



Lab 9

CS50 for MBAs

carterzenke.me/lab

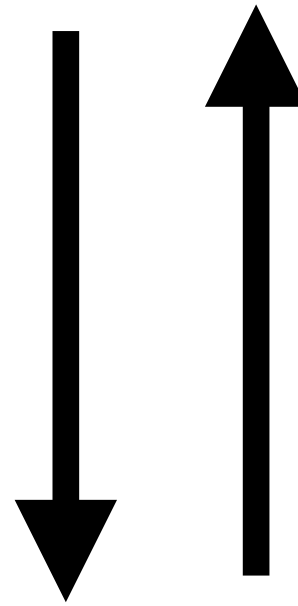
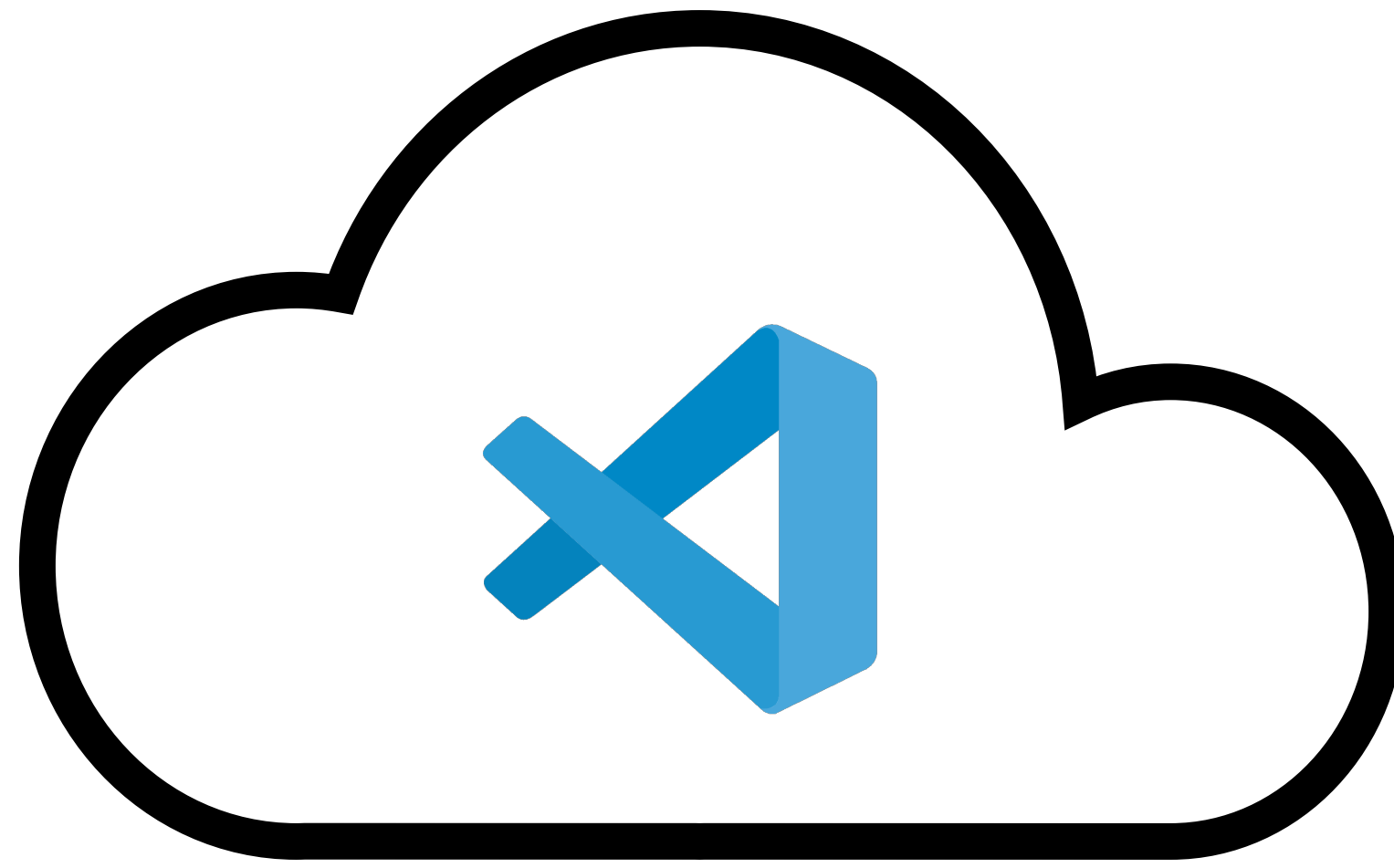
Browser window showing the profile page for Carter Zenke at carterzenke.me. The page includes a profile picture, name, bio, and a list of teaching roles for Spring 2023.

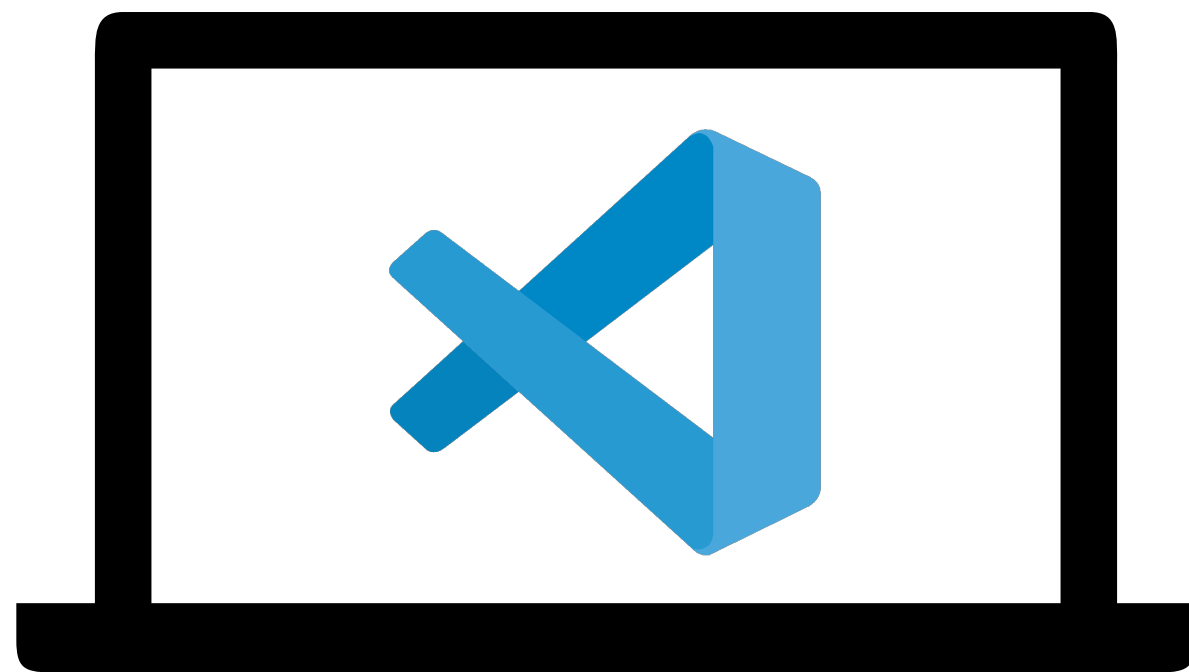
Carter Zenke
Computer science for everyone.

