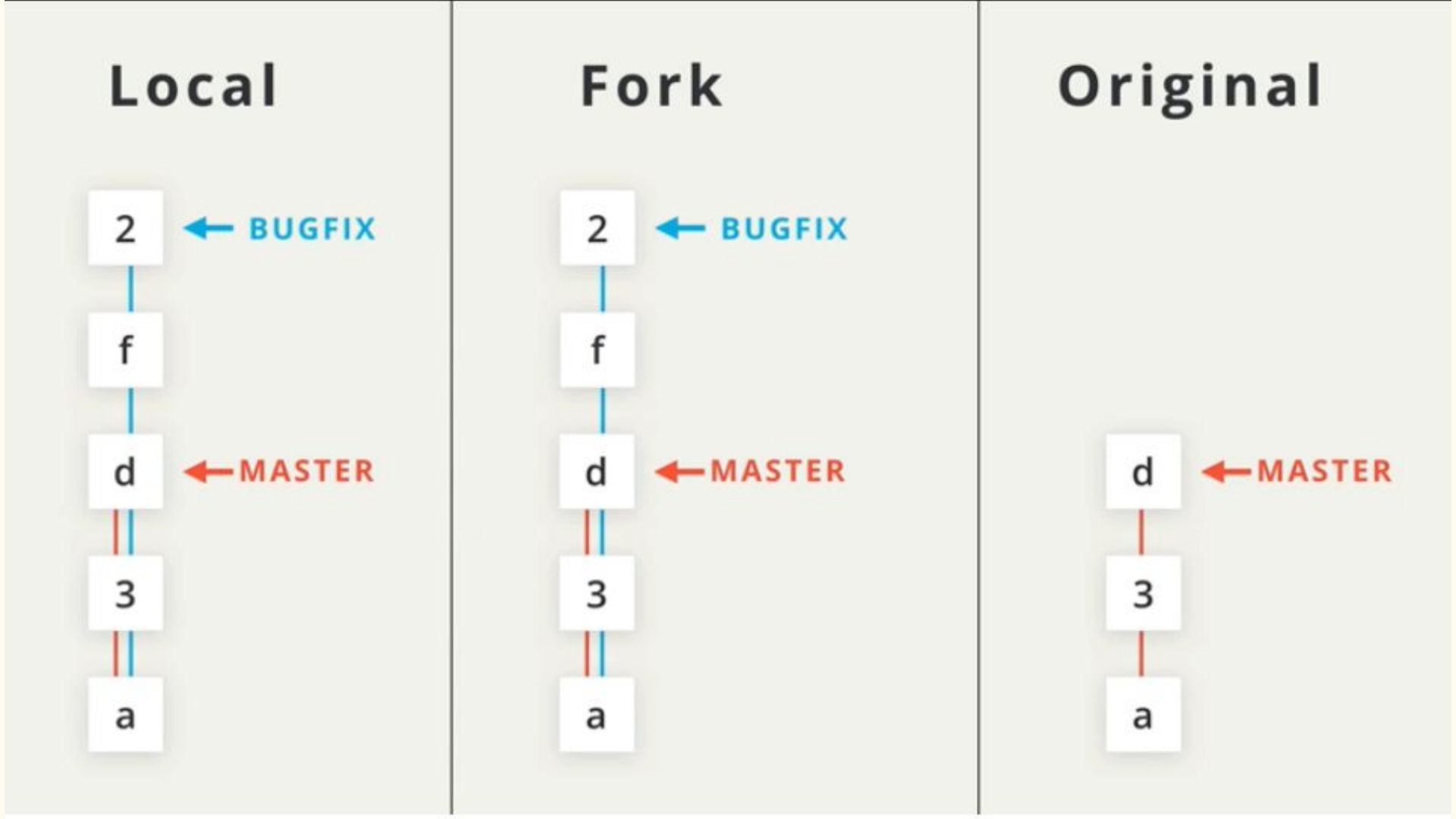
Creating a Pull Request

Forked Repository



Original Repository

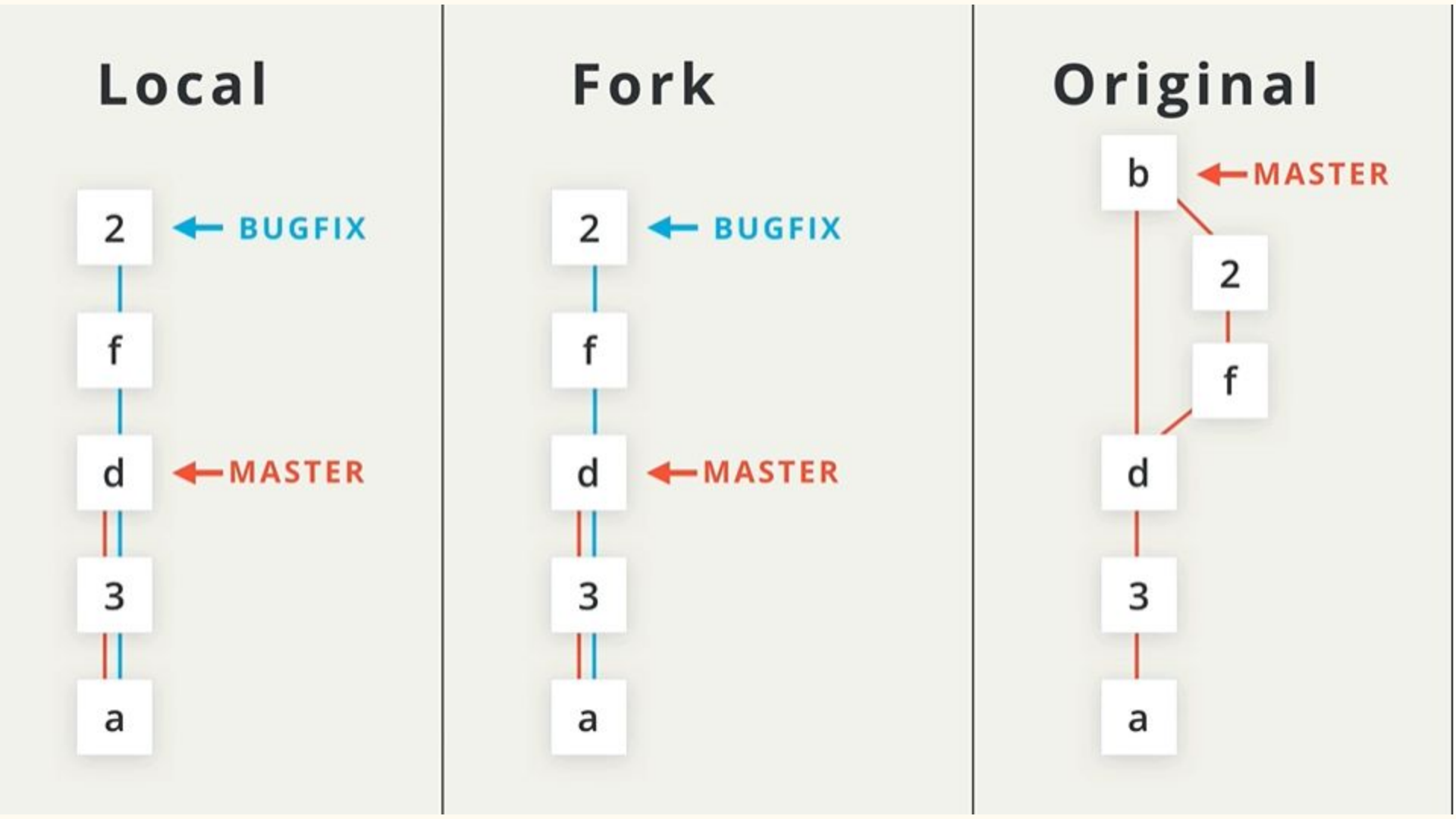

Local
2
BUGFIX
f
d
MASTER
3
a
Fork
d
MASTER
3
a
Original
d
MASTER
3
a


Local
2
BUGFIX
f
d
MASTER
3
a
Fork
2
BUGFIX
f
d
MASTER
3
a
Original
d
MASTER
3
a

Create a pull request

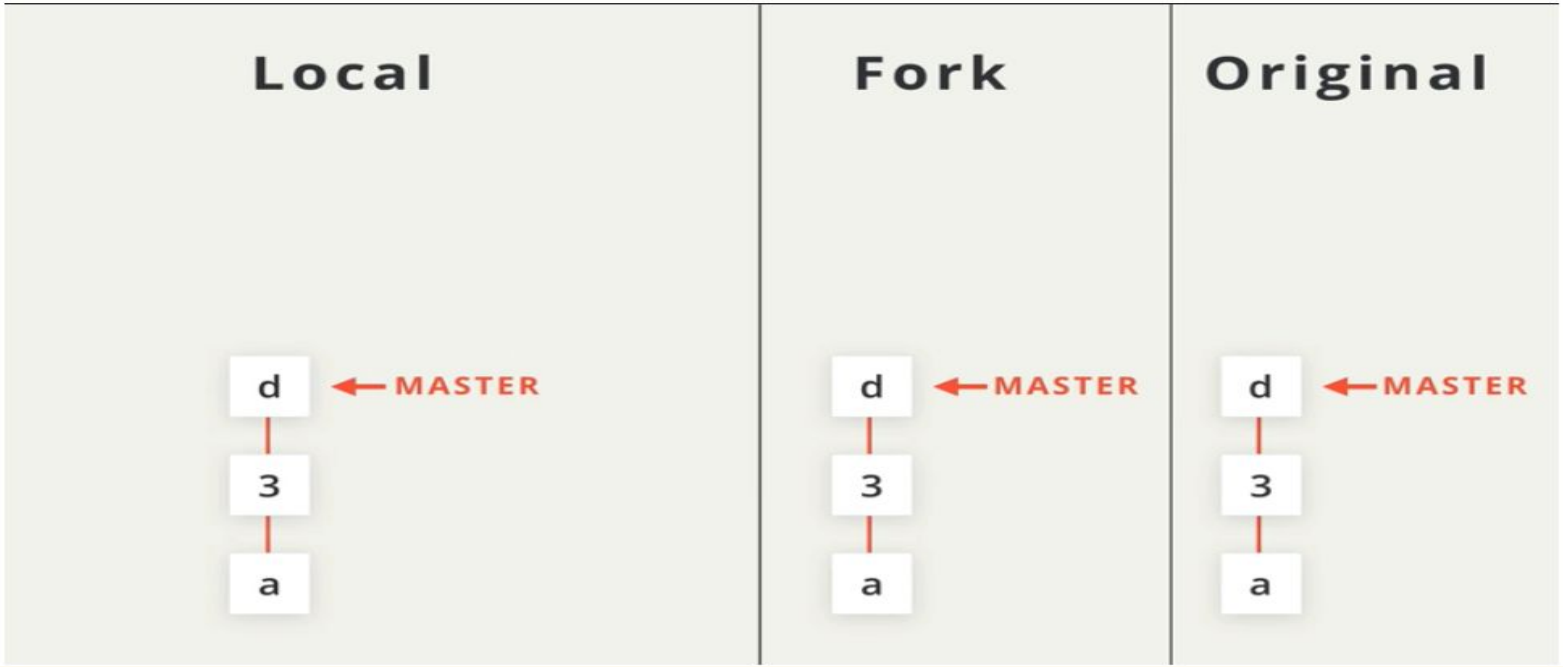
- https://www.youtube.com/watch?v=twLr9ndsf90
- https://www.youtube.com/watch?v=d3AGtKmHxUk

