An Introduction to GitHub for Librarians and Archivists

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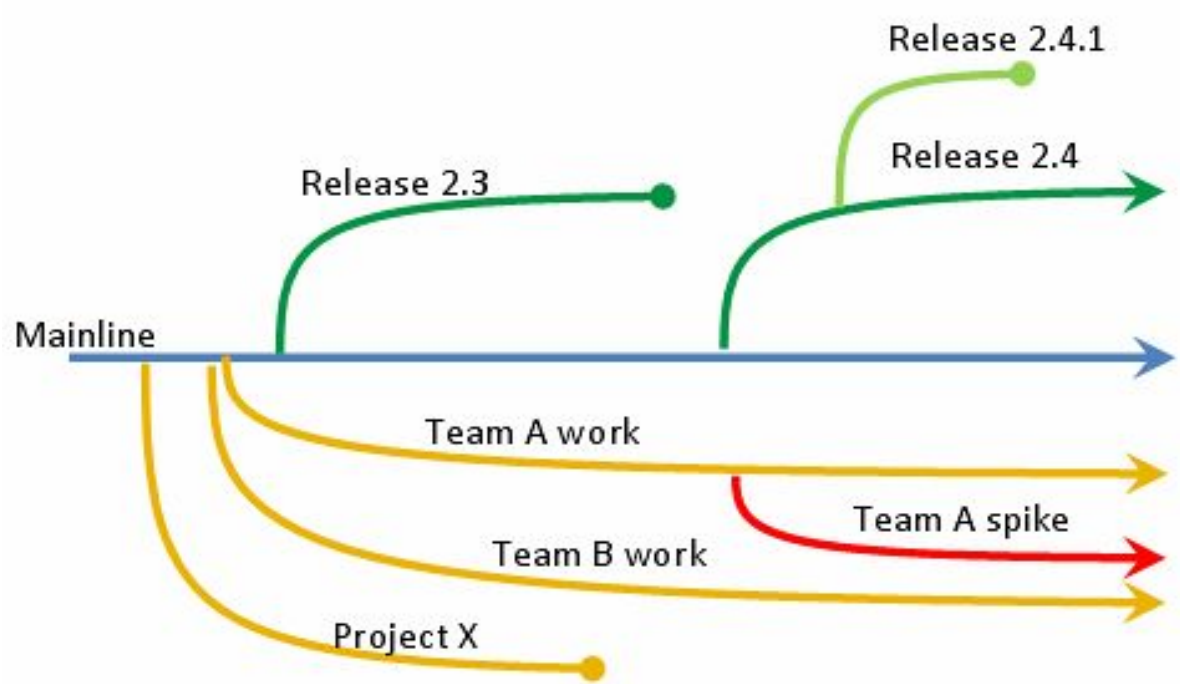
What is GitHub?

- Software development platform
- Hosting for code/applications
- “Social network”
- Both personal and enterprise service
- Web-based, graphical interface for git

Git and Version Control

- Command-line software developed by Linus Torvalds in 2005 for development of the Linux kernel
- Tracks and saves all changes to a given directory
- Snapshot-based
- Can be used locally or over a network
- Supports non-linear development



https://www.infoq.com/resource/articles/agile-version-control/en/resources/image13.gif

So what's the problem??

https://xkcd.com/1597/

Repositories

- “Repo”
- The folder/directory that contains your project
- Can be hosted locally or remotely

Trending in open source

See what the GitHub community is most excited about today.

Repositories | Developers

Trending: **today**

gurugio / **lowlevelprogramming-university**

Star

How to be low-level programmer

★ 2,263 ⑂ 104 Built by

★ 1,767 stars today

freeCodeCamp / **freeCodeCamp**

Star

The https://freeCodeCamp.com open source codebase and curriculum. Learn to code and help nonprofits.

JavaScript ★ 257,527 ⑂ 10,916 Built by

★ 602 stars today

prettier / **prettier**

Star

Prettier is an opinionated JavaScript formatter.