Teaching | Videos

Spring 2023

- Introduction to Computer Science (CS50)**, Harvard College
Preceptor
- Computer Science for Managers (HBS 7475 & 7473)**, Harvard Business School
Preceptor





Today

- Prepare your computer with **key tools for local development**
- Use those tools to **create and "deploy" a simple web page**, using GitHub Pages

Local Development

Key Software

- **Visual Studio Code**, to write and edit code
- **Python Interpreter**, to run Python code
- **Git and GitHub**, to track changes to files and sync your code on the internet

Git and GitHub

Scenario

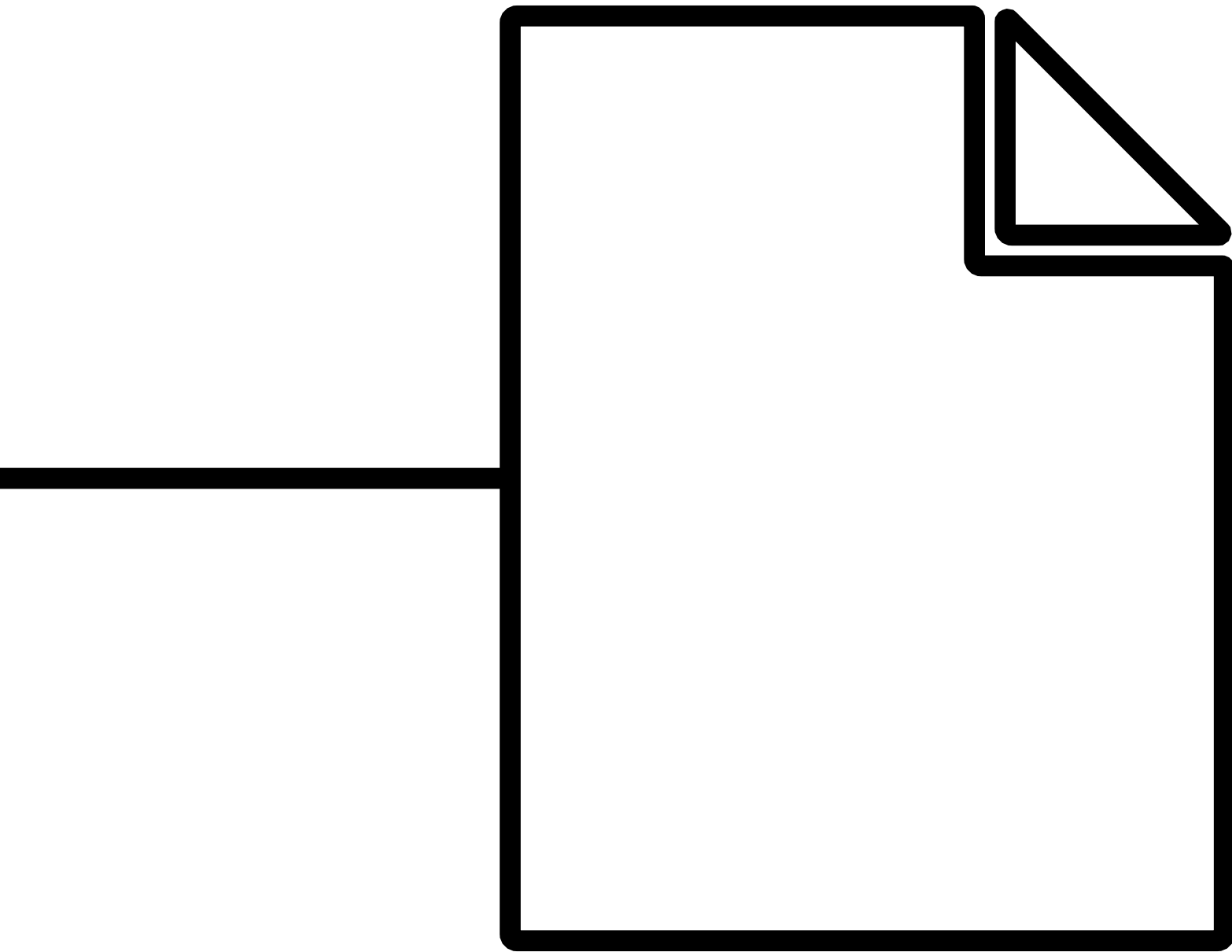
You're working on a CS50 assignment, **survey**.

Some parts work perfectly! You can write and read data from the CSV of responses.

But, while adding a SQLite database, **you break some of the code that worked before.**

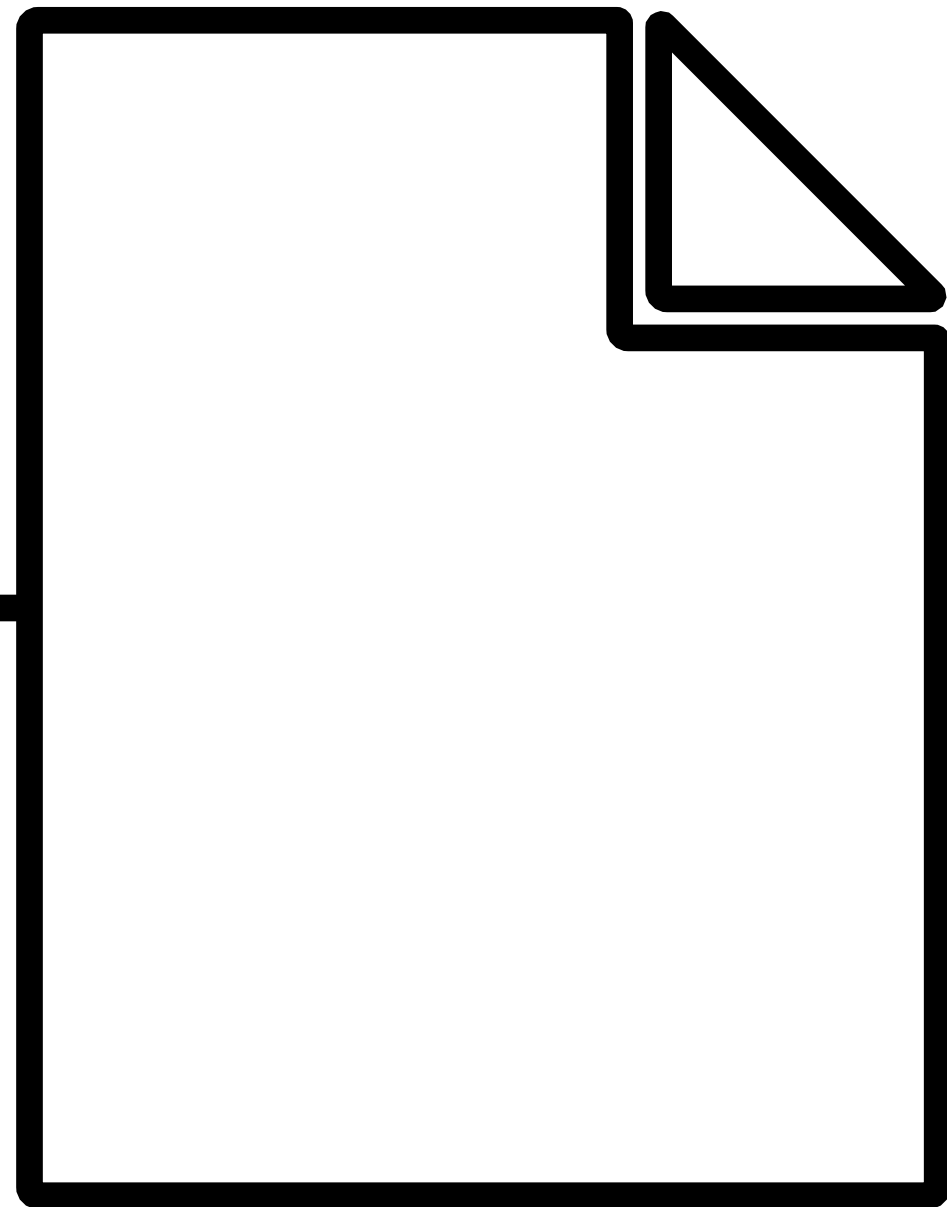
In hindsight, what could you have done to prevent this?

