Electronics for the Rest of Us!

INSPIRE 1A03 | Spring 2020 | Jay Brodeur

GitHub, Markdown, GitHub Pages

GitHub Pages | Learning Markdown

Objectives:

- Create a GitHub repository
- Add some content using Markdown
- Turn that content into a static webpage using GitHub Pages & jekyll
- Customize the web pages
- Experiment with embedded html code

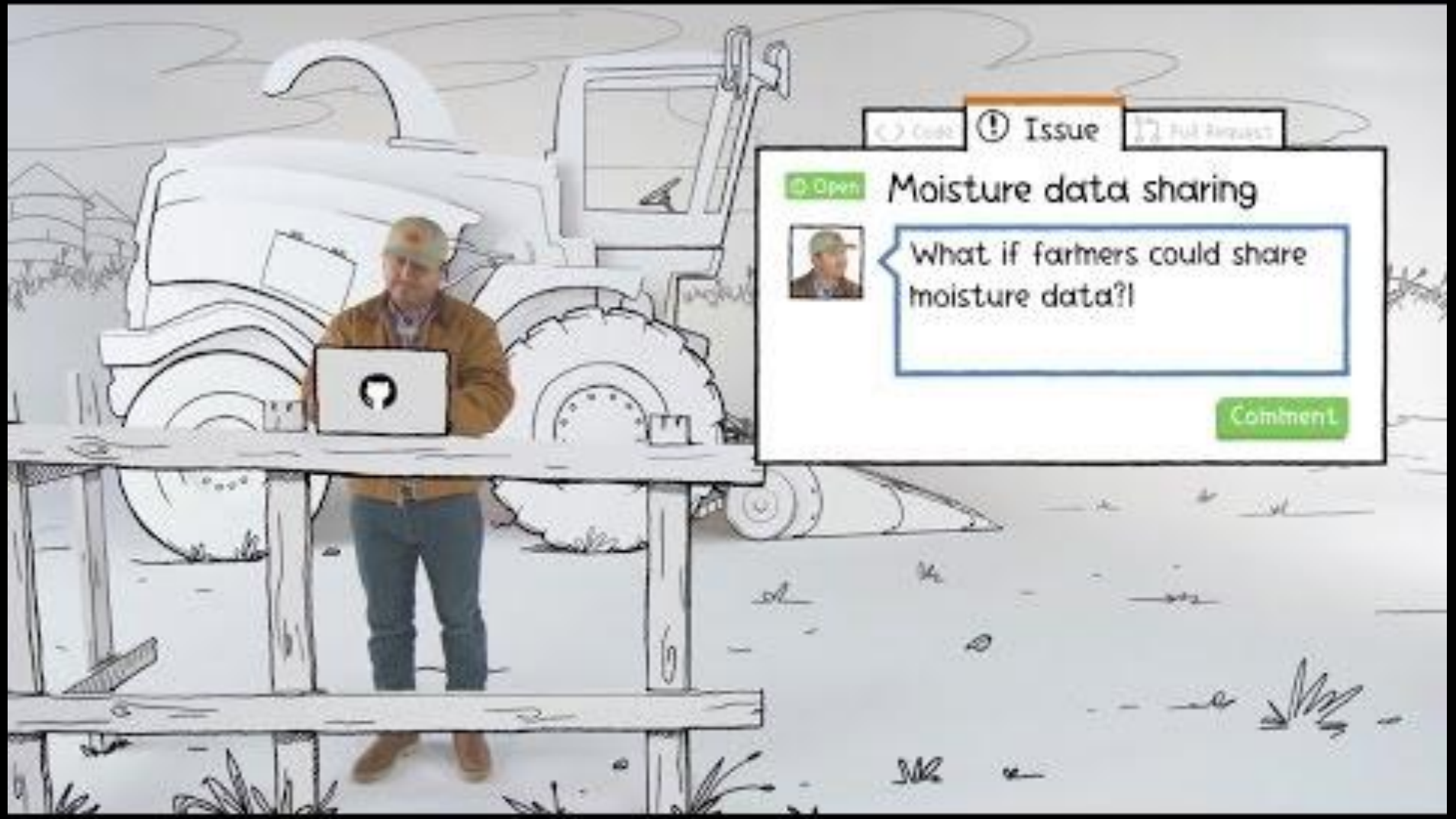
What you need to know

GitHub

In this module, you'll be using GitHub to store your code, document your progress, and share it with others who may want to see and reuse what you've done.