JavaScript ★ 7,550 ⑂ 245 Built by

★ 561 stars today

tootsuite / **mastodon**

Star

A GNU Social-compatible microblogging server

Ruby ★ 6,309 ⑂ 897 Built by

★ 499 stars today

All languages

Unknown languages

C++

HTML

Java

JavaScript

PHP

Python

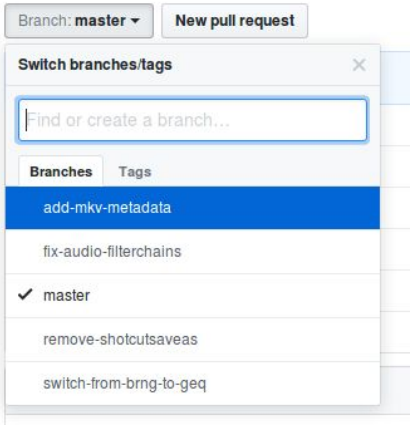
Ruby

Other: **Languages**

ProTip! Looking for most starred repositories? Try this search

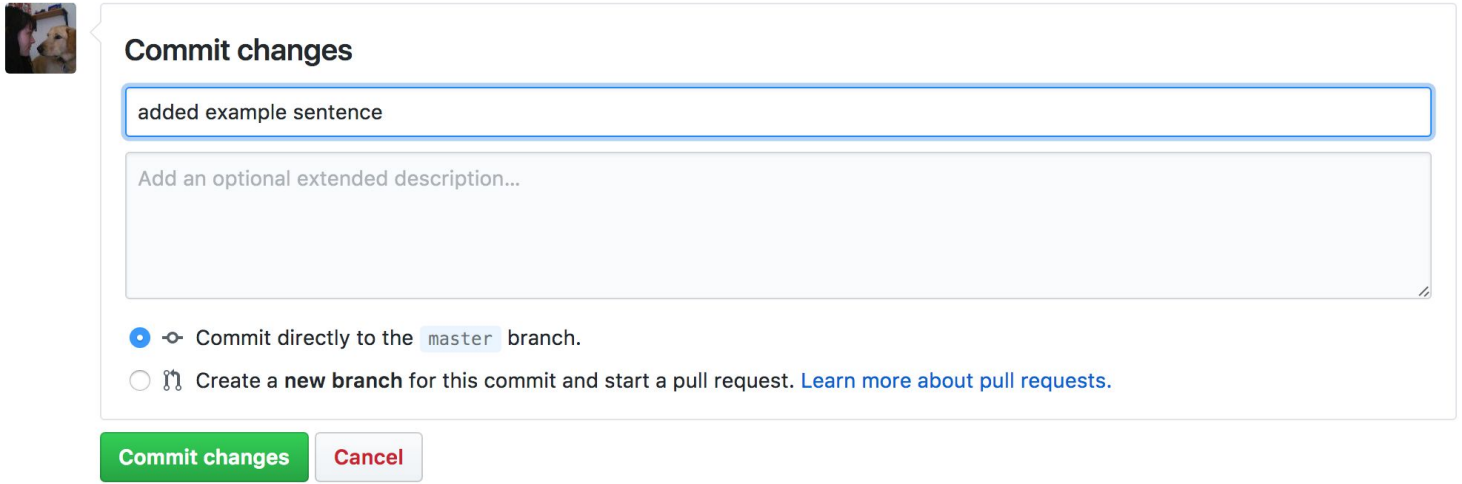
Branches

- Individual versions of the repository - within the repository
- “Master” branch: front-facing, most stable (the version of a project or app others will likely download/use/edit)
- All editing or changes to codebase usually occur in branches



Commit

- Updating the codebase with the changes you've made, either to the master branch or via a pull request from another branch or a forked repository

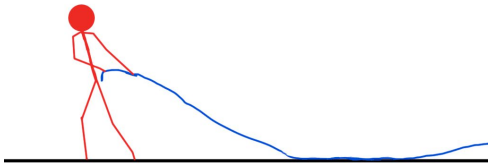


Forking

- A copy of a repository
- When you “fork” a repo, you are able to make changes to the code without it affecting the codebase
- Forks are useful for proposing changes to someone else’s code, or build your own project using someone else’s code as the starting point.