Keeping track of changes

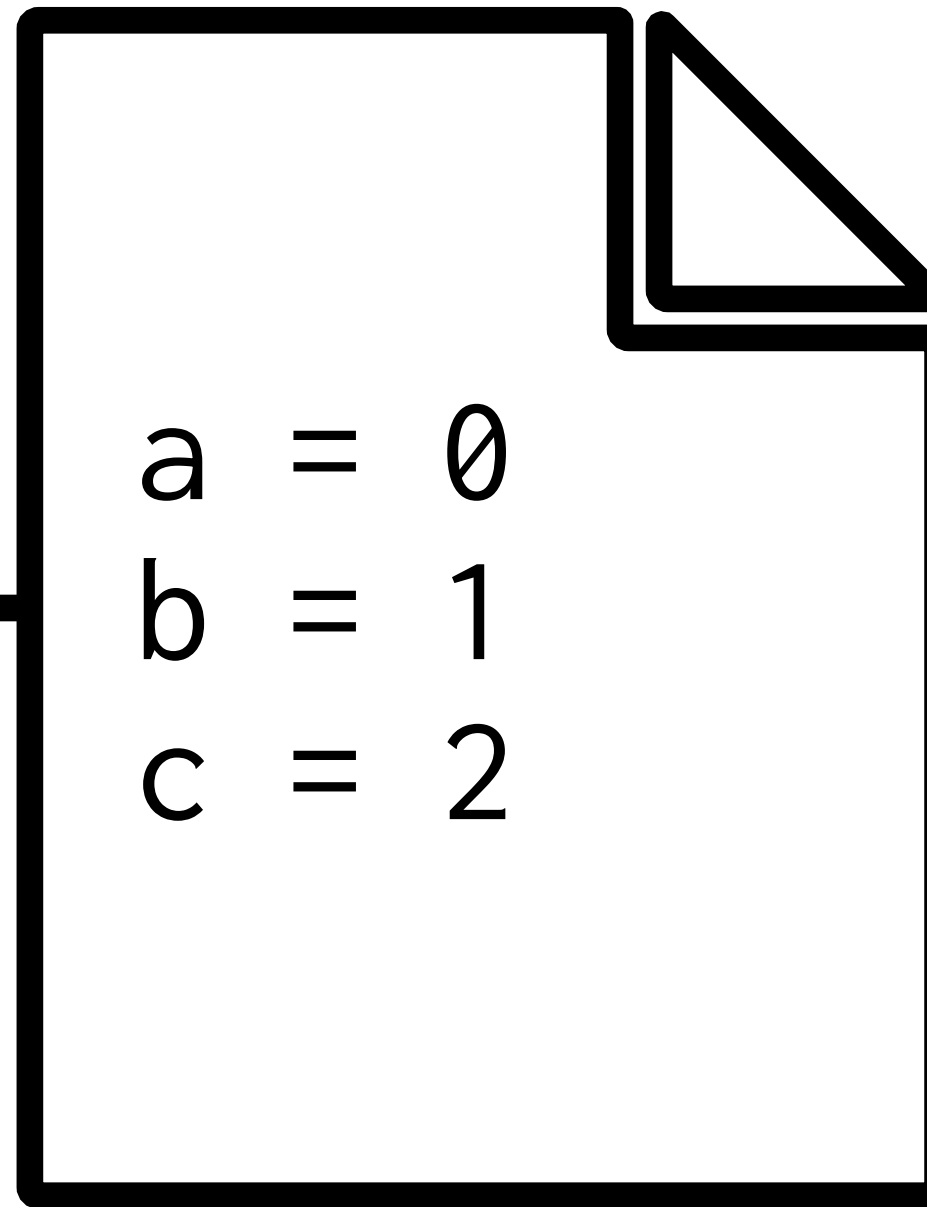


"create a file"

Keeping track of changes

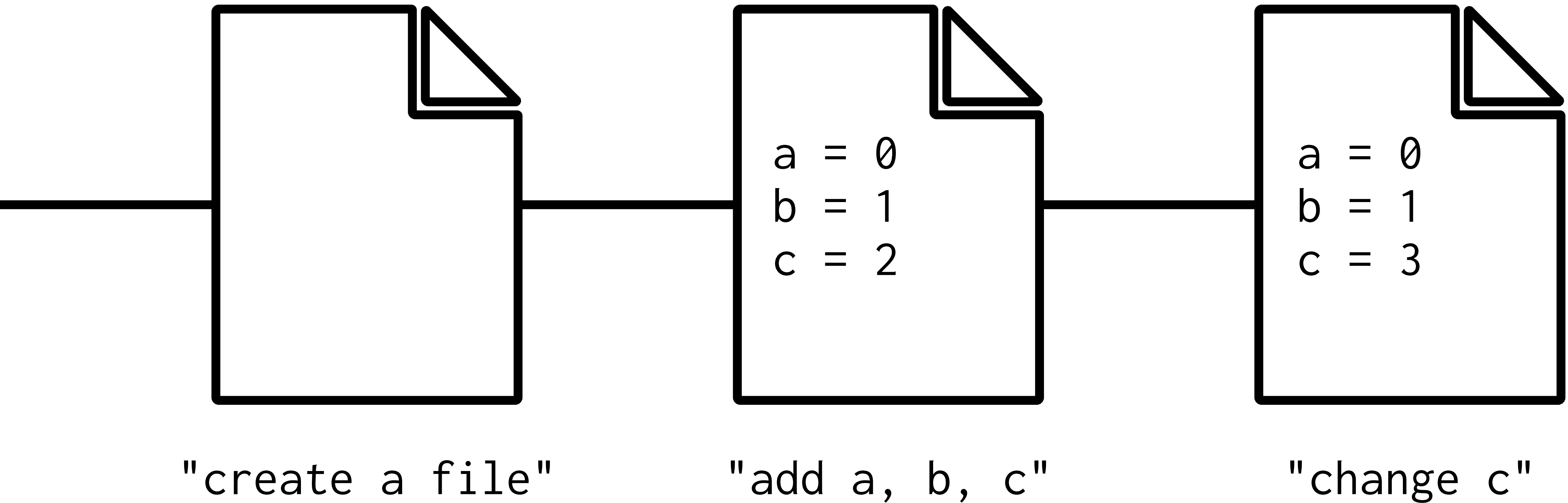


"create a file"

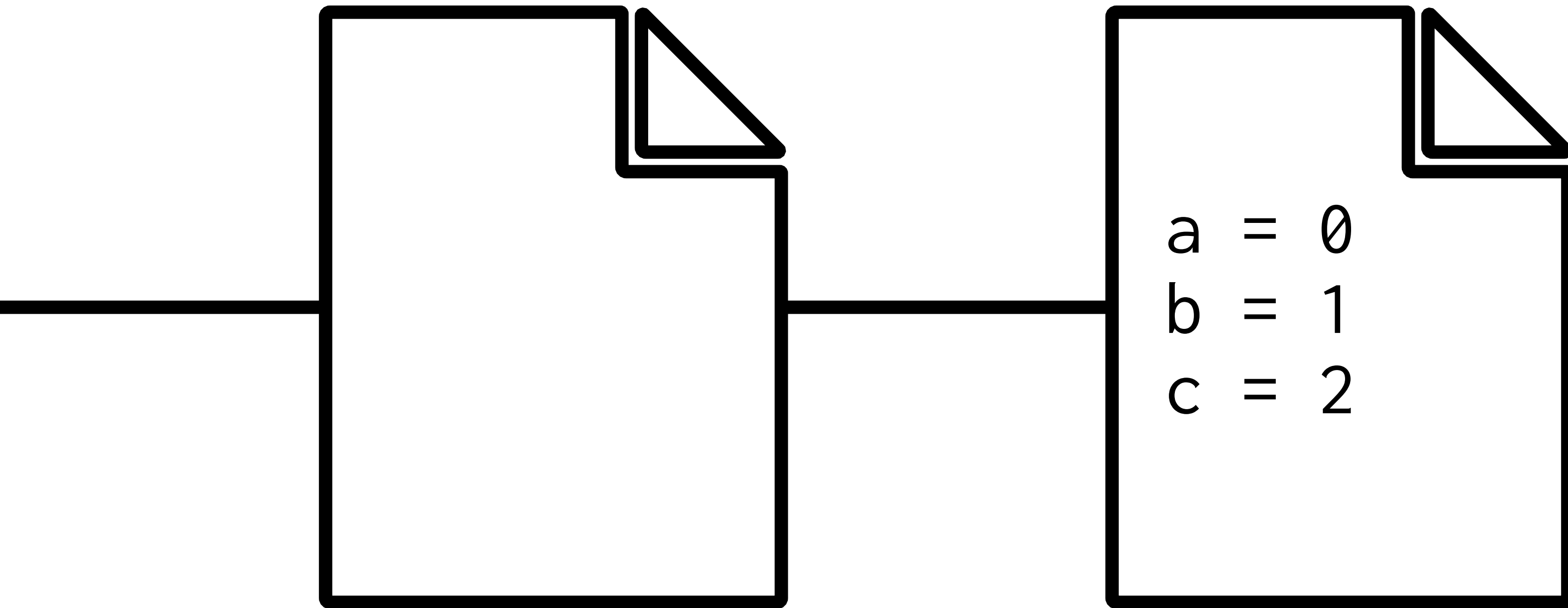


"add a, b, c"