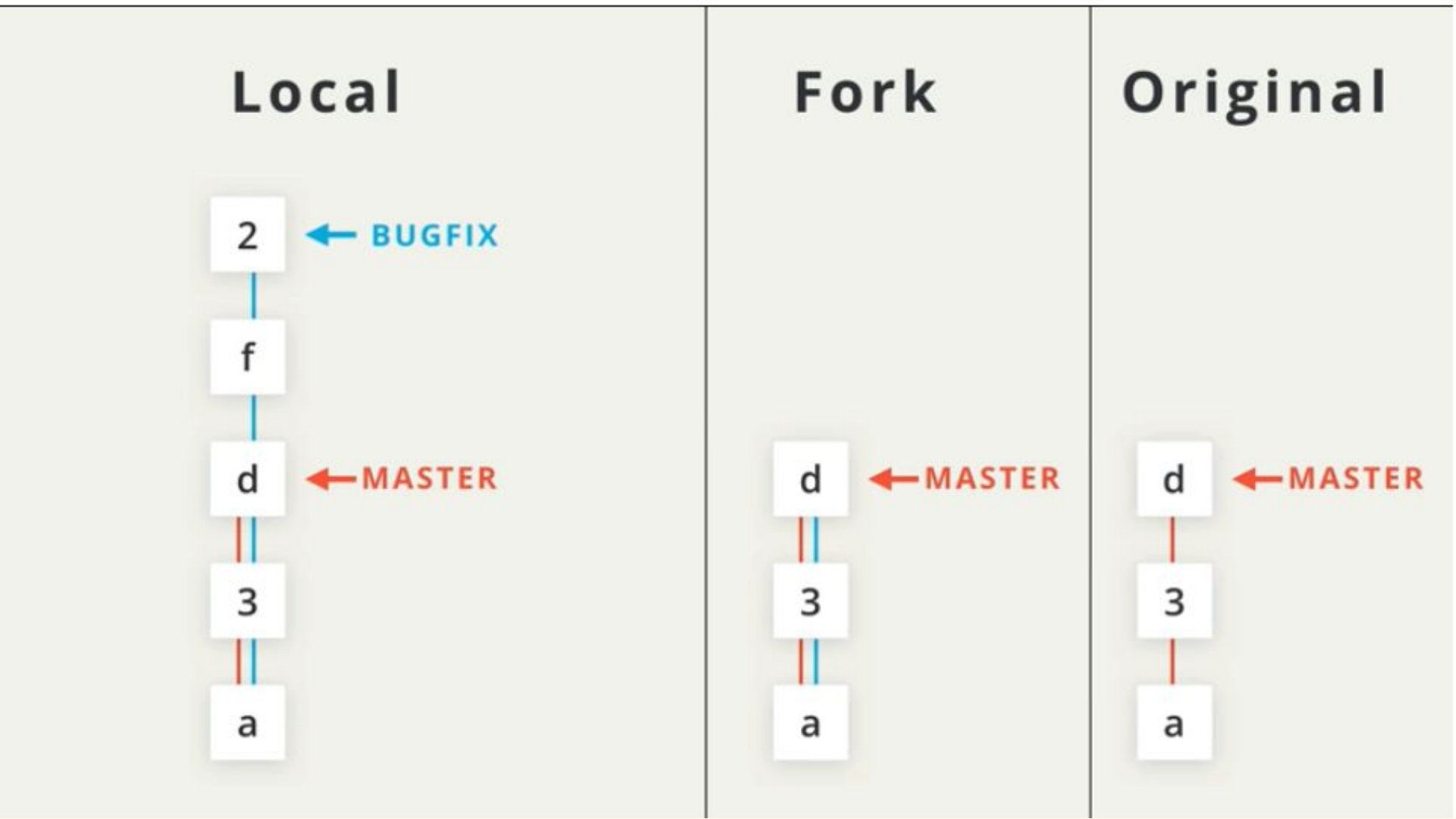
Fork

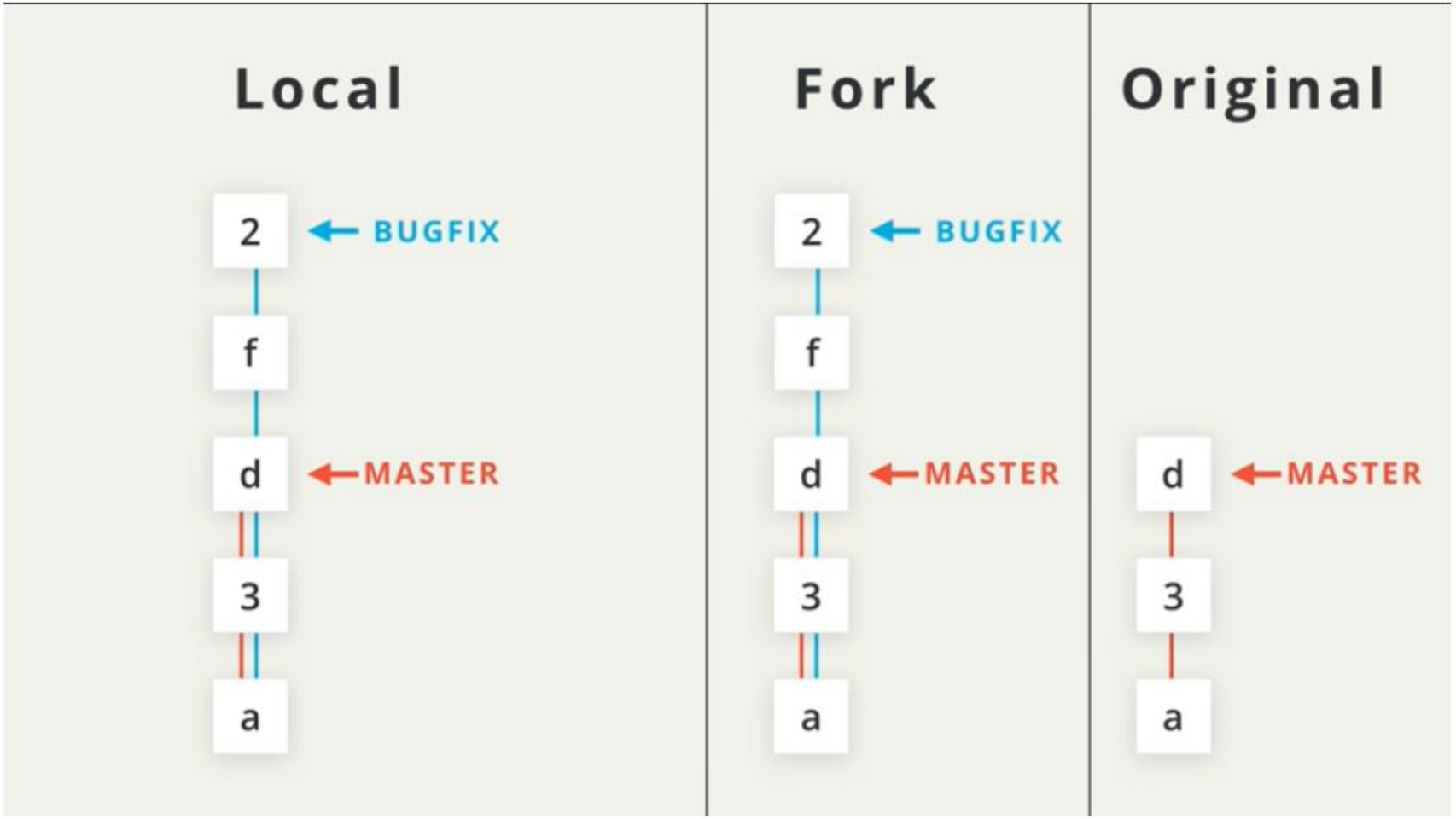

Local
2
BUGFIX
f
d
MASTER
3
a
Fork
2
BUGFIX
f
d
MASTER
3
a
Original
b
MASTER
2
f
d
3
a