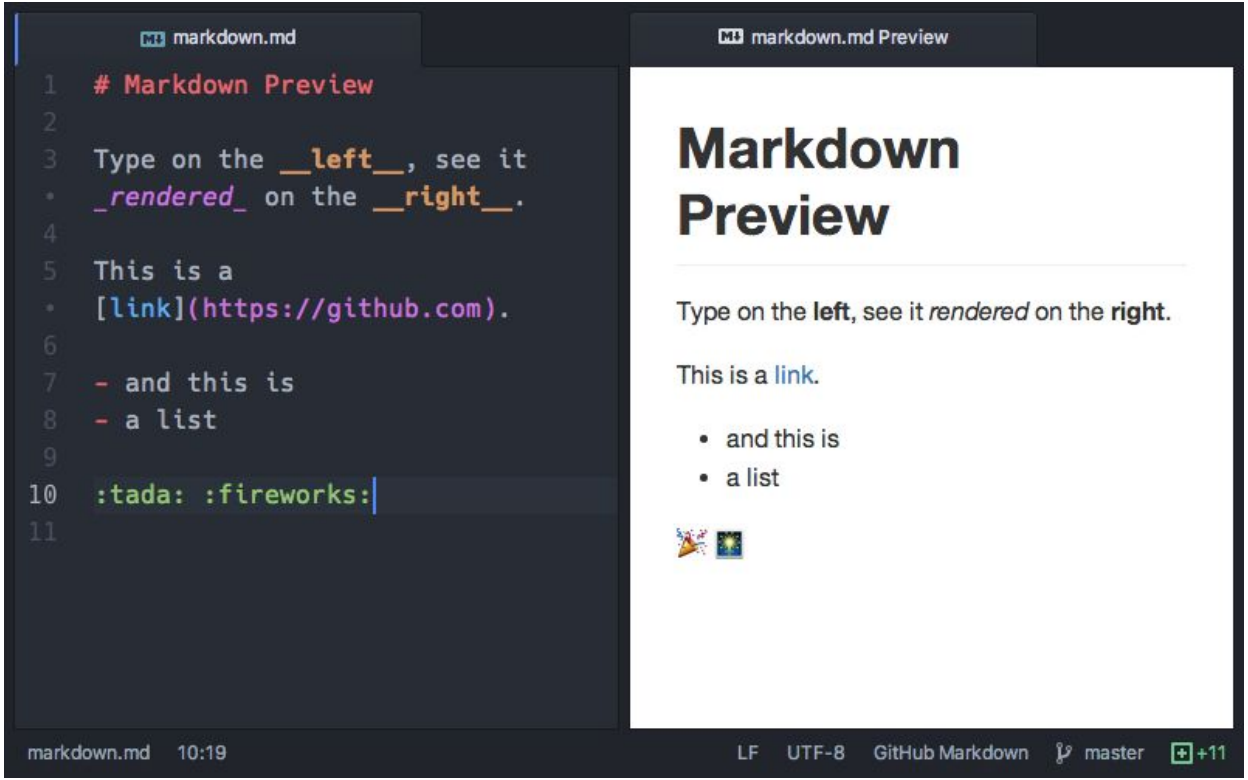
Pull Request

- Form of communication and notification on GitHub when working in branches or forks
- Tells others about changes you've proposed to the code
- Method of integrating changes to the code
- You create the pull request and someone else merges your pull request into the code, assuming there are no conflicts
- Mostly useful when editing code using the GitHub Desktop application



Markdown

- A plain text formatting syntax
- A software tool that converts plain text formatting to HTML
- Used on GitHub to structure text-based files - documentation, README’s, are some examples
- Relatively straightforward and simple once you remember the important symbols and rules


markdown.md
markdown.md Preview
Markdown Preview
Type on the __left__, see it _rendered_ on the __right__.
This is a [link](https://github.com).
- and this is
- a list
:tada: :fireworks:
Markdown Preview
Type on the left, see it rendered on the right.
This is a link.
and this is
a list
markdown.md 10:19
LF UTF-8 GitHub Markdown master +11

Examples of Internal and External Documentation

https://github.com/yorkulibraries/preservation_documentation

https://github.com/mediamicroservices/mm

https://github.com/CarnegieHall

Test Repos

https://github.com/dinahhandel/METRO_testingrepo

https://github.com/EG-tech/talking-tech

GitHub Desktop

- Stand-alone “staging ground” application
- Syncs local repositories with your repositories hosted on GitHub
- Pushes commits and pull requests to GitHub without going through the web interface
- Gives you the flexibility to edit and manipulate files/code on GitHub without going through the web interface, but is not an editor itself

Resources

Introductions

- "Non-technical person's guide to becoming an open source contributor via Github", Ashley Blewer
- "GitHub for Beginners: Don't Get Scared, Get Started", Lauren Orsini
- "Learning GitHub (or, if I can do it, you can too!)", Andrew Weaver

In-Depth Guides

- GitHub Guides
- git - the simple guide
- Markdown Syntax
- Open Source Guides

Supplementary Software

- GitBook (documentation, "ebooks")
- Jekyll (blogging/personal sites)
- Academic Pages (creating online CVs)