Keeping track of changes



Revert back to old versions



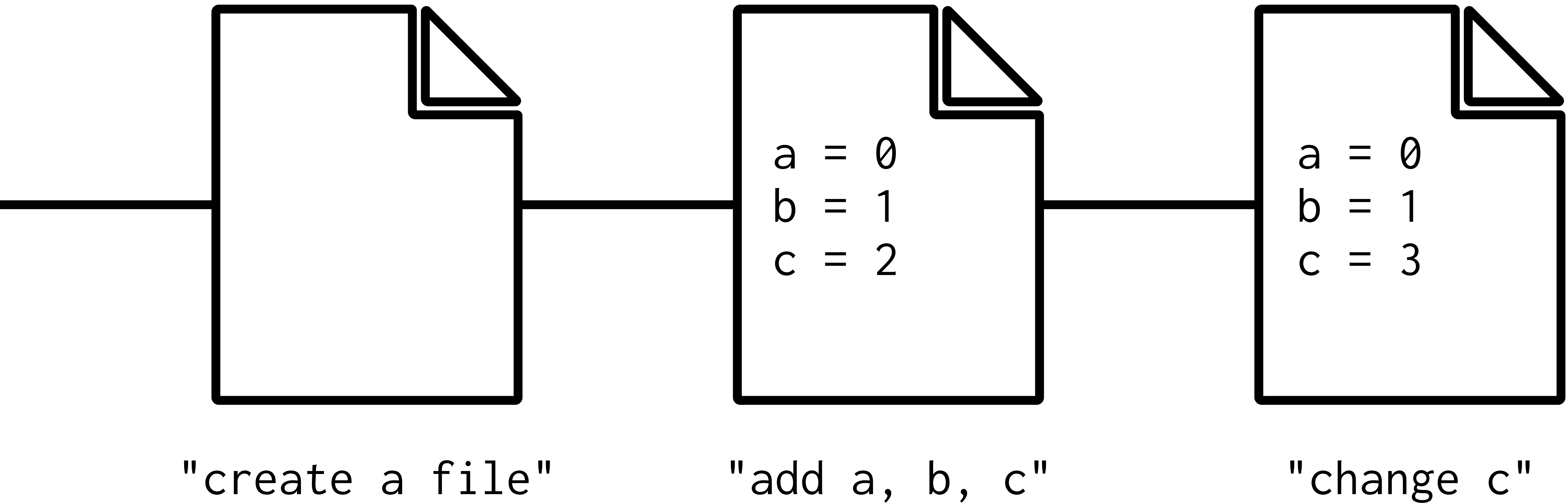
"create a file"

"add a, b, c"

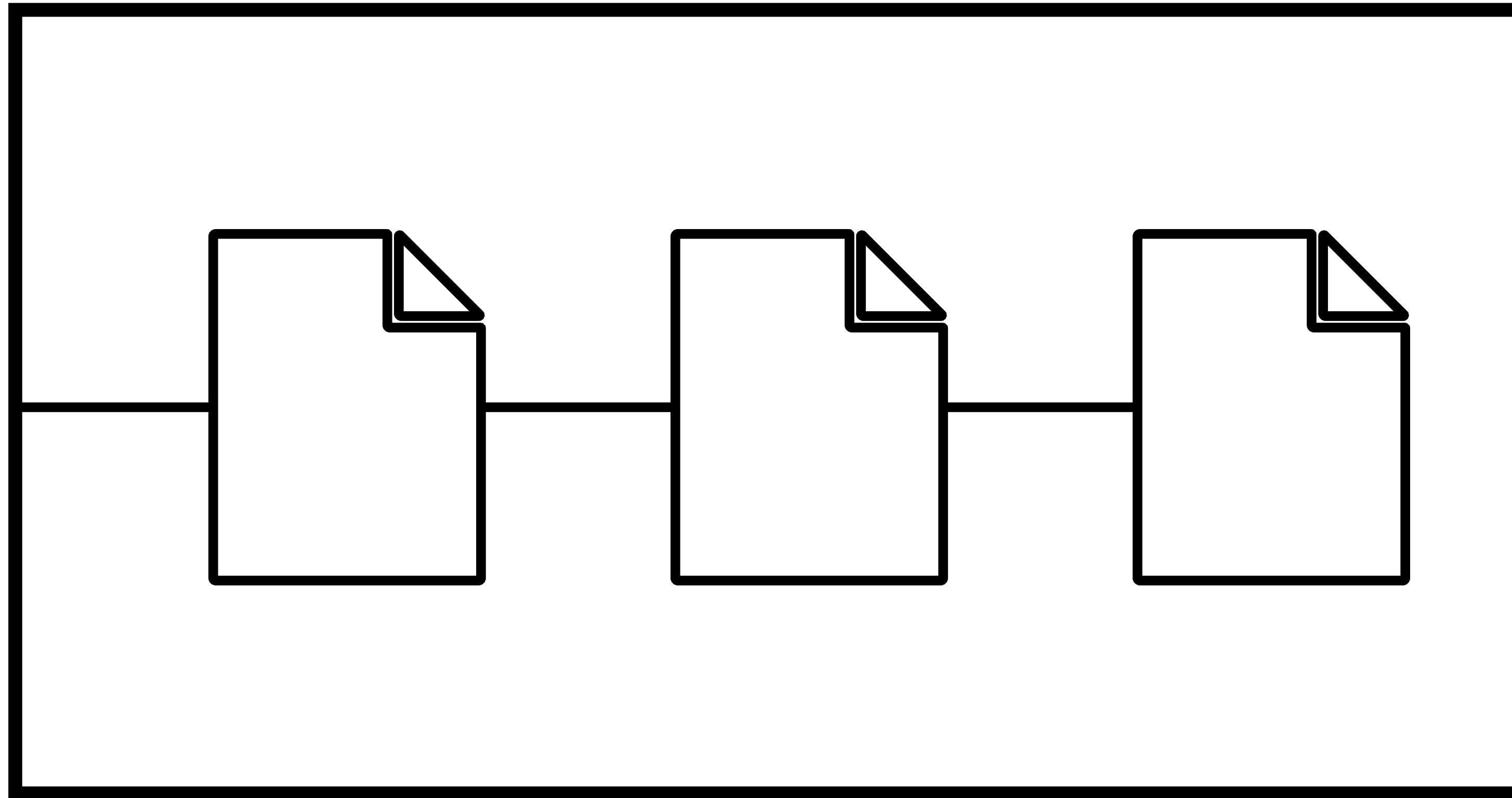
What is Git?

- **Git** is a "version control system"
- **Use Git to...**
 - Keep track of changes to your files
 - Keep a history of all changes you've made
- **Git** stores your project files in a **repository**