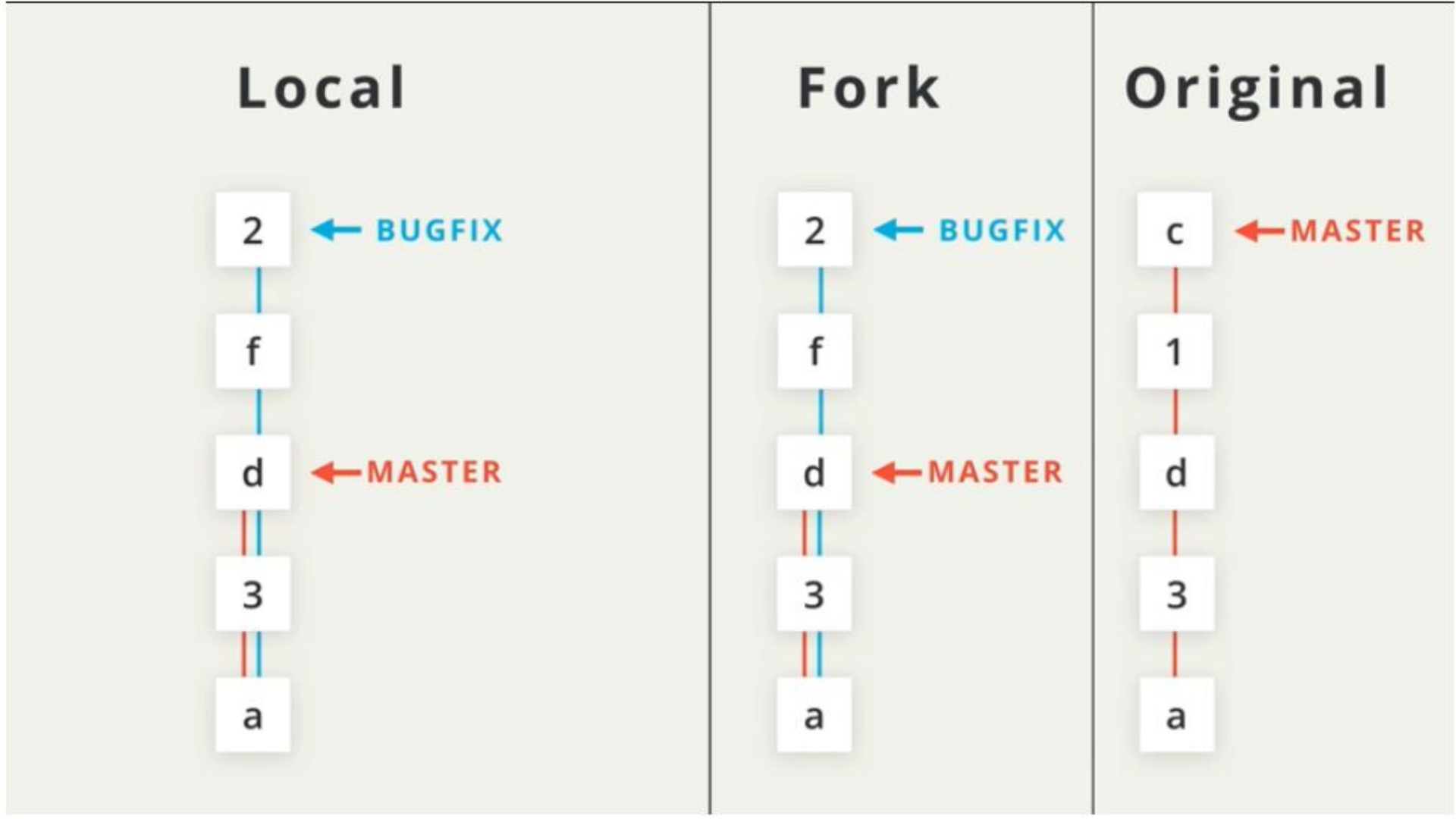
Staying in sync w/ Remote Repository

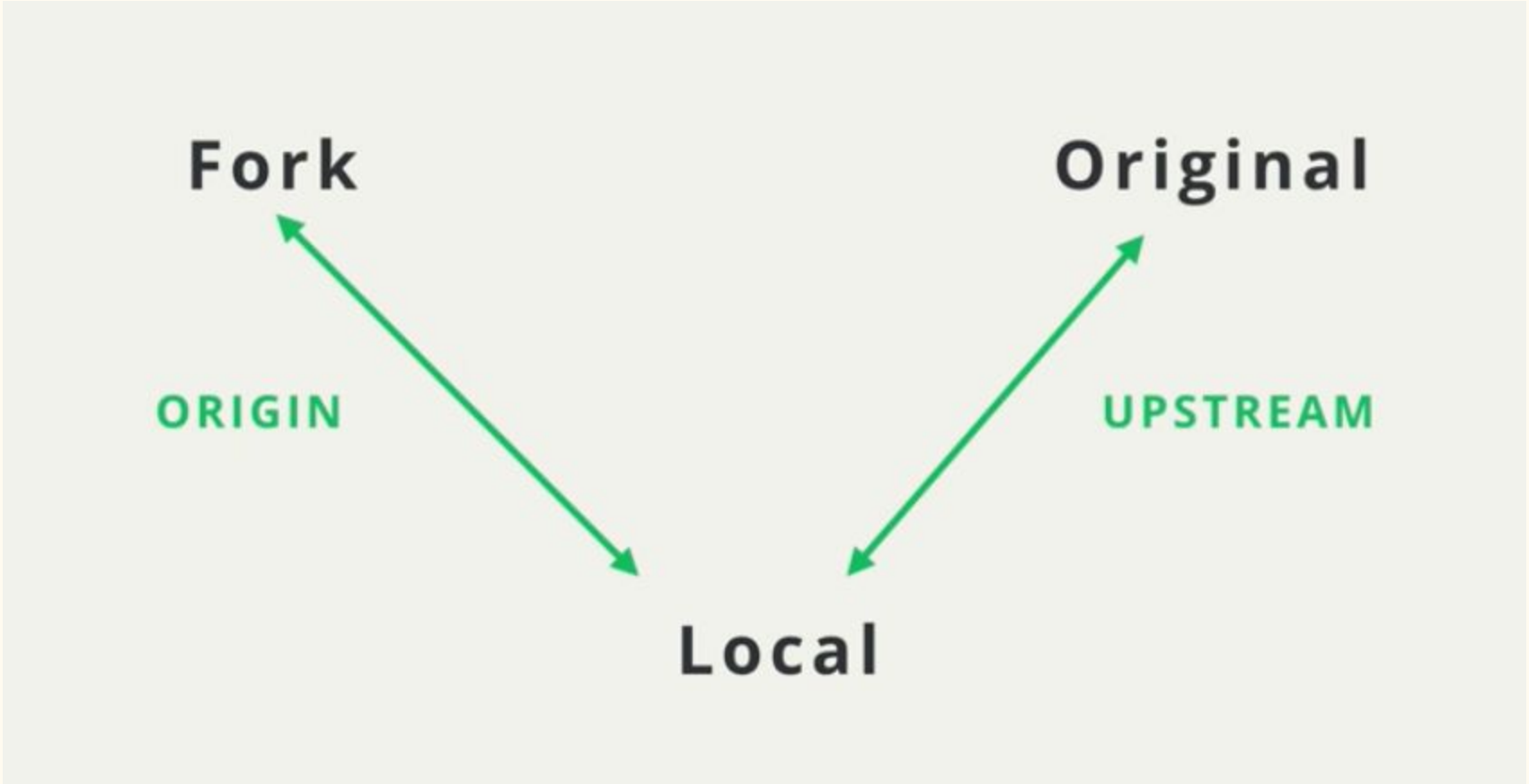
Staying in sync with remote repo



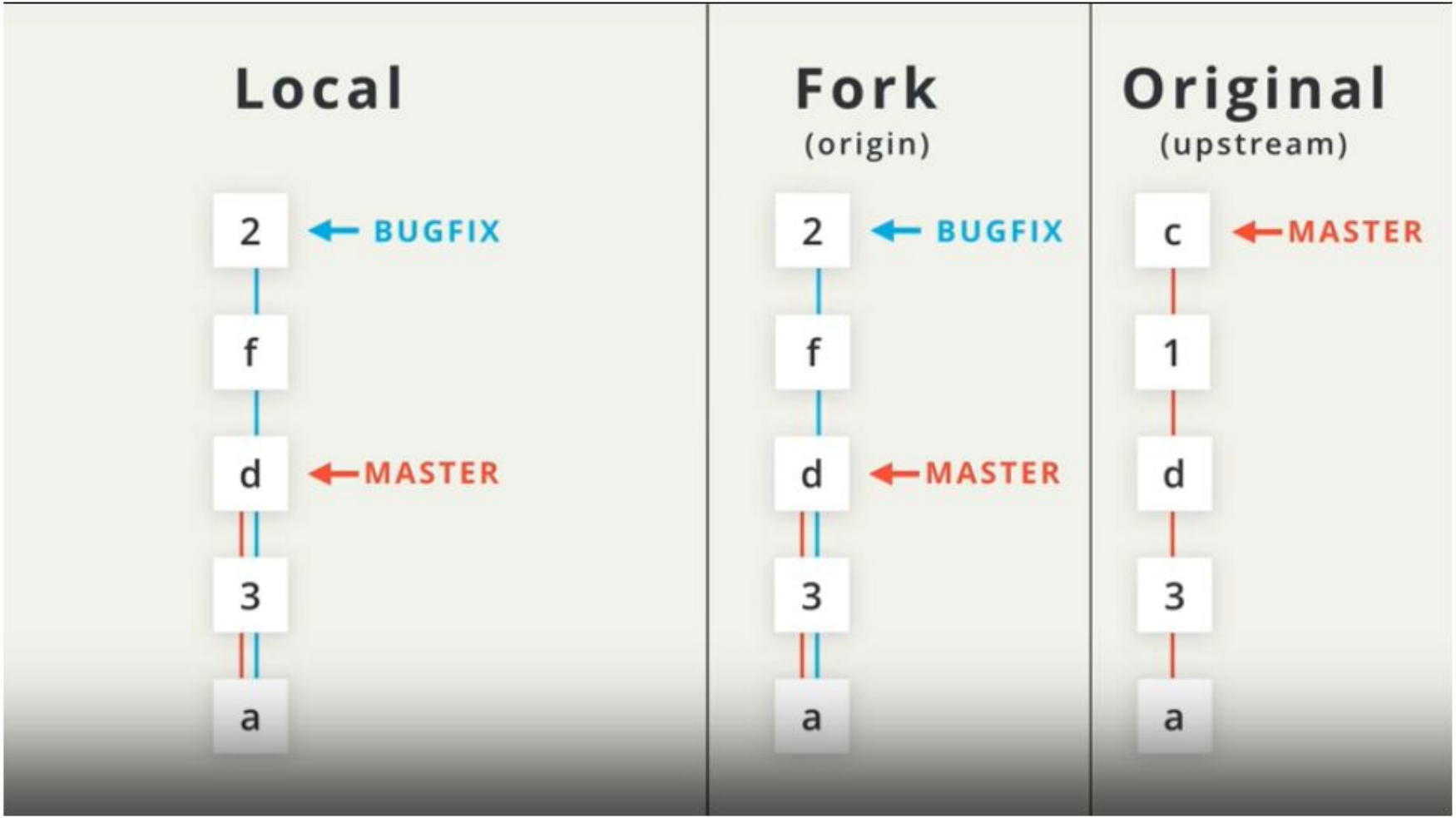

Local
Fork
Original
2
BUGFIX
f
d
MASTER
3
a
d
MASTER
3
a
d
MASTER
3
a

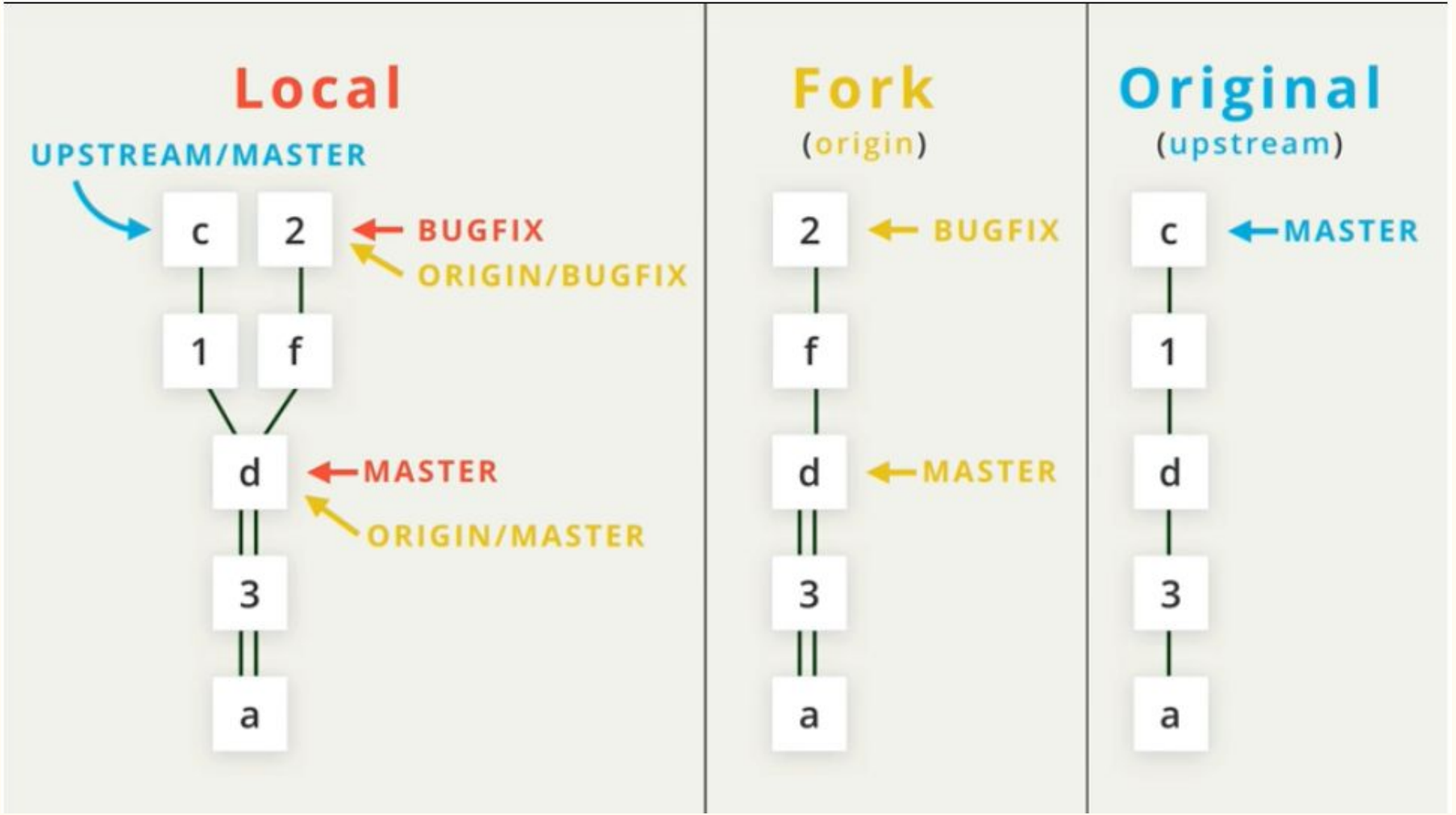

Local
2
BUGFIX
f
d
MASTER
3
a
Fork
2
BUGFIX
f
d
MASTER
3
a
Original
d
MASTER
3
a

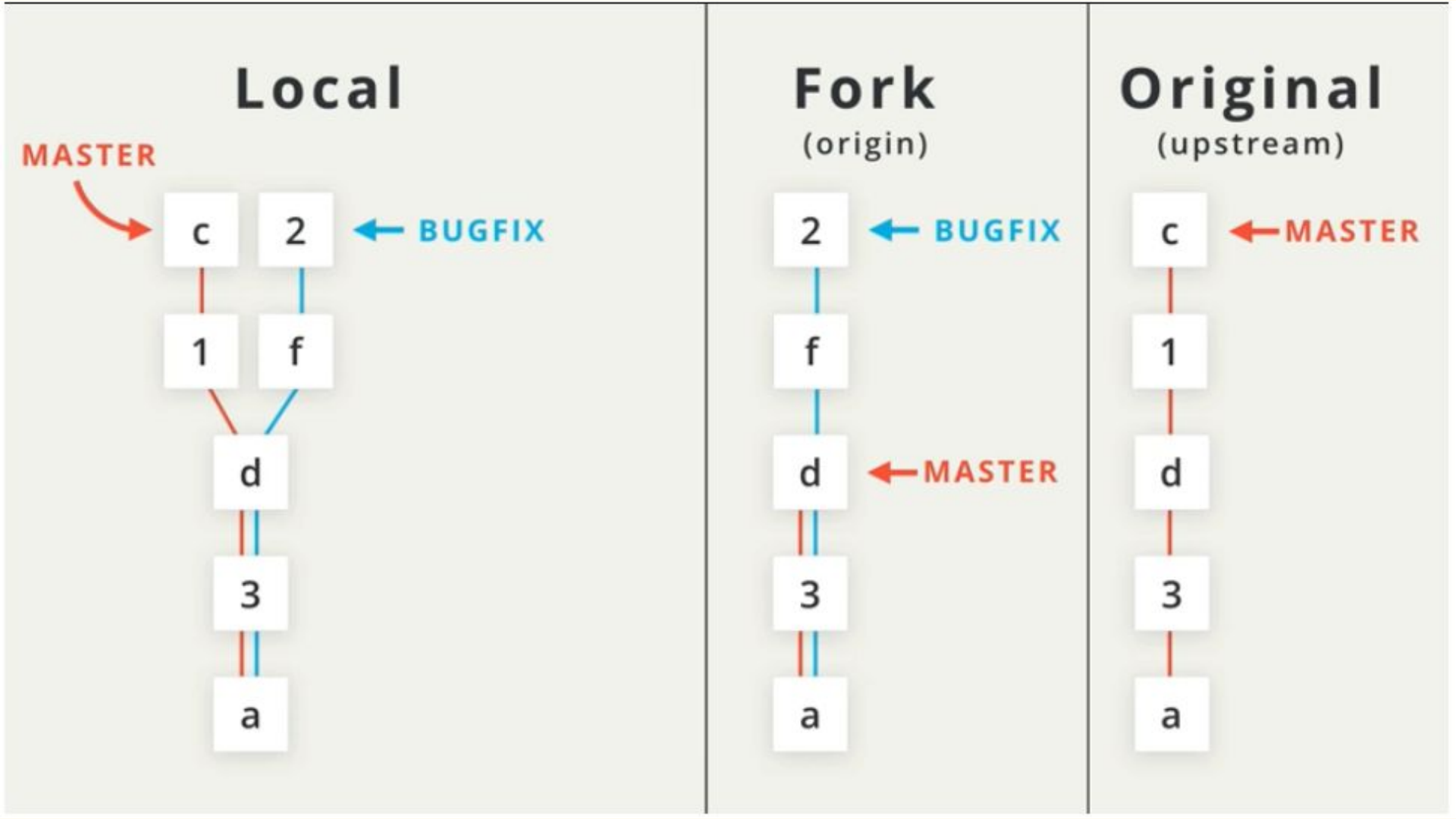

Local
2
BUGFIX
f
d
MASTER
3
a
Fork
2
BUGFIX
f
d
MASTER
3
a
Original
c
MASTER
1
d
3
a