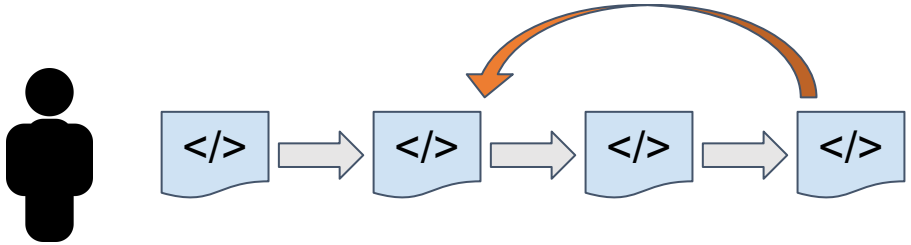
What is GitHub? Why use it?

See the next slide for a (very) high-level overview of GitHub

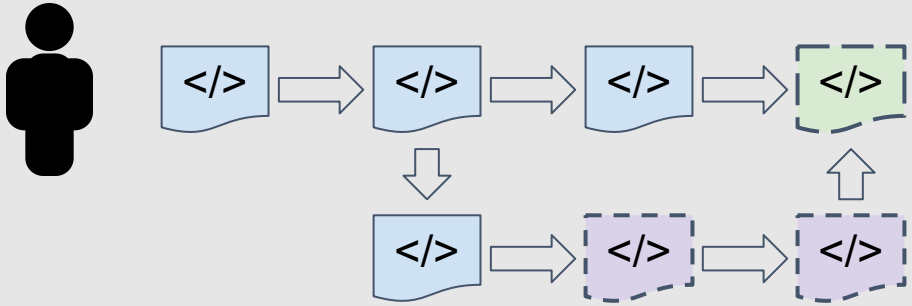


https://youtu.be/w3jLJU7DT5E

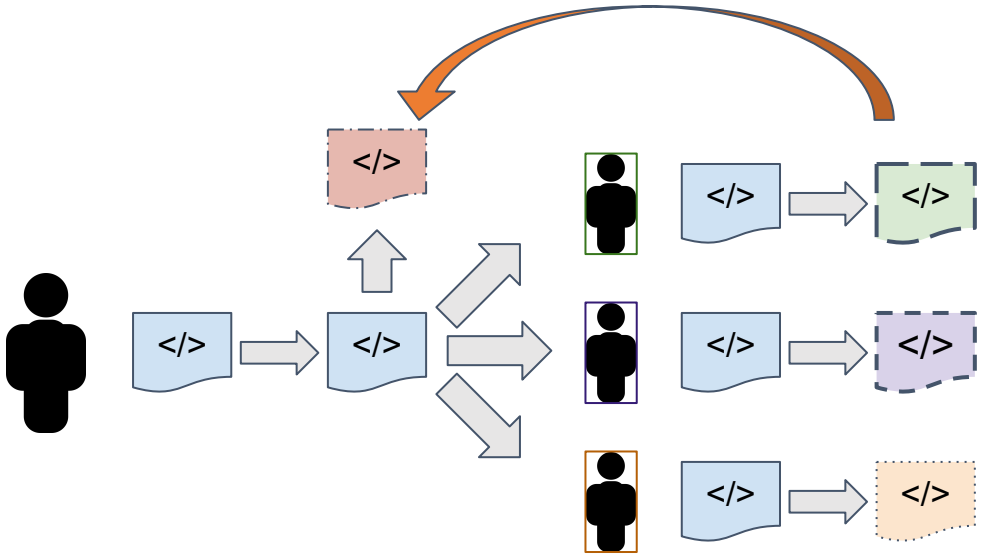
Essentially, GitHub allows you to …



Manage versions, revert to previous ones



Create ‘branches’ to develop/test new code versions
Merge changes back to the main branch when ready



Disseminate & share
Enable others to modify / contribute to your work
Manage contributions; decide what gets merged
Merge changes & control development

git, GitHub, GitHub Desktop

GitHub is a web-based hosting service for version control using git. It is mostly used for computer code. It offers all of the distributed version control and source code management functionality of git as well as adding its own features.

git is a free and open source ***distributed version control system*** designed to handle everything from small to very large projects with speed and efficiency.