Keeping track of changes



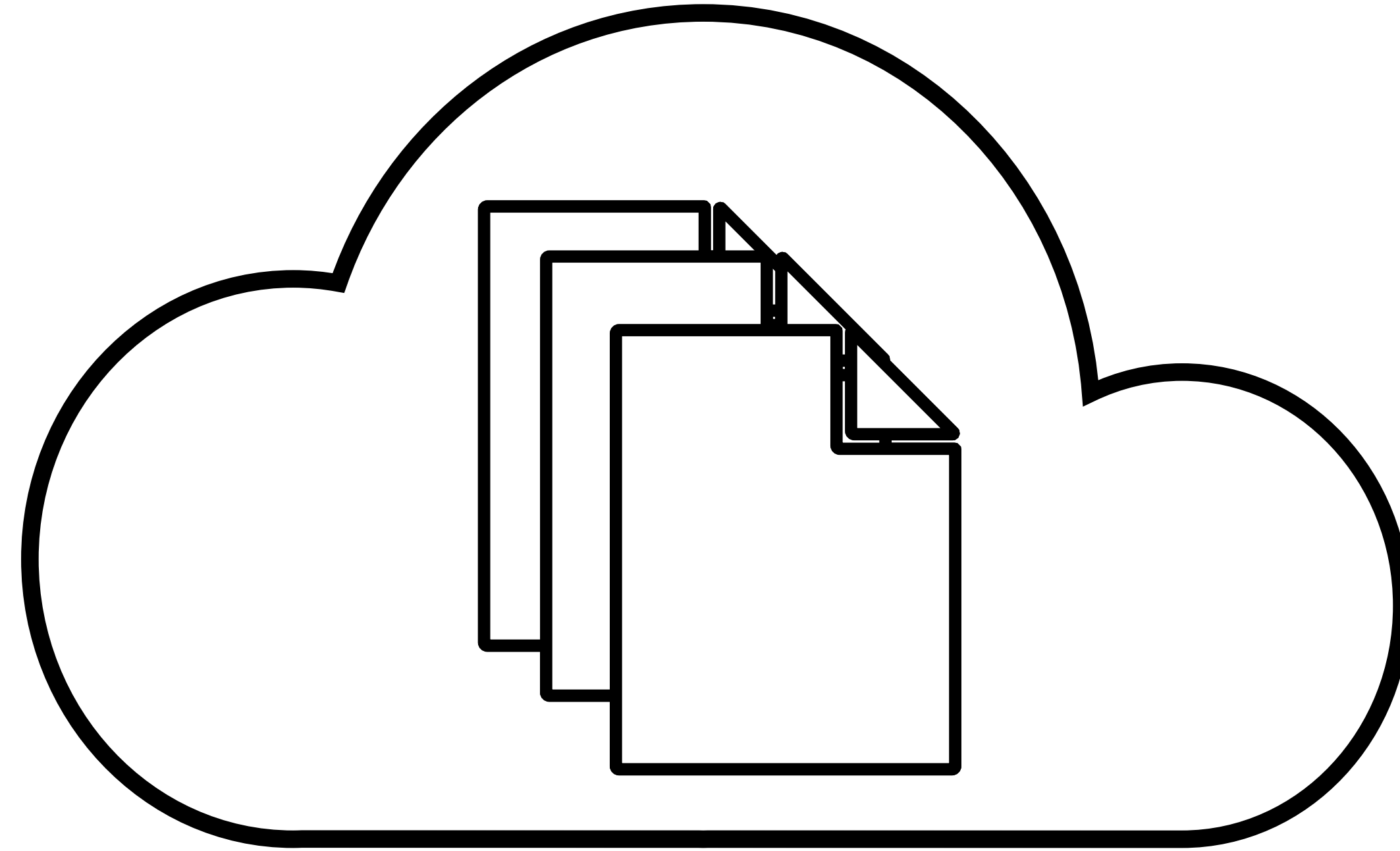
Repository



What is GitHub?

- **GitHub** is a platform that offers cloud-based ("remote") Git repository hosting
- **GitHub Pages** is a service to turn a Git repository into a simple website others can access