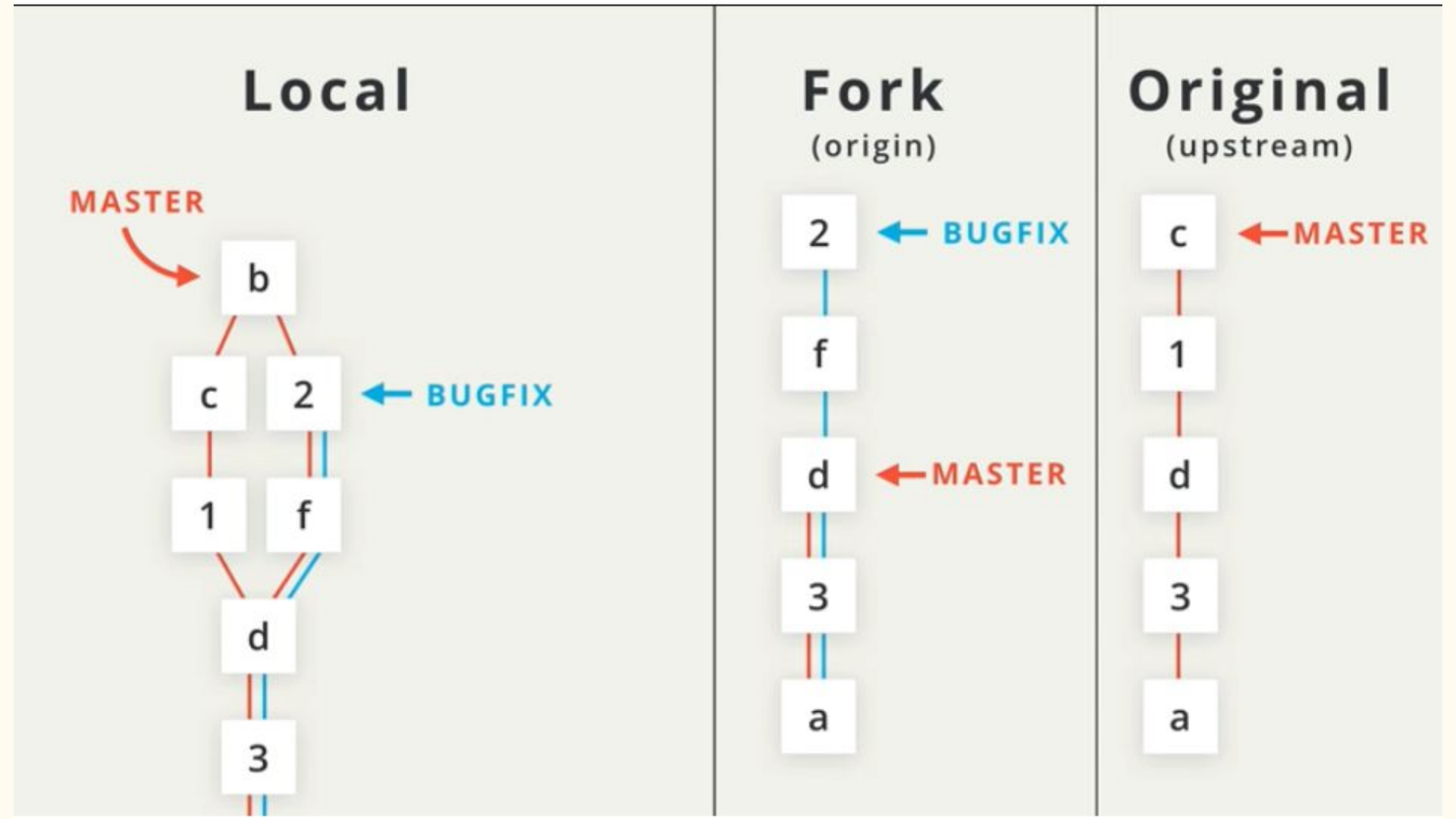

Fork
Original
ORIGIN
UPSTREAM
Local

- Git remote add upstream <URL of src repo>
- Git remote rename <oldname> <newname>


Local
2
BUGFIX
f
d
MASTER
3
a
Fork
(origin)
2
BUGFIX
f
d
MASTER
3
a
Original
(upstream)
c
MASTER
1
d
3
a

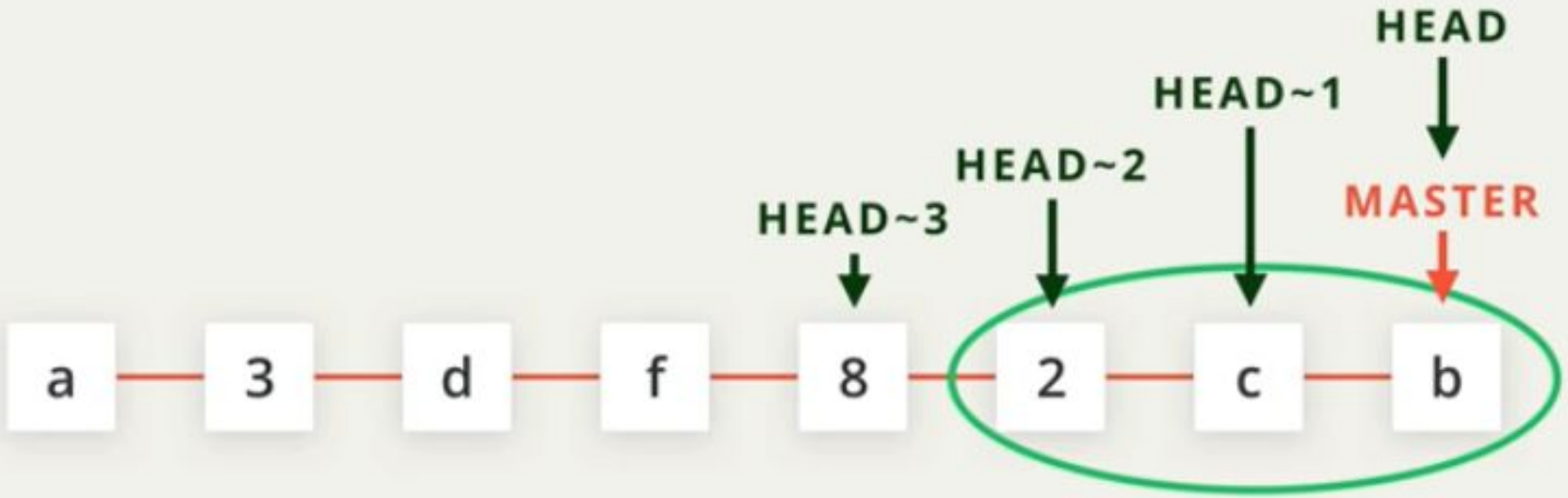

Local
UPSTREAM/MASTER
c
2
BUGFIX
ORIGIN/BUGFIX
1
f
d
MASTER
ORIGIN/MASTER
3
a
Fork
(origin)
2
BUGFIX
f
d
MASTER
3
a
Original
(upstream)
c
MASTER
1
d
3
a


Local
MASTER
c
2
BUGFIX
1
f
d
3
a
Fork
(origin)
2
BUGFIX
f
d
MASTER
3
a
Original
(upstream)
c
MASTER
1
d
3
a

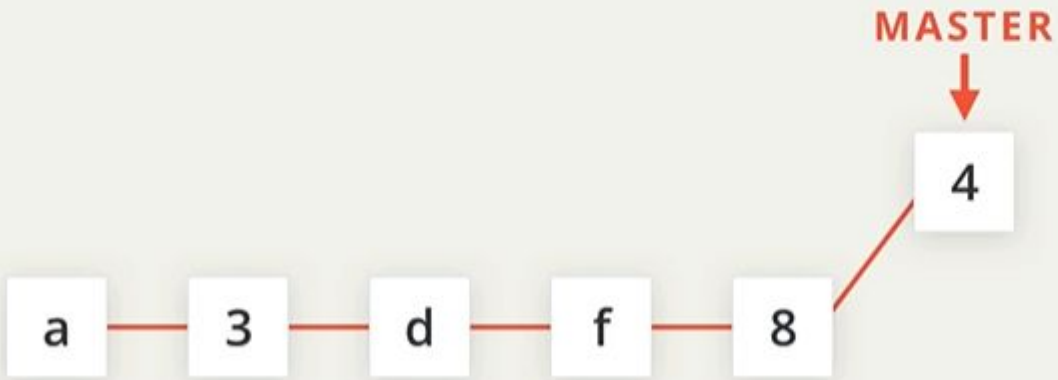

Local
MASTER
b
c
2
BUGFIX
1
f
d
3
Fork
(origin)
2
BUGFIX
f
d
MASTER
3
a
Original
(upstream)
c
MASTER
1
d
3
a