GitHub Desktop is an application that allows you to interact with GitHub (and git, if installed) using a desktop interface.

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In this module, we'll use ***GitHub*** only, and we will do everything through a web browser.

However, feel free to experiment with **git** and **GitHub Desktop,** if you're interested. You can find a link to other workshops at the end of this presentation.

Why use distributed version control?

Distributed version control software allows you (and your collaborators) to:

- Track, compare, and revert changes
- Enable and manage collaborative development
- Share open materials and gather feedback
- Backup your work to an external repository

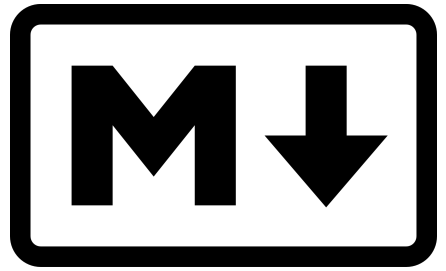
Use it to manage:

- Software / code — e.g. Openrefine: https://github.com/OpenRefine/OpenRefine
- Data — e.g. OpenIndexMaps: https://github.com/OpenIndexMaps
- Books — e.g. Git from the Bottom Up: https://github.com/jwiegley/git-from-the-bottom-up
- Websites — e.g. This module's webpage content: https://github.com/inspire-1a03/eru-2020

Markdown

GitHub uses Markdown (a very lightweight markup language) to improve formatting of documents, while leaving the plain document readable.

Generally, **Markdown** is a way to style text on the web. You control the display of the document; formatting words as bold or italic, adding images, and creating lists are just a few of the things you can do with Markdown. Mostly, Markdown is just regular text with a few non-alphabetic characters thrown in, like # or *.



You can see Markdown in action in this modules webpages.

- Plain-text markdown like this is entered in the text editor.
- That text is rendered like this on a site like GitHub

Many other sites (like Reddit and Trello, as examples) use Markdown to format text

Learn more: https://guides.github.com/features/mastering-markdown/

GitHub Pages

"**GitHub Pages** is a static site hosting service that takes HTML, CSS, and JavaScript files straight from a repository on GitHub, optionally runs the files through a build process, and publishes a website. You can see examples of GitHub Pages sites in the GitHub Pages examples collection."

- https://help.github.com/en/github/working-with-github-pages/about-github-pages

GitHub pages also allows you to create webpages from markdown files, using a built-in software called jekyll.

- e.g. This module's website is created entirely from markdown

In this module, you'll use Markdown to create your project page, and let jekyll work (in the background) to turn it into a webpage.

Why / When Static Web pages?

- Simplicity
- No database
- No CMS (content management system)
- Fast
- Minimal
- Design control
- Security
- Convenient hosting

Let’s get started!

