THE EPIC GIT

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In case of fire

1. git commit
2. git push
3. leave building
A LITTLE BACK-STORY
THE REPO DOES NOT FORGET
STEP 1: GIT FILTER-BRANCH

```
$ git filter-branch --index-filter 'git rm -rf --cached --ignore-unmatch FOLDER_NAME' --prune-empty --tag-name-filter cat -- --all
```

Hey, it's a pretty long line. ¯\_(ツ)_/¯
The **filter-branch** command allows you to rewrite the Git history

- Can apply filters to modify information about each commit
- **--index-filter** rewrites the index
- Possible to use **--tree-filter** but **--index-filter** is faster because it does not check out the tree
'git rm -rf --cached --ignore-unmatch

- Used with **--index-filter** for optimal results
- Removes file(s) recursively (**rm**) and forcefully (**-rf**)
- **--cached** is used to unstage and remove paths from the index
- **--ignore-unmatch** will prevent the command from failing if the file is absent from the tree of a commit
--prune-empty  --tag-name-filter  cat

- **--prune-empty** allows the filter-branch command to ignore empty commits generated by the filters applied
- **-tag-name-filter  cat** will update the relevant tags by rewriting them
-- --all

- -- simply separates the filter-branch options from the revision options
- --all will rewrite ALL branches and tags
- Official documentation for `git filter-branch`
**STEP 2: GIT PRUNE**

```bash
git prune
```

- Prunes all unreachable objects from the object database
- Removes objects that are no longer being referenced
- **Official documentation for** *git prune*
STEP 3: REMOVE OLD REFERENCES

```
rm -rf .git/refs/original/
```

- Removes any old references to the unwanted folder/file
- Branches, remote-tracking branches, and tags are all references to commits
- All references are named with a slash-separated path name starting with "refs"
STEP 4: GIT REFLOG

```bash
git reflog expire --expire=now --all
```

- To manage reference log information
- `expire` is used to prune older reflog entries
- `--expire=now` specifies how far behind these older entries should be, in this case, right now
- Official documentation for `git reflog`
STEP 5: GIT GC

```bash
git gc --prune=now
```

- Cleans up unnecessary files and optimises the local repository
- `--prune=now` prunes objects older than the date specified, in this case, right now
- Official documentation for `git gc`
STEP 6: CLONE TO NEW REPO

```bash
git clone --no-hardlinks file://PATH/TEMP
```

- Gives a "clean" repository with the history rewritten to remove target folder, with all other commits intact
HOUSTON, WE GOT A PROBLEM

• Force pushing these changes up to remote didn't work
• Create a new remote repository and push the clean repo up there
• Asked everyone to change their remote origin
• Only works if nobody pulled from the time you screwed up and the time you fixed things
TO FIND OUT MORE...

- BFG Repo-Cleaner
- Official Git documentation
- The Git Community Book
THE END

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