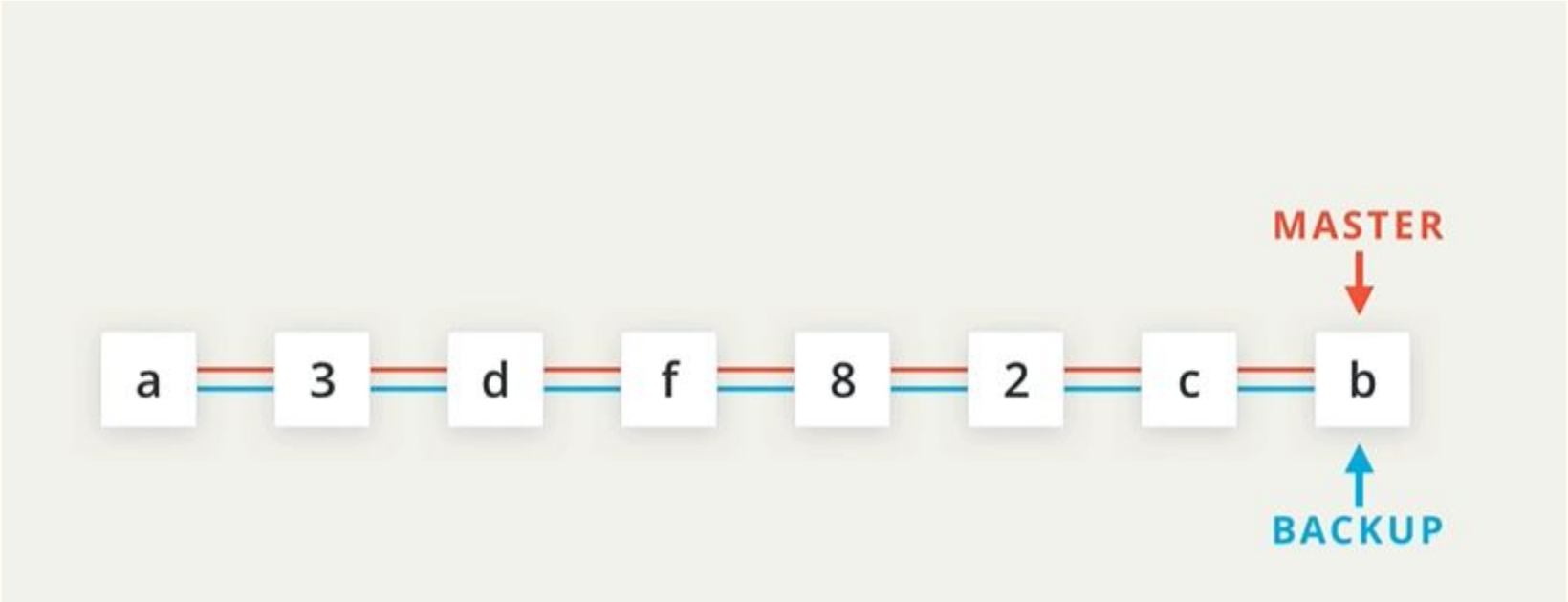
Squashing Commits

$ git rebase -i HEAD~3

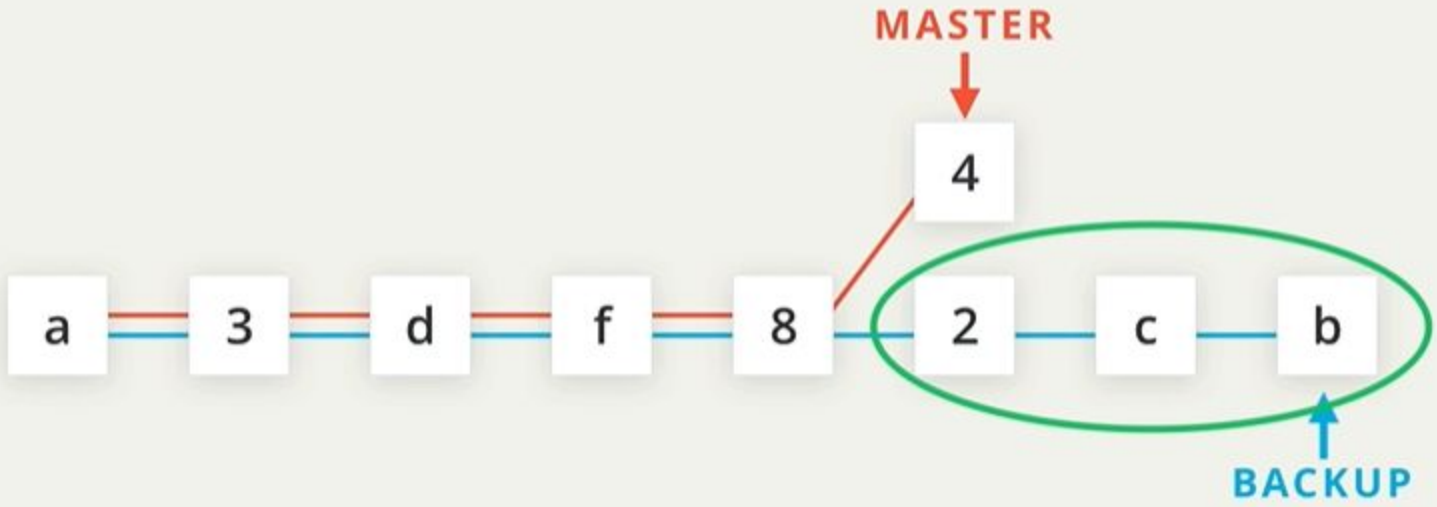


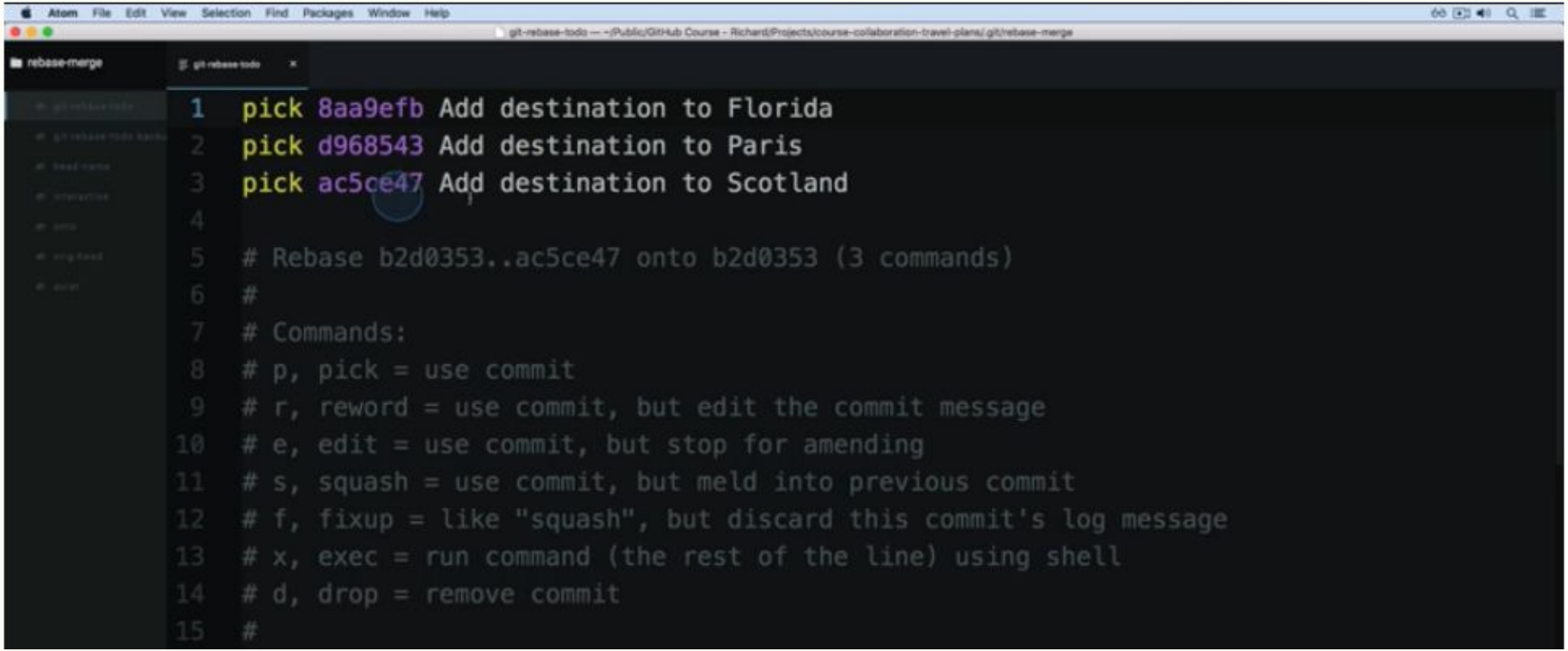
$ git rebase -i HEAD~3

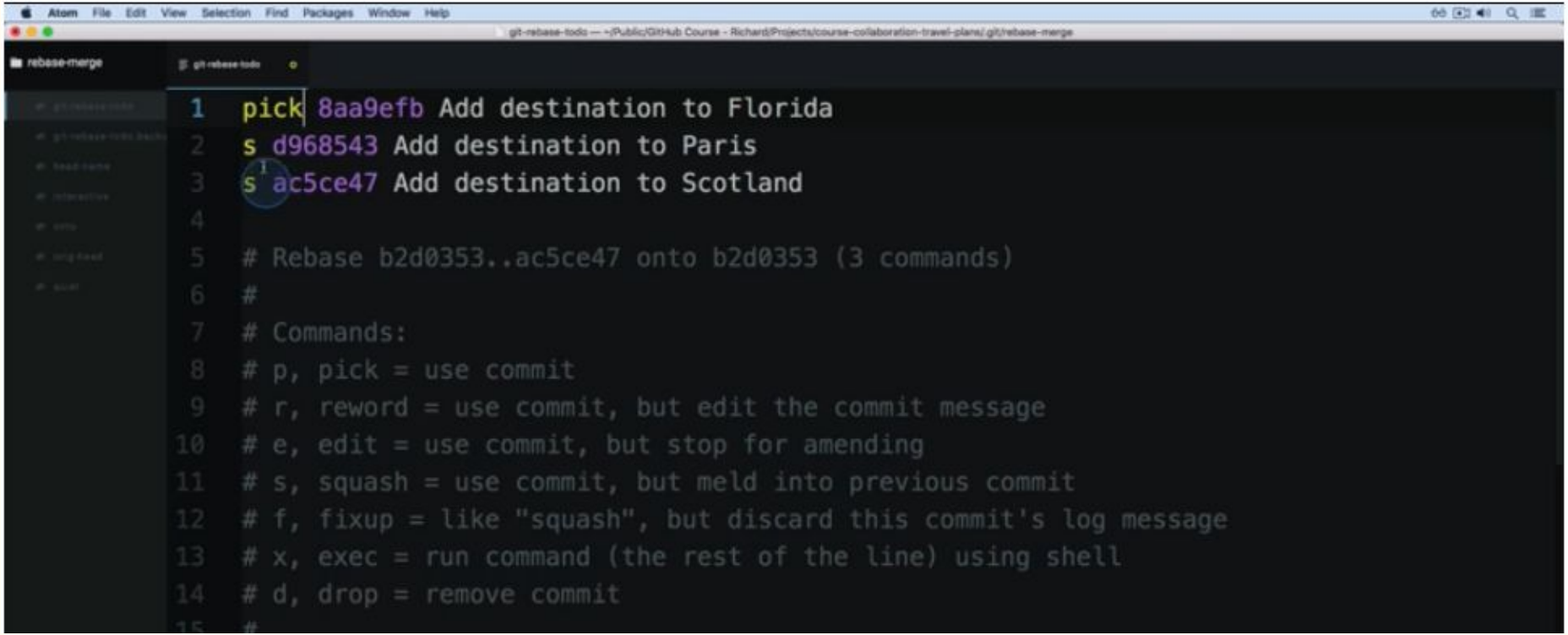


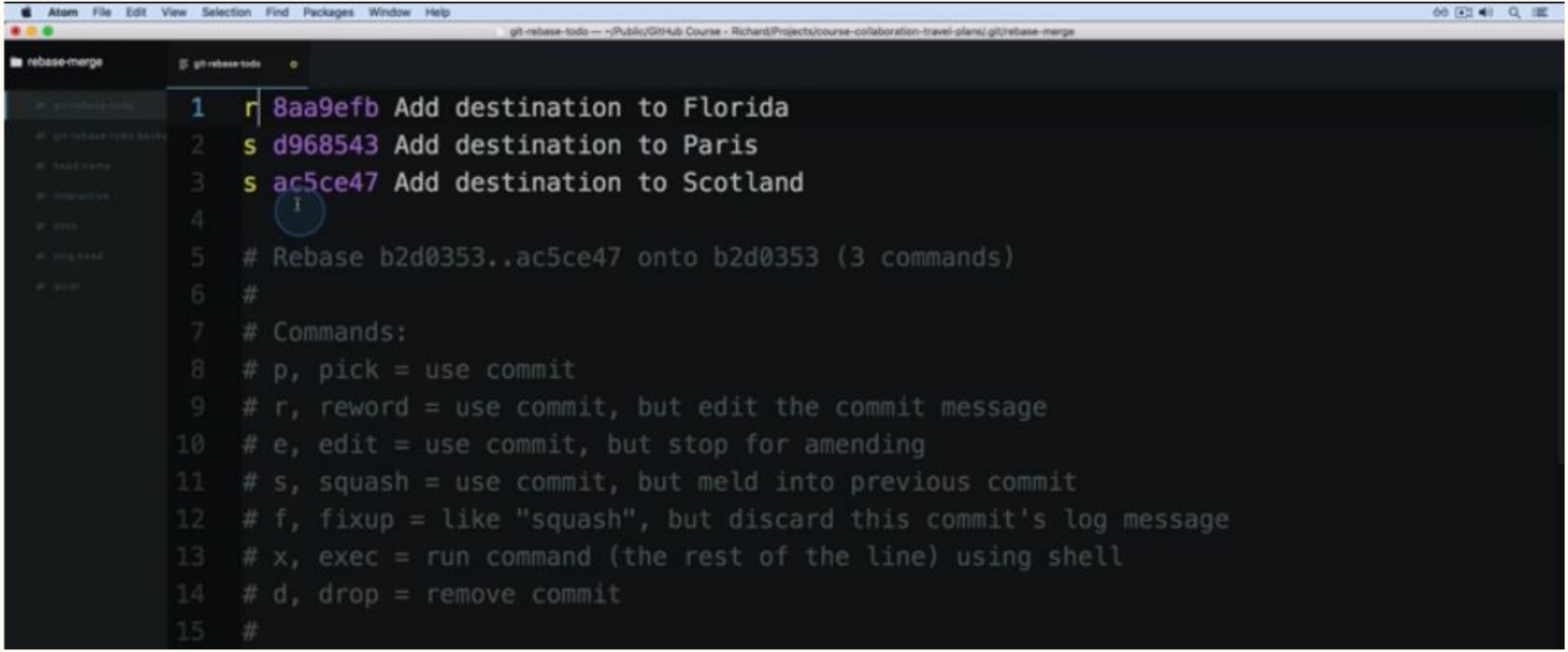

MASTER
a
3
d
f
8
2
c
b
BACKUP

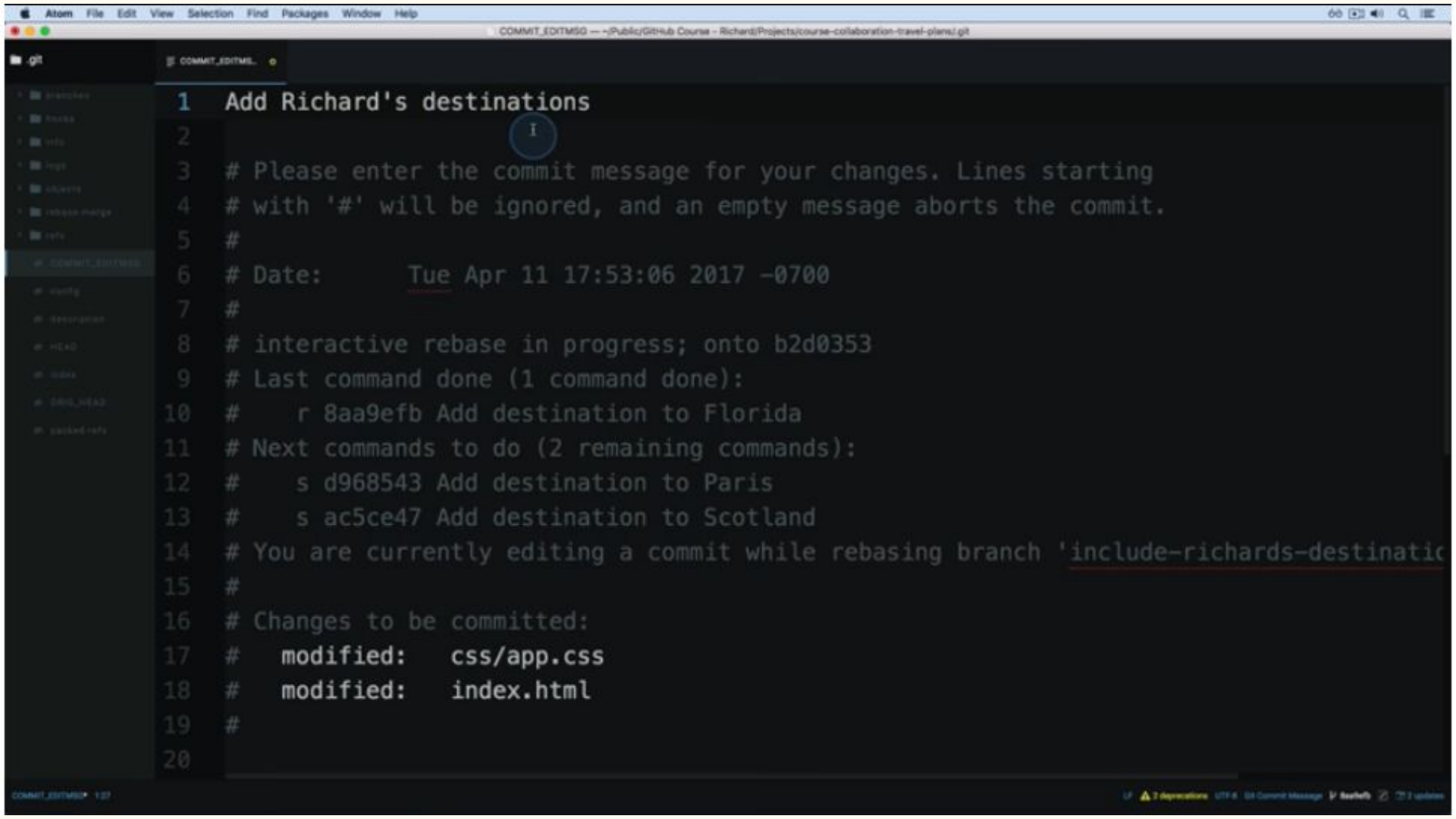
$ git rebase -i HEAD~3

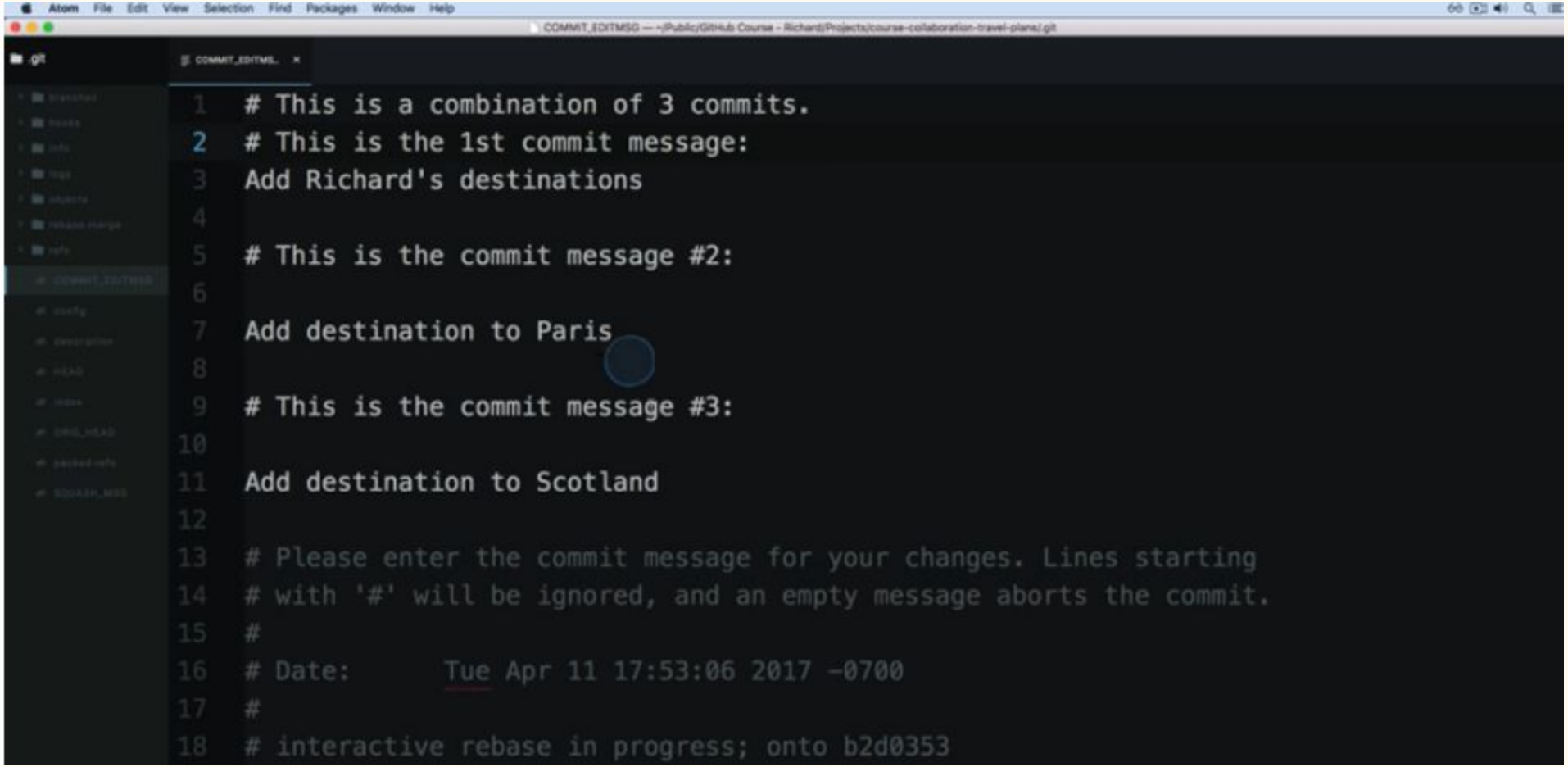


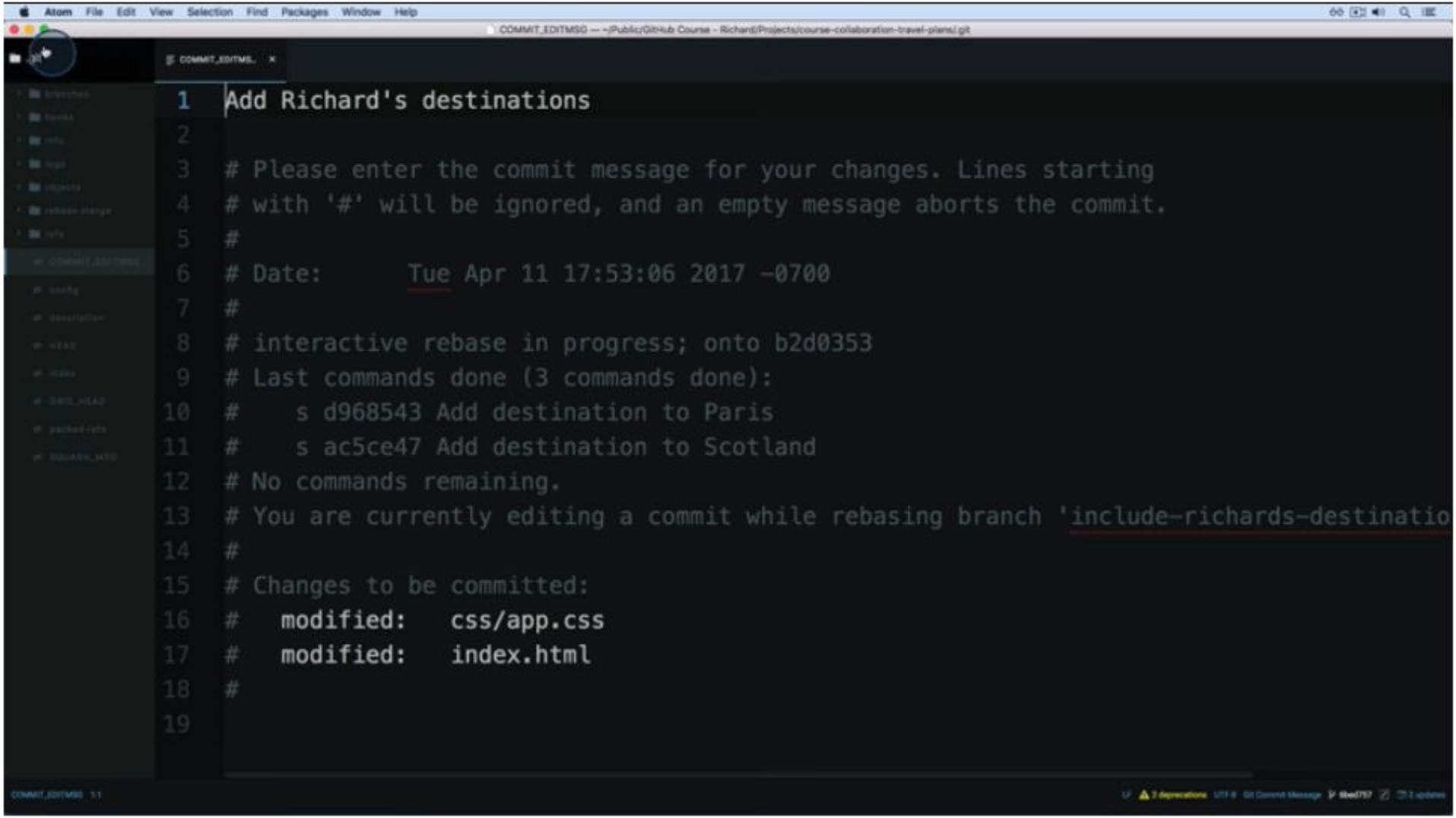

Atom File Edit View Selection Find Packages Window Help
git-rebase-todo — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git/rebase-merge
rebase-merge
git-rebase-todo
pick 8aa9efb Add destination to Florida
pick d968543 Add destination to Paris
pick ac5ce47 Add destination to Scotland
Rebase b2d0353..ac5ce47 onto b2d0353 (3 commands)
#
Commands:
p, pick = use commit
r, reword = use commit, but edit the commit message
e, edit = use commit, but stop for amending
s, squash = use commit, but meld into previous commit
f, fixup = like "squash", but discard this commit's log message
x, exec = run command (the rest of the line) using shell
d, drop = remove commit
#

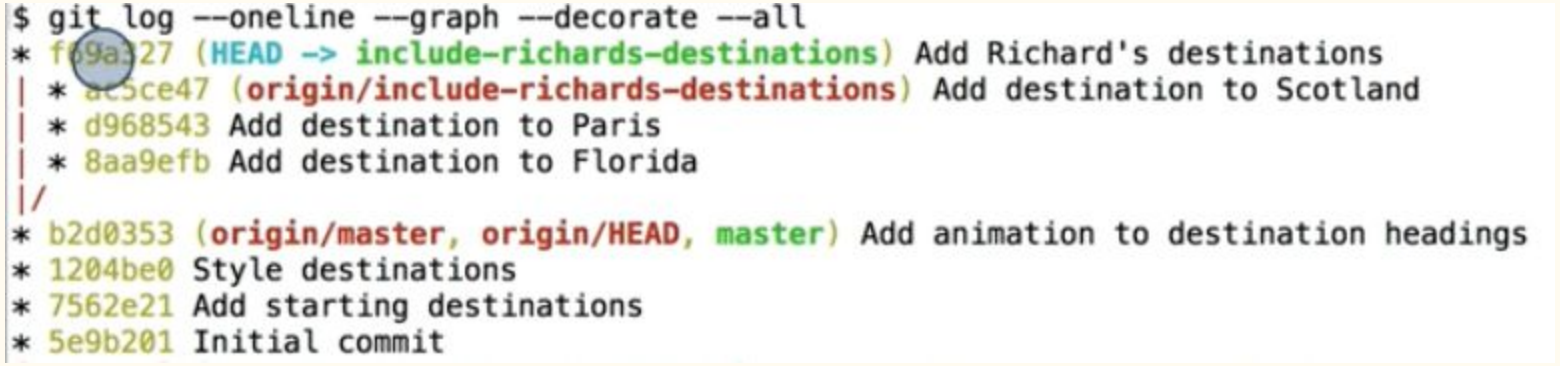

Atom File Edit View Selection Find Packages Window Help
git-rebase-todo — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git/rebase-merge
rebase-merge
git-rebase-todo
1 pick 8aa9efb Add destination to Florida
2 s d968543 Add destination to Paris
3 s ac5ce47 Add destination to Scotland
4
5 # Rebase b2d0353..ac5ce47 onto b2d0353 (3 commands)
6 #
7 # Commands:
8 # p, pick = use commit
9 # r, reword = use commit, but edit the commit message
10 # e, edit = use commit, but stop for amending
11 # s, squash = use commit, but meld into previous commit
12 # f, fixup = like "squash", but discard this commit's log message
13 # x, exec = run command (the rest of the line) using shell
14 # d, drop = remove commit
15 #


Atom File Edit View Selection Find Packages Window Help
git-rebase-todo — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git/rebase-merge
rebase-merge
git-rebase-todo
1 r 8aa9efb Add destination to Florida
2 s d968543 Add destination to Paris
3 s ac5ce47 Add destination to Scotland
4