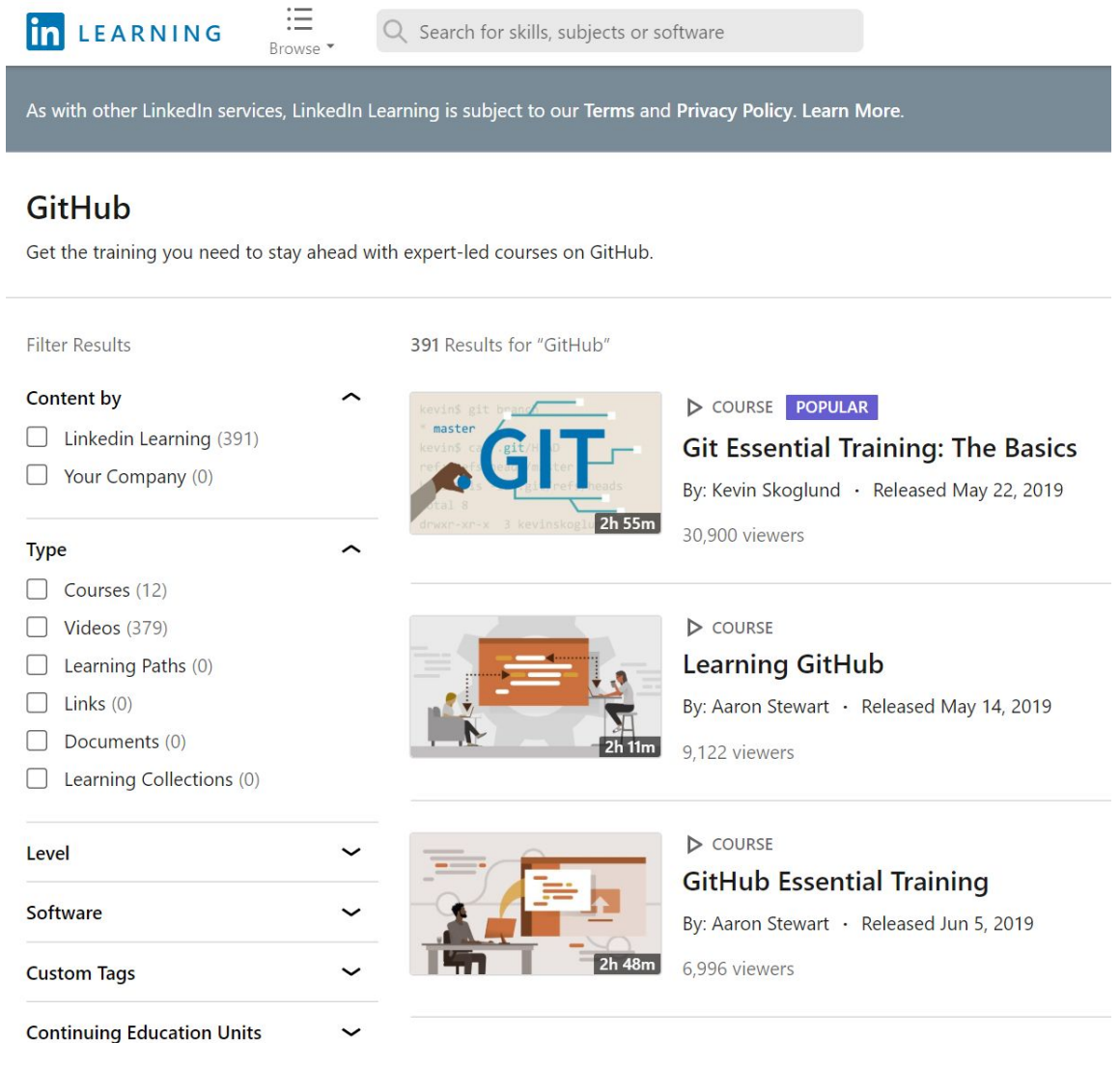
Go to inspire-1a03.github.io/eru-2020 (u.mcmaster.ca/eru-home)
and navigate to Part 2 in the Day 1 & 2 worksheet