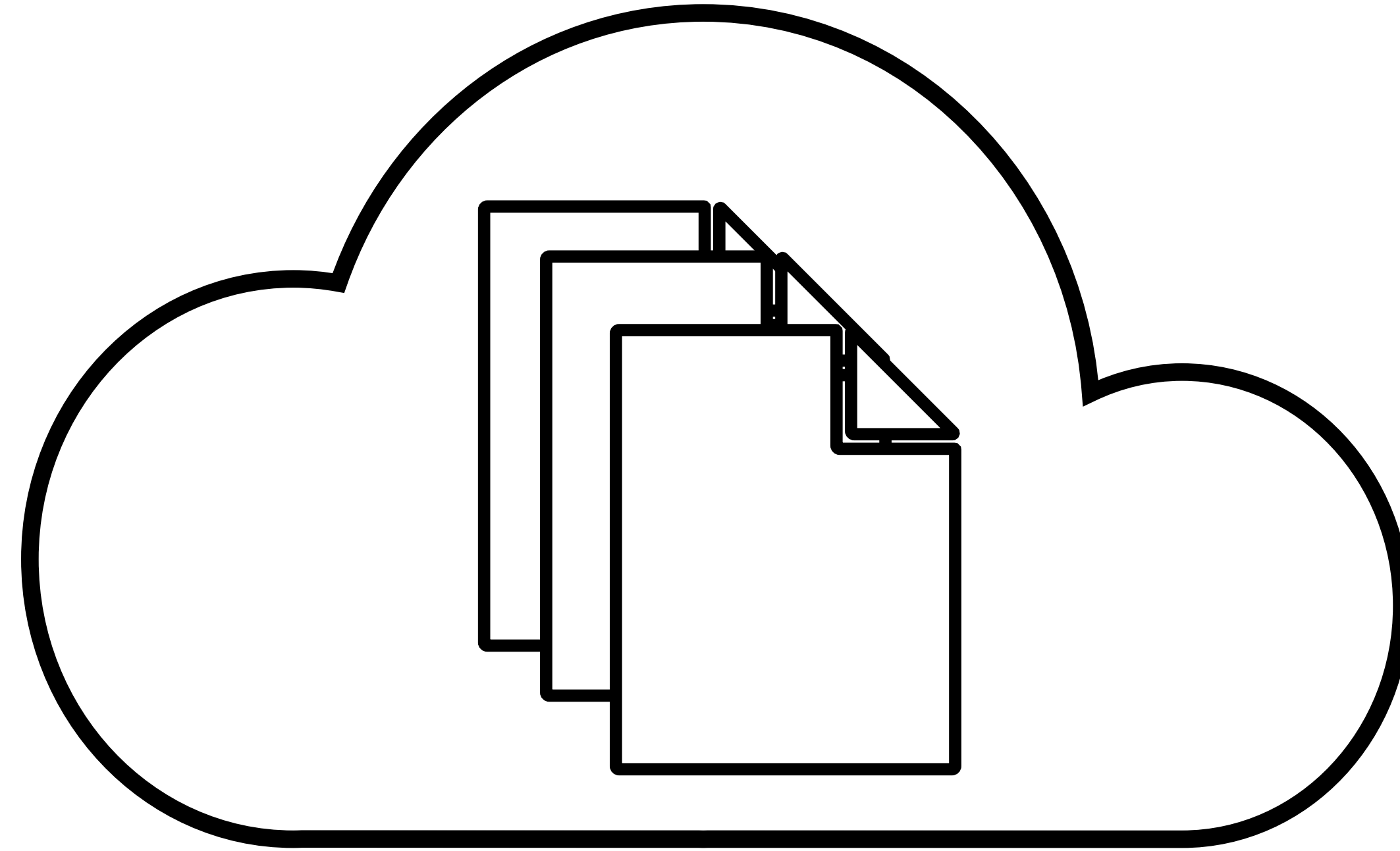
Cloning, Pulling, and Pushing



GitHub

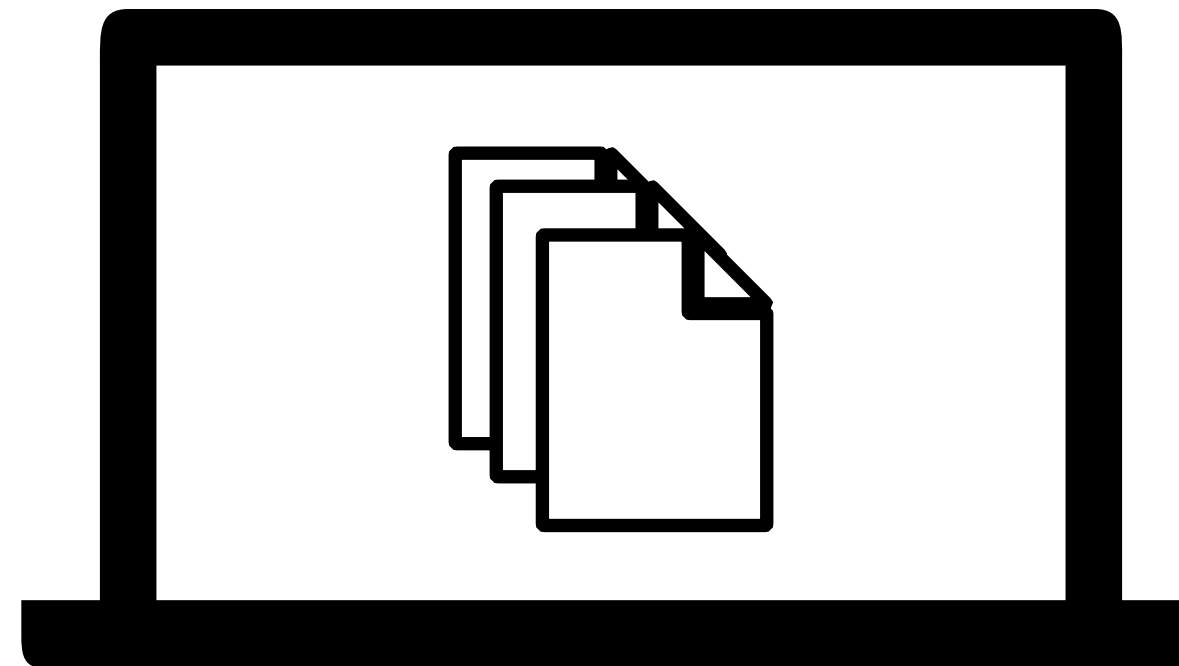
Cloning

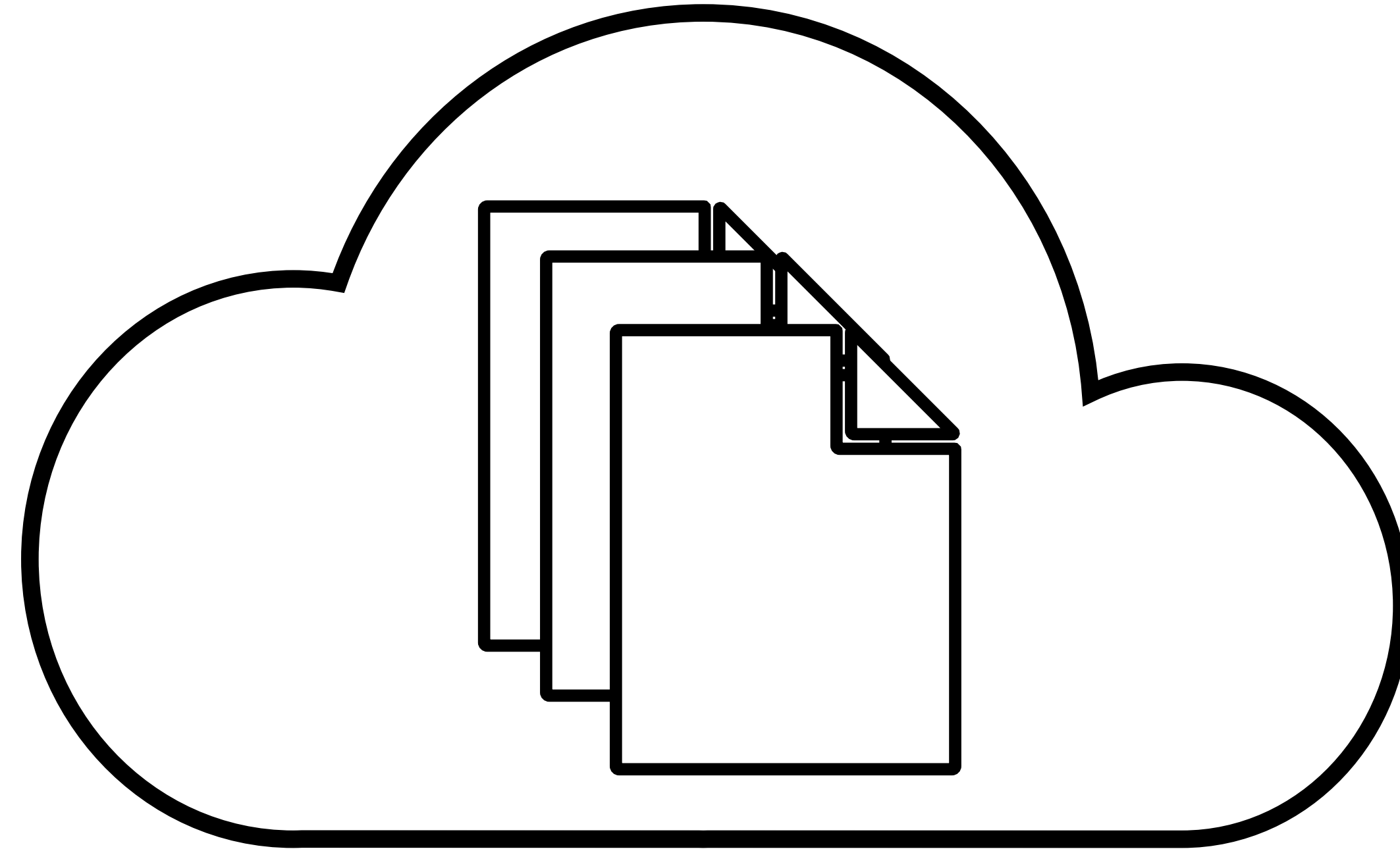




GitHub

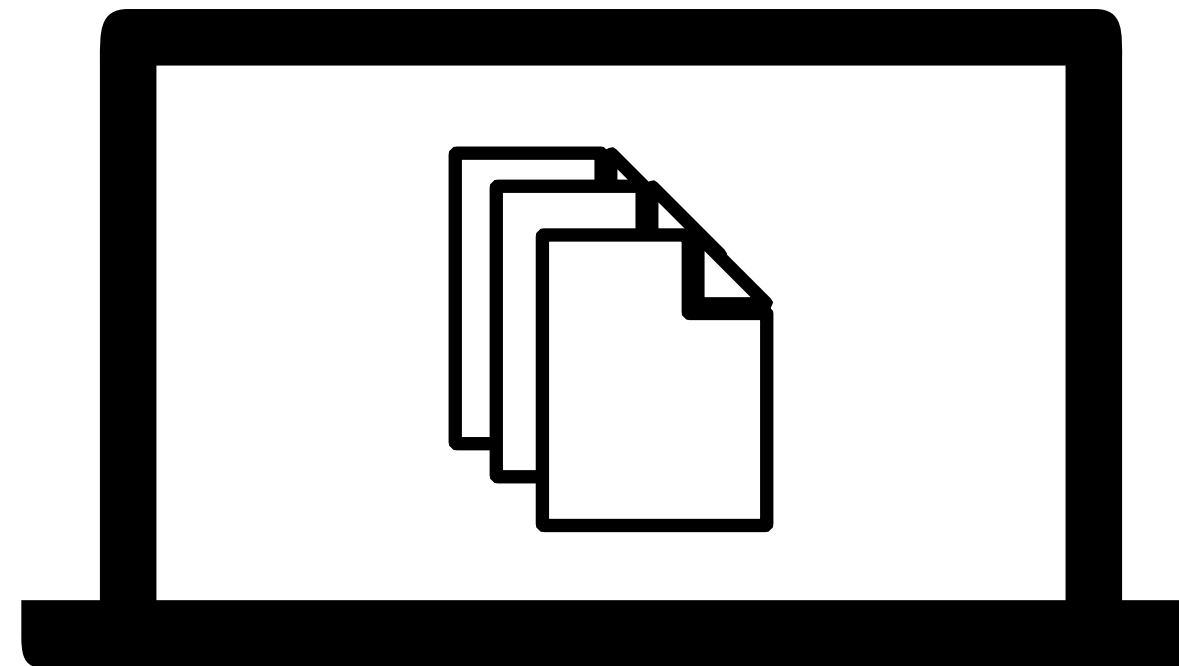