5 # Rebase b2d0353..ac5ce47 onto b2d0353 (3 commands)
6 #
7 # Commands:
8 # p, pick = use commit
9 # r, reword = use commit, but edit the commit message
10 # e, edit = use commit, but stop for amending
11 # s, squash = use commit, but meld into previous commit
12 # f, fixup = like "squash", but discard this commit's log message
13 # x, exec = run command (the rest of the line) using shell
14 # d, drop = remove commit
15 #


Atom File Edit View Selection Find Packages Window Help
COMMIT_EDITMSG — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git
.git
COMMIT_EDITMSG
Add Richard's destinations
Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.
#
Date: Tue Apr 11 17:53:06 2017 -0700
#
interactive rebase in progress; onto b2d0353
Last command done (1 command done):
r 8aa9efb Add destination to Florida
Next commands to do (2 remaining commands):
s d968543 Add destination to Paris
s ac5ce47 Add destination to Scotland
You are currently editing a commit while rebasing branch 'include-richards-destinatic
#
Changes to be committed:
modified: css/app.css
modified: index.html
#


Atom File Edit View Selection Find Packages Window Help
COMMIT_EDITMSG — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git
.git
COMMIT_EDITMS...
This is a combination of 3 commits.
This is the 1st commit message:
Add Richard's destinations
This is the commit message #2:
Add destination to Paris
This is the commit message #3:
Add destination to Scotland
Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.
#
Date: Tue Apr 11 17:53:06 2017 -0700
#
interactive rebase in progress; onto b2d0353


Atom File Edit View Selection Find Packages Window Help
COMMIT_EDITMSG — ~/Public/GitHub Course - Richard/Projects/course-collaboration-travel-plans/.git
COMMIT_EDITMSG
Add Richard's destinations
Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.
Date: Tue Apr 11 17:53:06 2017 -0700
interactive rebase in progress; onto b2d0353
Last commands done (3 commands done):
s d968543 Add destination to Paris
s ac5ce47 Add destination to Scotland
No commands remaining.
You are currently editing a commit while rebasing branch 'include-richards-destinatio
Changes to be committed:
modified: css/app.css
modified: index.html