Additional information about version control

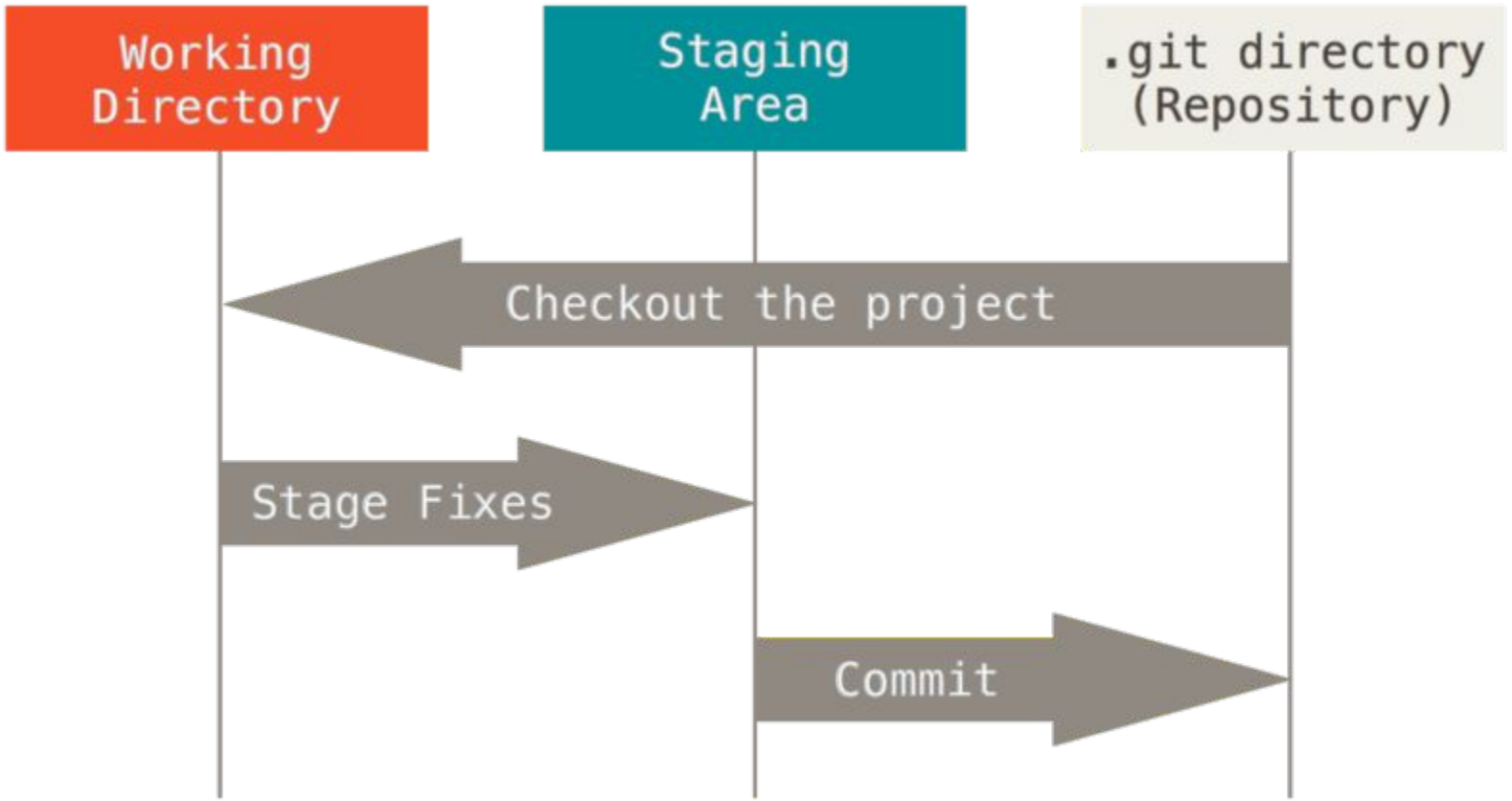
Learn more with LinkedIn Learning

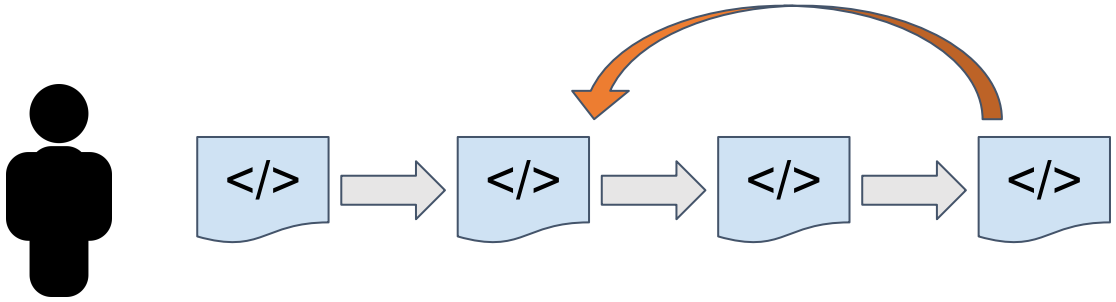
mcmaster.ca/uts/linkedinlearning/

- ***Free to all McMaster students, staff, faculty***



How git works





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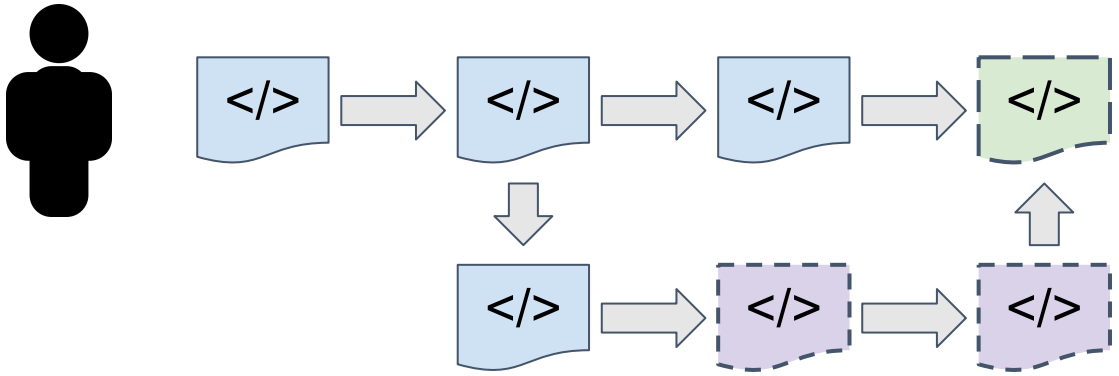