Cloning



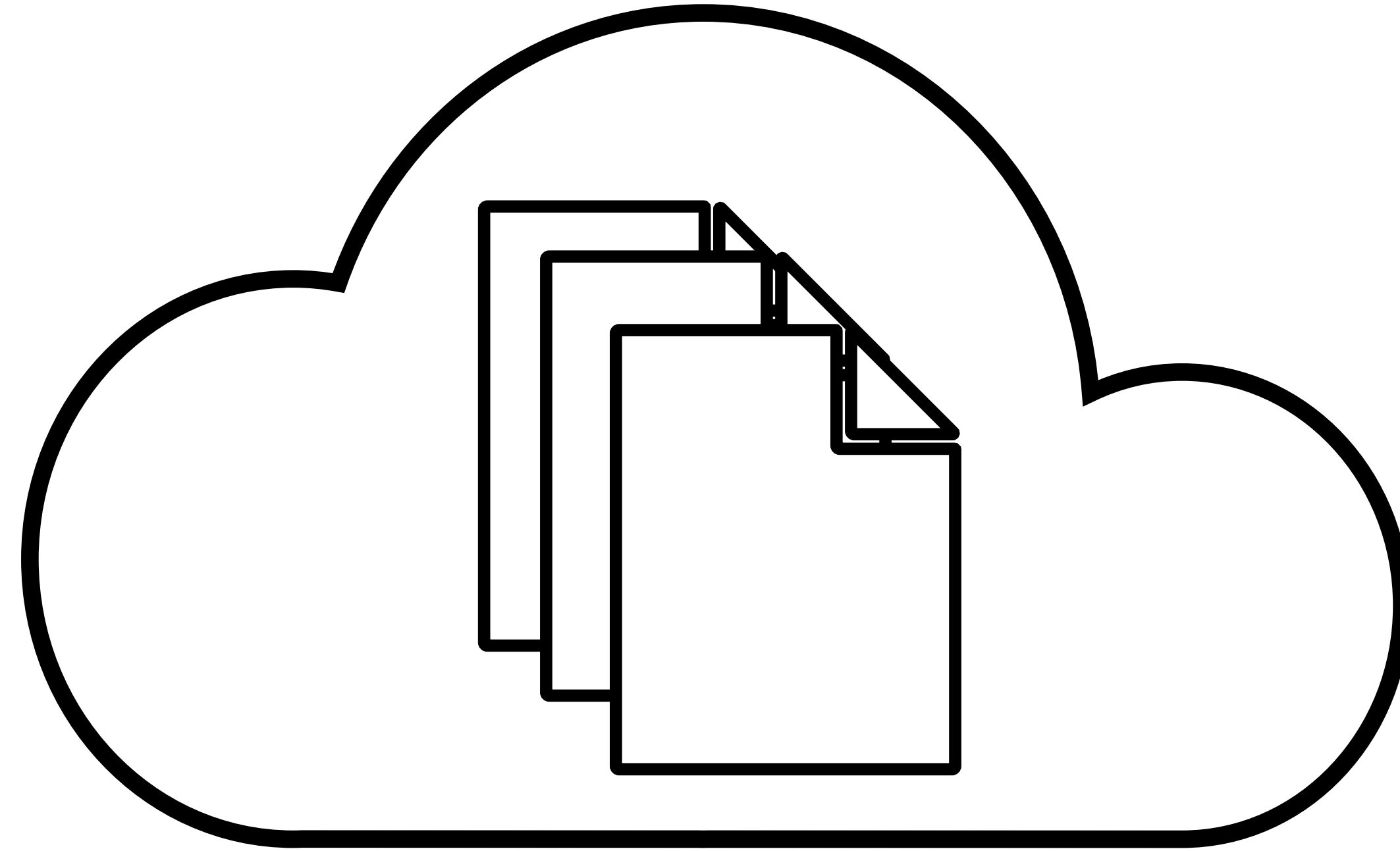


"Remote" repository

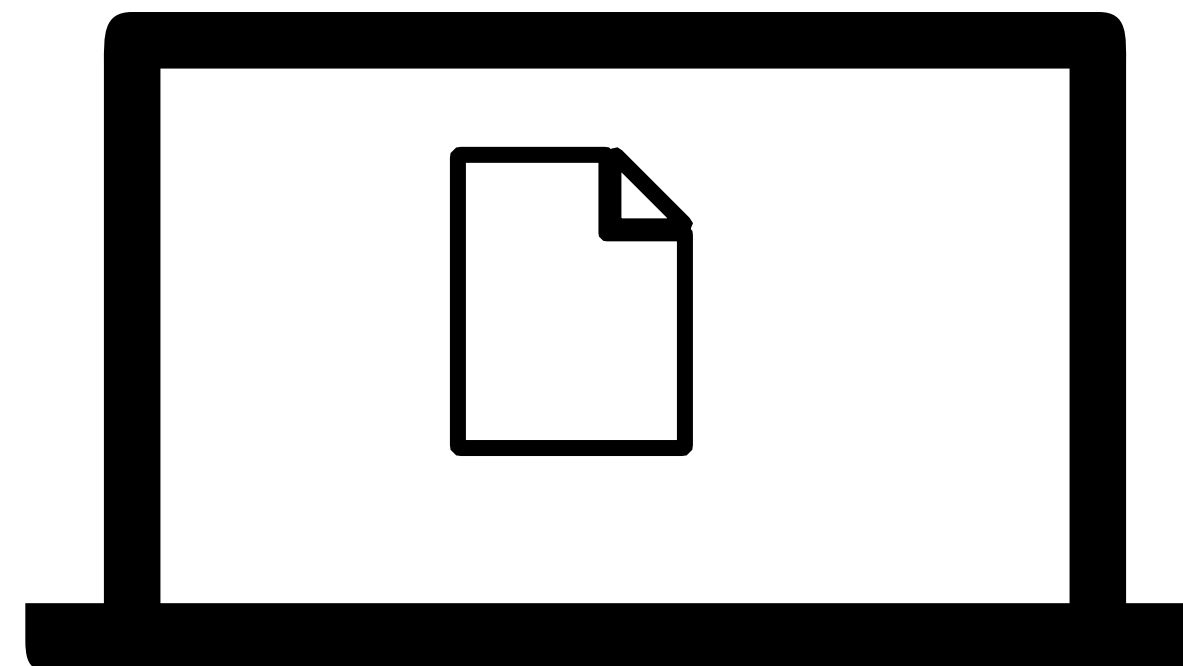
Cloning



"Local" repository

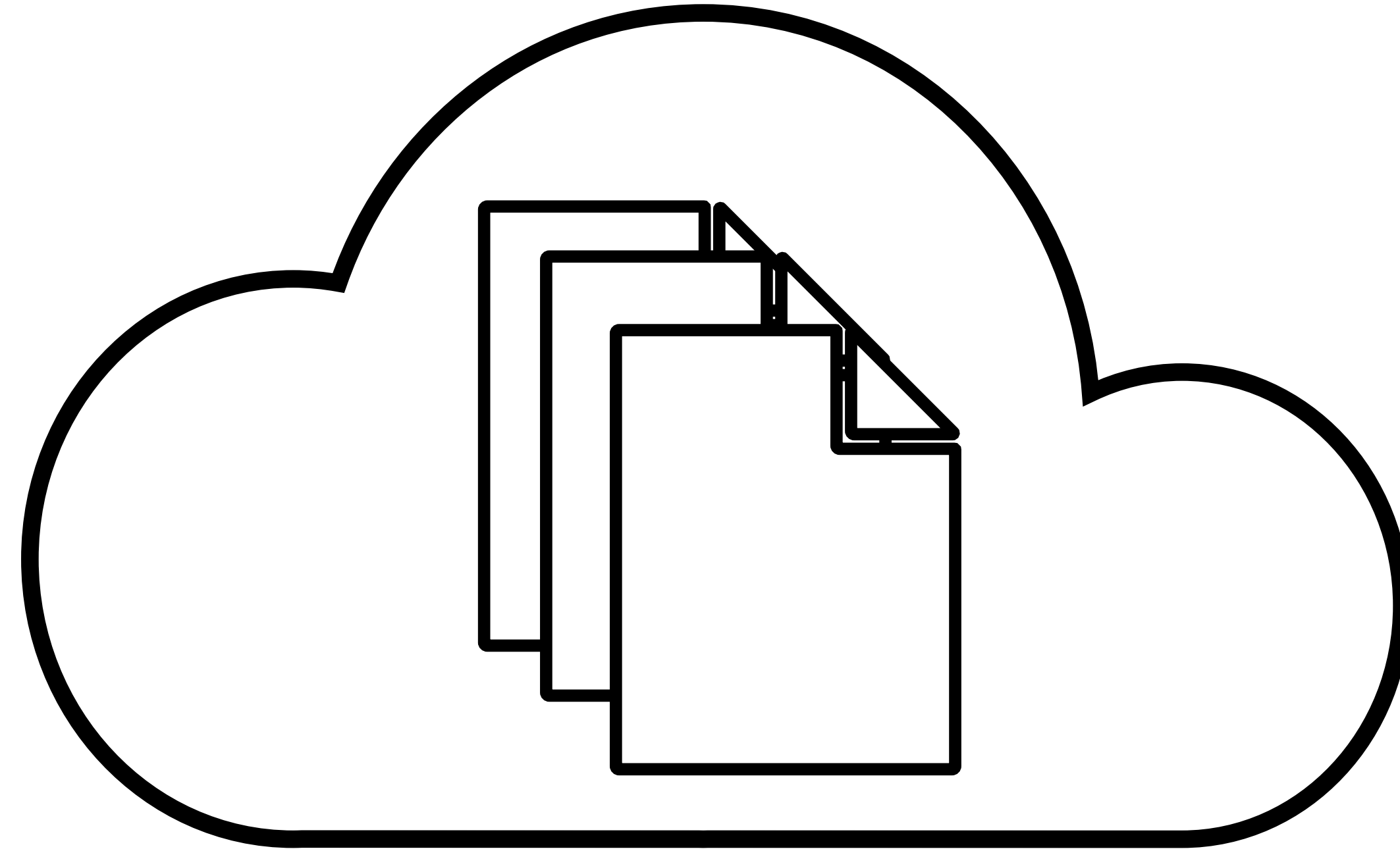


"Remote" repository