$ git log --oneline --graph --decorate --all
* f69a327 (HEAD -> include-richards-destinations) Add Richard's destinations
| * ac5ce47 (origin/include-richards-destinations) Add destination to Scotland
| * d968543 Add destination to Paris
| * 8aa9efb Add destination to Florida
|/
* b2d0353 (origin/master, origin/HEAD, master) Add animation to destination headings
* 1204be0 Style destinations
* 7562e21 Add starting destinations
* 5e9b201 Initial commit

```
$ git push origin include-richards-destinations
To https://github.com/richardkalehoff/course-collaboration-travel-plans.git
 ! [rejected]        include-richards-destinations -> include-richards-destinations (non-fast-forward)
error: failed to push some refs to 'https://github.com/richardkalehoff/course-collaboration-travel-plans.
git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. Integrate the remote changes (e.g.
hint: 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

- Git push -f origin include-richards-destination

Rebase Command

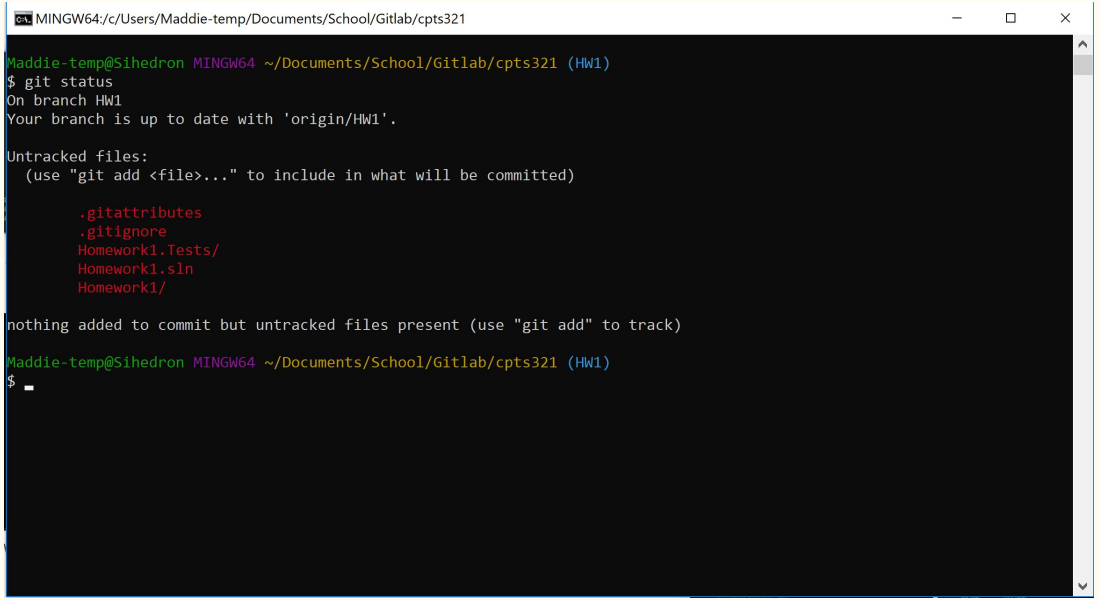
- Use **p** or **pick** - to keep the commit as is
- Use **r** or **reword** - to keep the commint's content but alter the commit message
- Use **e** or **edit** - to keep the commit's content but stop before committing so that you can:
  - Add new content or files
  - Remove content or files
  - Alter the content that was going to be committed
- Use **s** or **squash** - to combine commit's changes into the previous commit (the commit above)
- Use **f** or **fixup** - to combine commit's change into the previous one but drop the commit message
- Use **x** or **exec** - to run a shell command
- Use **d** or **drop** - to delete the commit

Tools - Bash, Plugins, and a GUI

Git Bash

What is it?

- A command-line interface to use Git
- Styled after Linux command lines
- “The standard” way to use Git



Git Bash - Pros and Cons

Pros:

- Extremely powerful tool
- Fast and flexible
- Similar to Linux shell
- Looks really cool

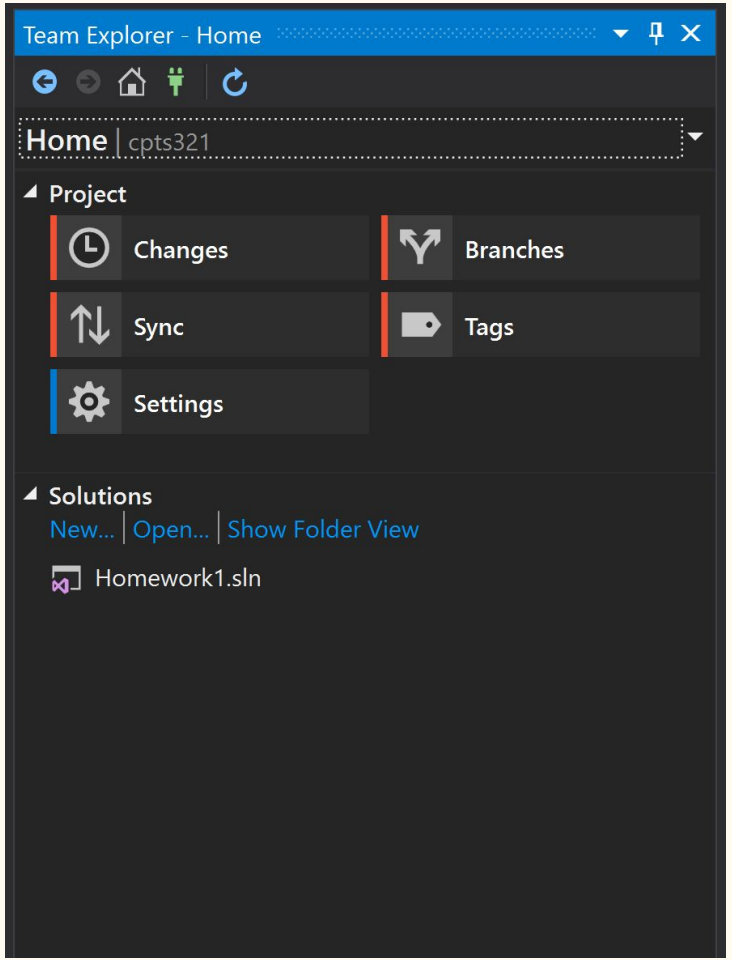
Cons:

- Very steep learning curve
- Not easy to visually parse
- Not user friendly

Visual Studio Team Explorer

What is it?

- An integrated tool to use Git
- Works with any Git service (Github, Gitlab, etc.)
- Everything in one area
- This student's go-to!



Team Explorer - Pros and Cons

Pros:

- Integrated with VS
- Simple, intuitive interface
- Can view everything graphically

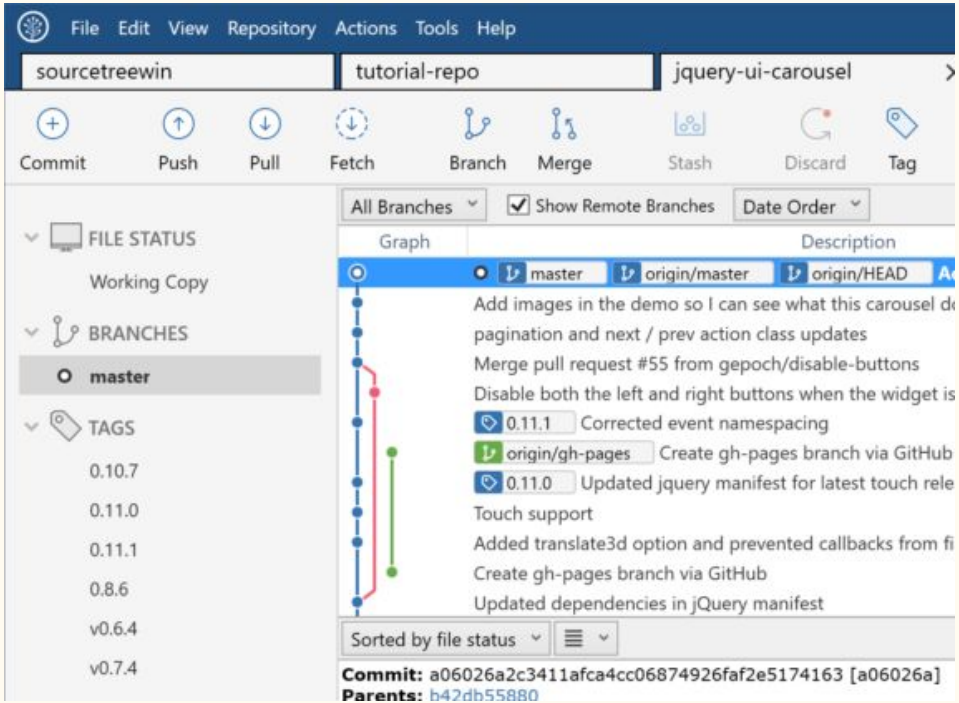
Cons:

- Only in VS, and not in VS Community
- Requires a bit of setup
- Takes a bit longer to use than Bash (clicking is slower than typing)

Other GUI applications

What is it?

- Lots of other third-party applications
- Provide an easy-to-use interface
- Popular ones include Sourcetree (pictured), Github desktop, SmartGit, and more



GUI Applications - Pros and Cons

Pros:

- Tons of choices
- GUIs are easier and more user friendly
- Language/IDE agnostic - use them regardless of the language

Cons:

- Have to install/set up
- Some cost money
- Yet another tool to learn

Expired Passwords

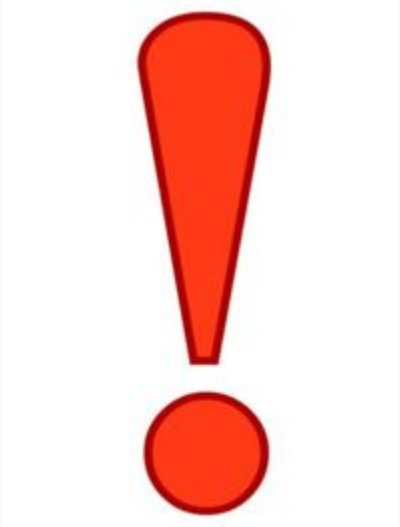
Your emotions:

- You’re angry
- You’re upset
- You’re sad
- What can you do?

You can call the help desk

And listen to a boring person on the other line help you fix it.

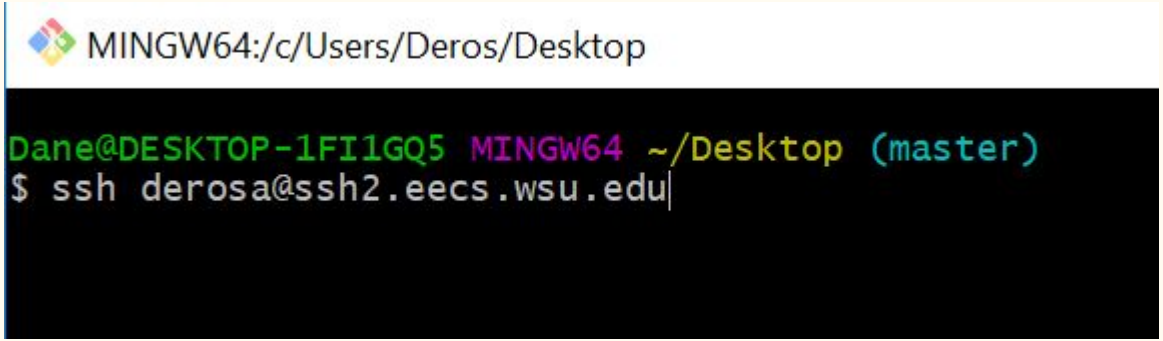
OR



You can reset it on your own.

To start off:

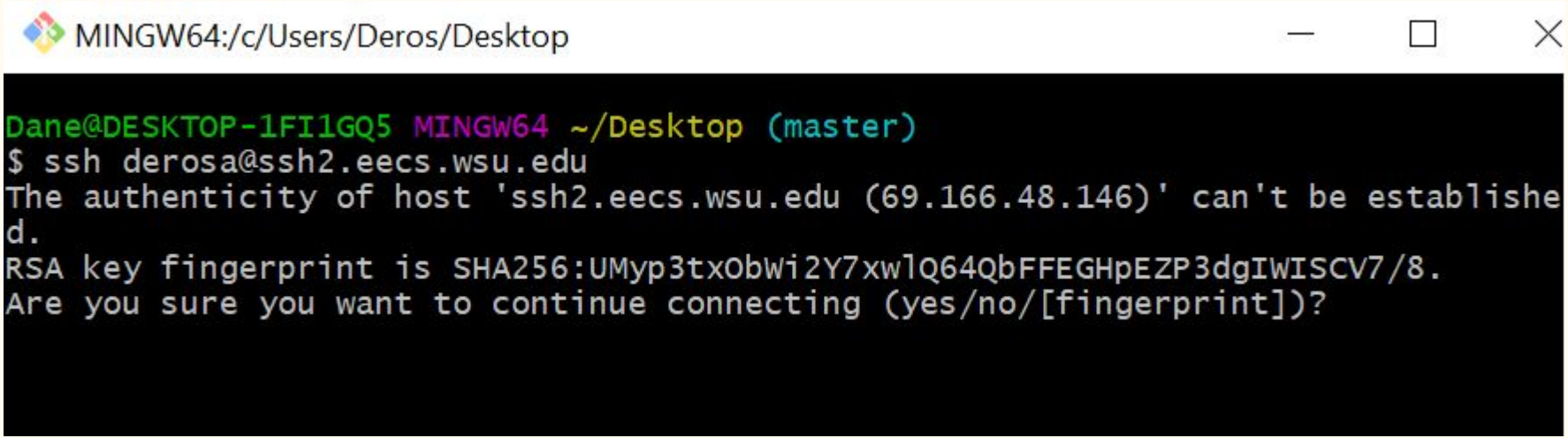
- Open Bash
- Type ssh
- First initial then last name which is also your gitlab username.
- ssh 1-10
- eecs.wsu.edu



RSA Fingerprint

Whoa!

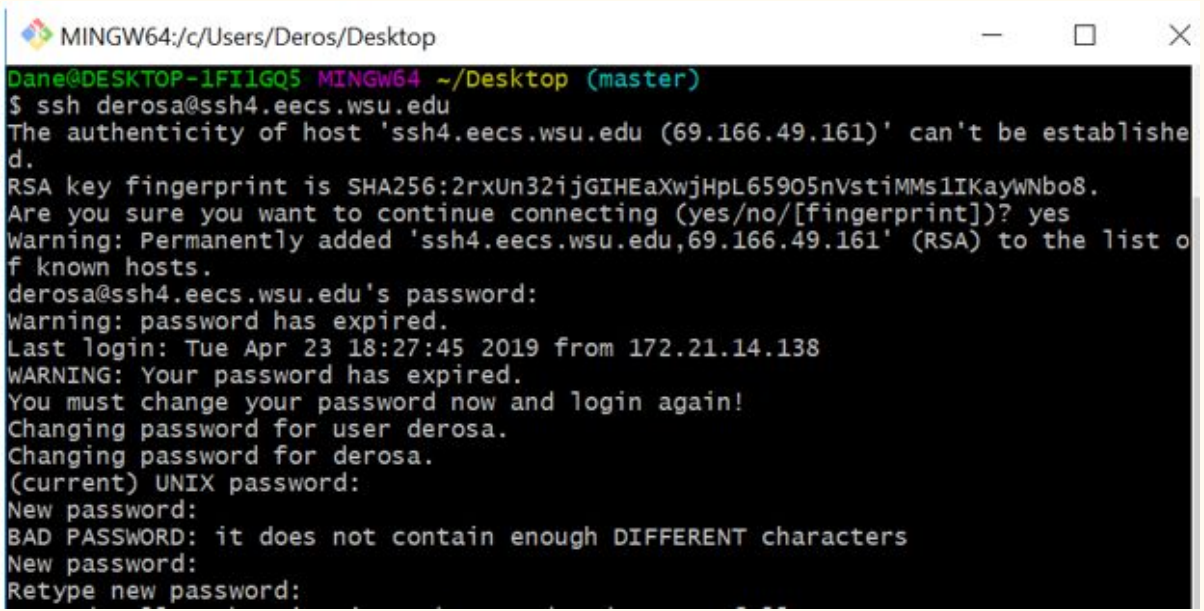
- Type: Yes



Changing your password

- Your current UNIX password is your previously known expired password.

- Enter your new password twice.



SUCCESS!

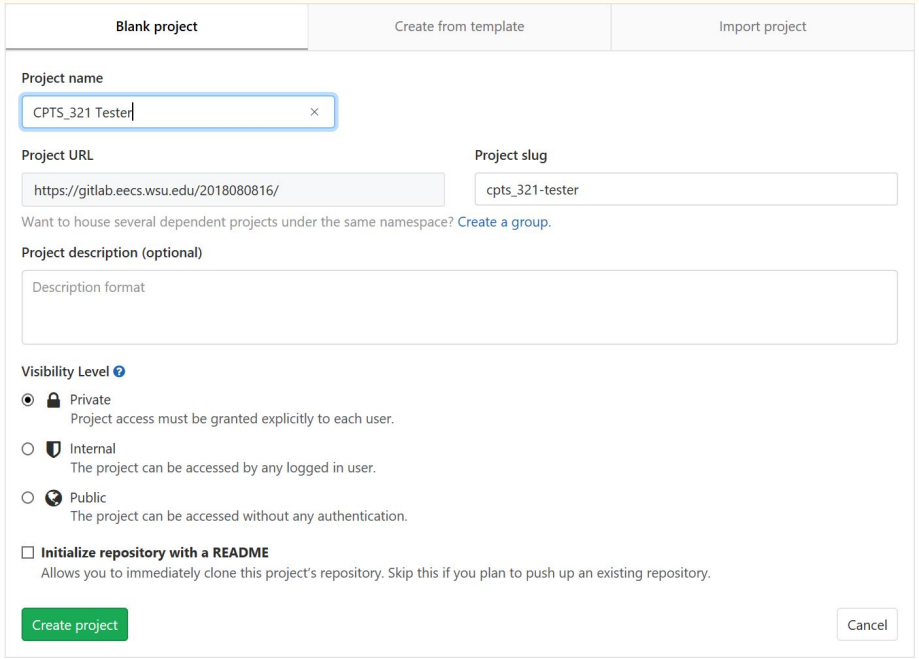
- We have changed our password and now things are fine but we are still behind on homework.

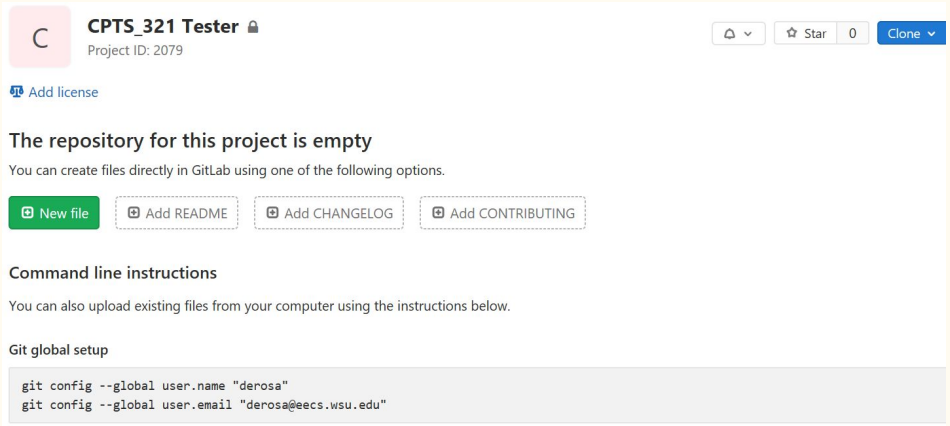