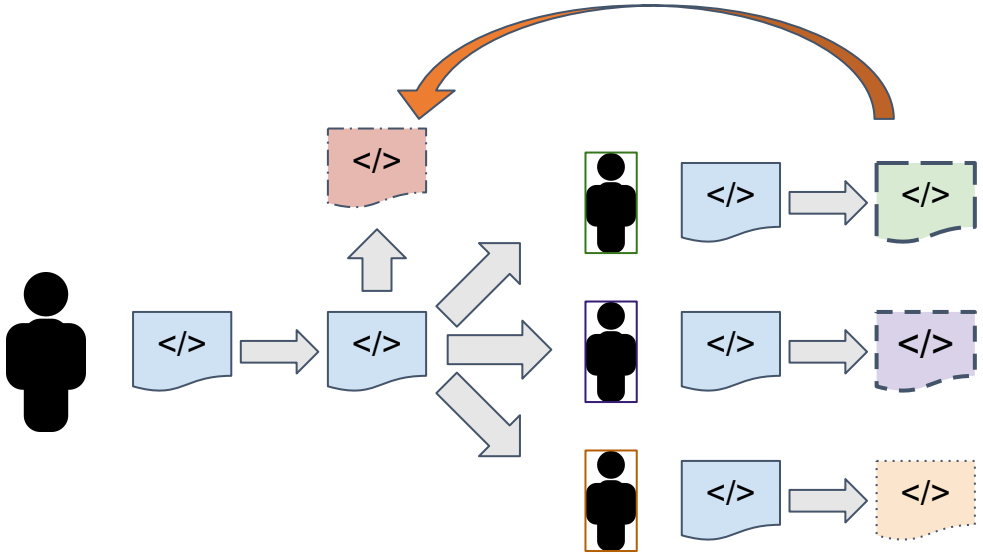


Branch versions
Merge changes



Disseminate & share
Enable modification
Manage contributions
Merge changes & manage development

In case you're interested (after this module is over)

Follow along with this workshop using GitHub, GitHub Desktop, and GitHub Pages:

https://jasonbrodeur.github.io/DASH-githubpages/