```
MINGW64:/c/Users/Deros/Desktop
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop (master)
$ ssh derosa@ssh4.eecs.wsu.edu
The authenticity of host 'ssh4.eecs.wsu.edu (69.166.49.161)' can't be establishe
d.
RSA key fingerprint is SHA256:2rxUn32ijGIHEaXwjHpL659O5nVstiMMs1IKayWNbo8.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ssh4.eecs.wsu.edu,69.166.49.161' (RSA) to the list o
f known hosts.
derosa@ssh4.eecs.wsu.edu's password:
Warning: password has expired.
Last login: Tue Apr 23 18:27:45 2019 from 172.21.14.138
WARNING: Your password has expired.
You must change your password now and login again!
Changing password for user derosa.
Changing password for derosa.
(current) UNIX password:
New password:
BAD PASSWORD: it does not contain enough DIFFERENT characters
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
Connection to ssh4.eecs.wsu.edu closed.
```

Let’s put it all together

Step 1: Setup Repo

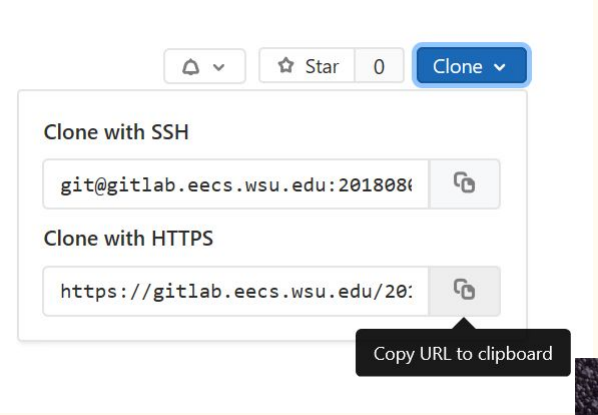
Create a new project

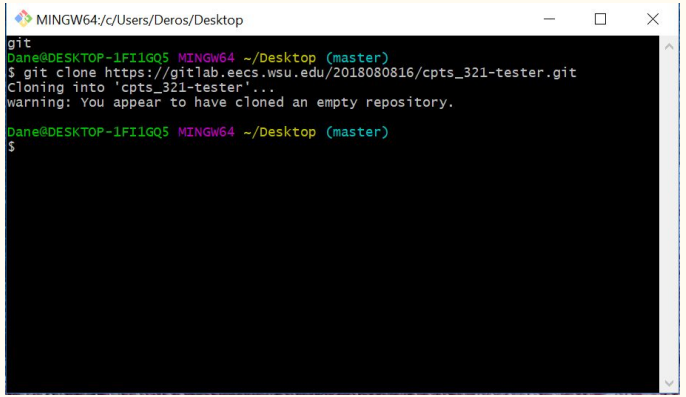


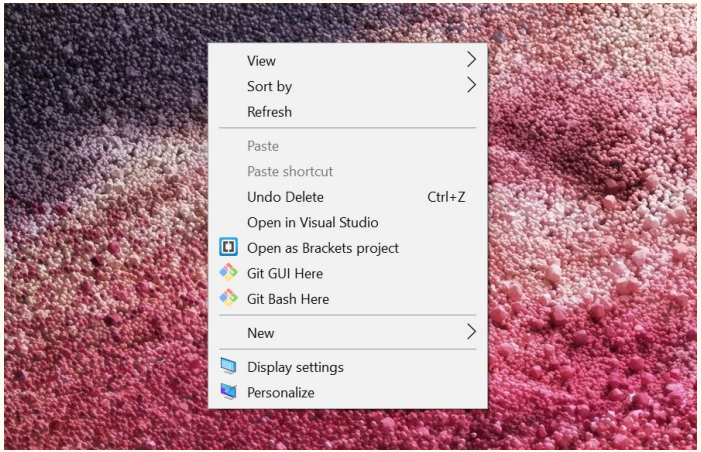


Step 2: Clone Repo

Click Clone: and we are using HTTPS







Step 3: Actions

Move Hello World into folder.

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Hello_World_One/
        Test/

nothing added to commit but untracked files present (use "git add" to track)

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git add Hello_World_One

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git commit -m 'Uploading For First Time'
```

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git push
Enumerating objects: 30, done.
Counting objects: 100% (30/30), done.
Delta compression using up to 8 threads
Compressing objects: 100% (22/22), done.
Writing objects: 100% (29/29), 182.05 KiB | 1.65 MiB/s, done.
Total 29 (delta 1), reused 0 (delta 0)
To https://gitlab.eecs.wsu.edu/2018080816/cpts_321-tester.git
   db242f4..52c33ce  master -> master
```

Step 4: Editing

We edited Hello World One and Pushed it back

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git add Hello_World_One

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git commit -m 'Added another Hello World'
[master 2434a65] Added another Hello World
 9 files changed, 10 insertions(+), 10 deletions(-)
 rewrite Hello_World_One/.vs/Hello_World_One/v16/.suo (60%)
 rewrite Hello_World_One/Hello_World_One/obj/Debug/netcoreapp2.1/Hello_World_One
.csprojAssemblyReference.cache (99%)

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git push
Enumerating objects: 42, done.
Counting objects: 100% (42/42), done.
Delta compression using up to 8 threads
Compressing objects: 100% (18/18), done.
Writing objects: 100% (22/22), 4.34 KiB | 126.00 KiB/s, done.
Total 22 (delta 9), reused 0 (delta 0)
To https://gitlab.eecs.wsu.edu/2018080816/cpts_321-tester.git
   52c33ce..2434a65  master -> master
```

Step 5: Create & Push to Branch

Let’s open bash in our folder again

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git pull
Already up to date.

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (master)
$ git checkout -b 'Demo_Tester'
Switched to a new branch 'Demo_Tester'
```

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (Demo_Tester)
$ git status
On branch Demo_Tester
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Test/

nothing added to commit but untracked files present (use "git add" to track)

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (Demo_Tester)
$ git add Test

Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (Demo_Tester)
$ git commit -m 'Uploading Test to Demo_Tester'
[Demo_Tester b6fdc1b] Uploading Test to Demo_Tester
 21 files changed, 1248 insertions(+)
```

```
Dane@DESKTOP-1FI1GQ5 MINGW64 ~/Desktop/cpts_321-tester (Demo_Tester)
$ git push --set-upstream origin Demo_Tester
Enumerating objects: 37, done.
Counting objects: 100% (37/37), done.
Delta compression using up to 8 threads
Compressing objects: 100% (28/28), done.
Writing objects: 100% (36/36), 173.13 KiB | 1.37 MiB/s, done.
Total 36 (delta 2), reused 0 (delta 0)
remote:
remote: To create a merge request for Demo_Tester, visit:
remote:   https://gitlab.eecs.wsu.edu/2018080816/cpts_321-tester/merge_requests/
new?merge_request%5Bsource_branch%5D=Demo_Tester
remote:
To https://gitlab.eecs.wsu.edu/2018080816/cpts_321-tester.git
   2434a65..b6fdc1b  Demo_Tester -> Demo_Tester
Branch 'Demo_Tester' set up to track remote branch 'Demo_Tester' from 'origin'.
```