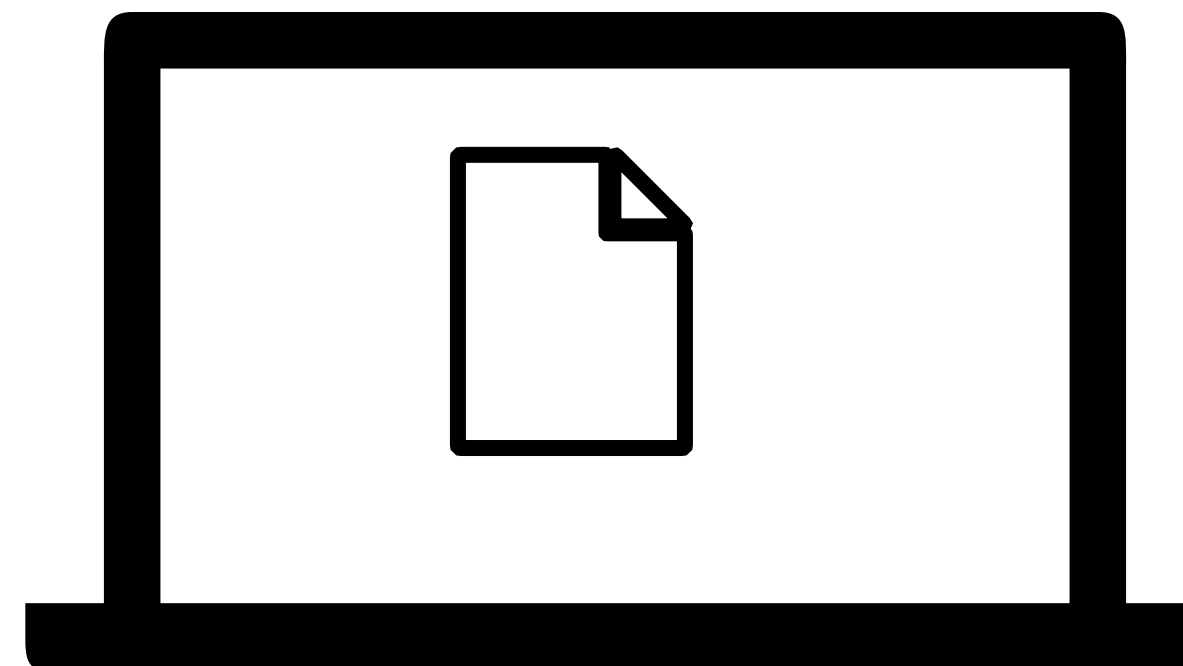
"Local" repository

Pushing



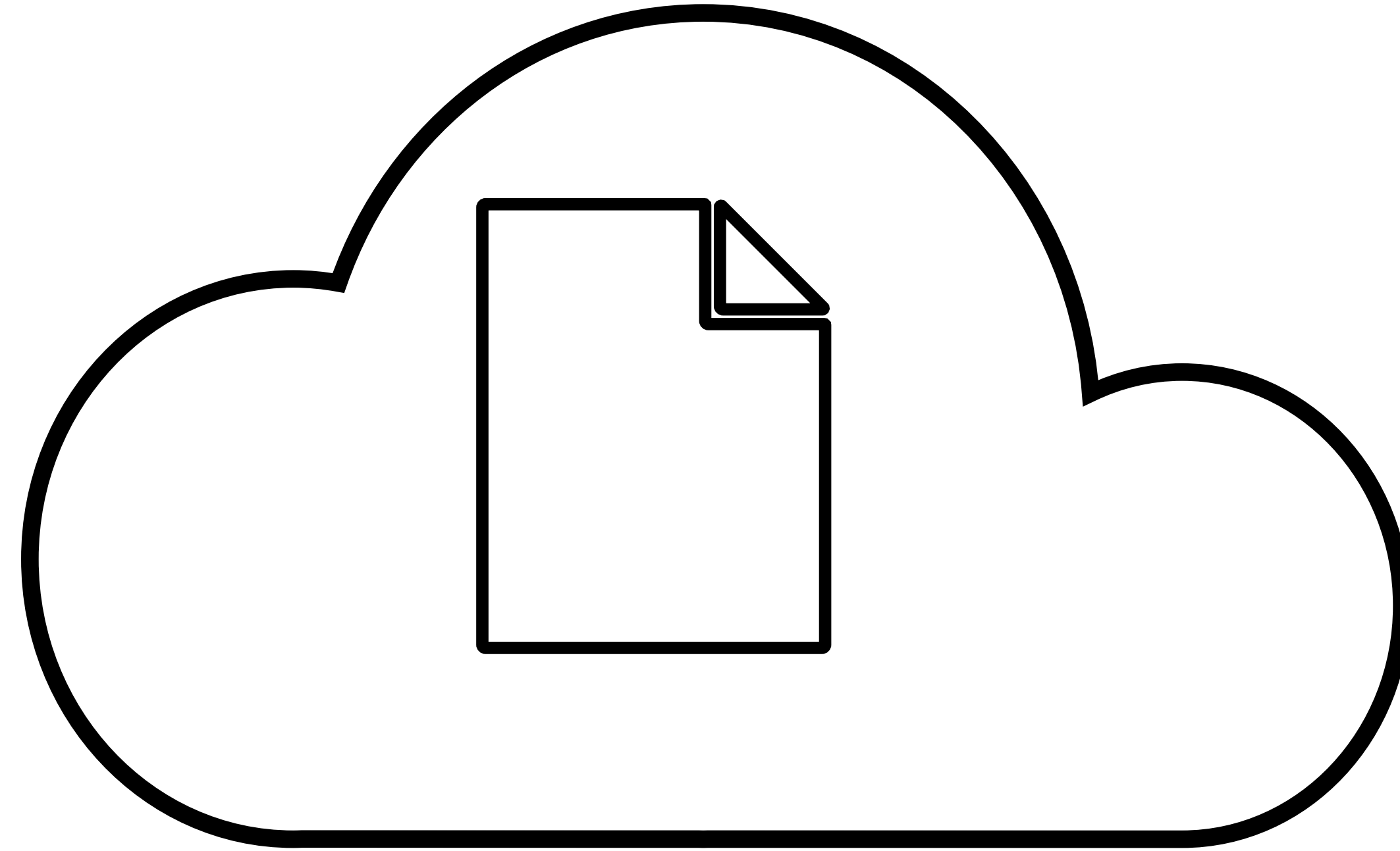
"Remote" repository

out of sync!

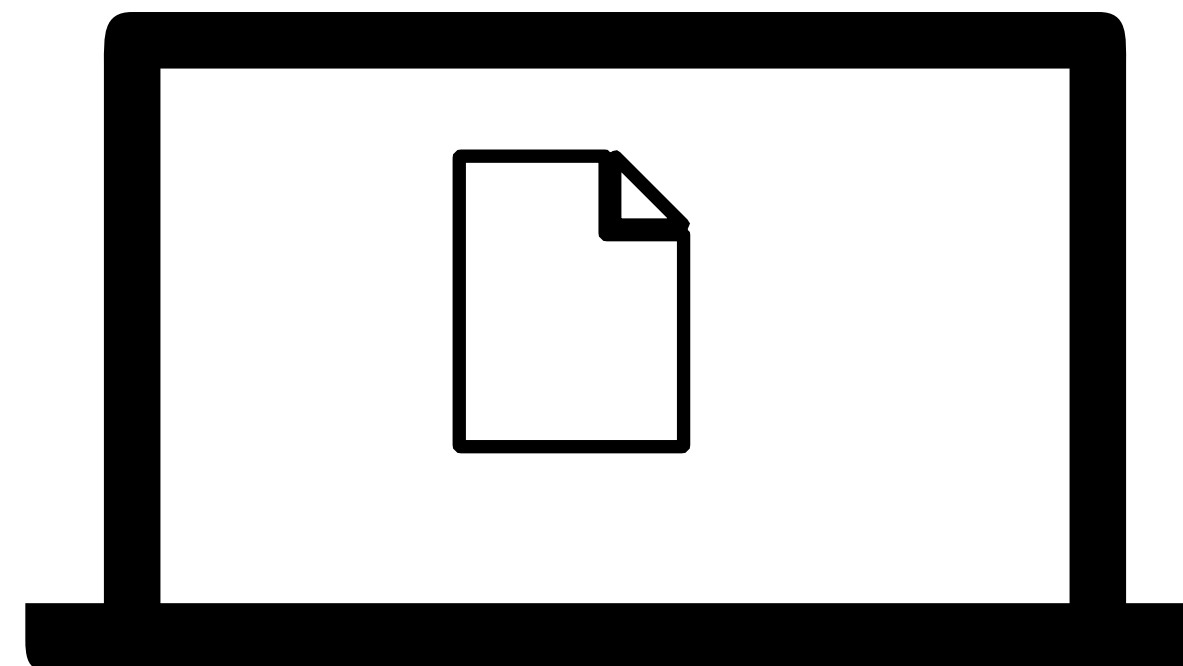


Pushing

"Local" repository

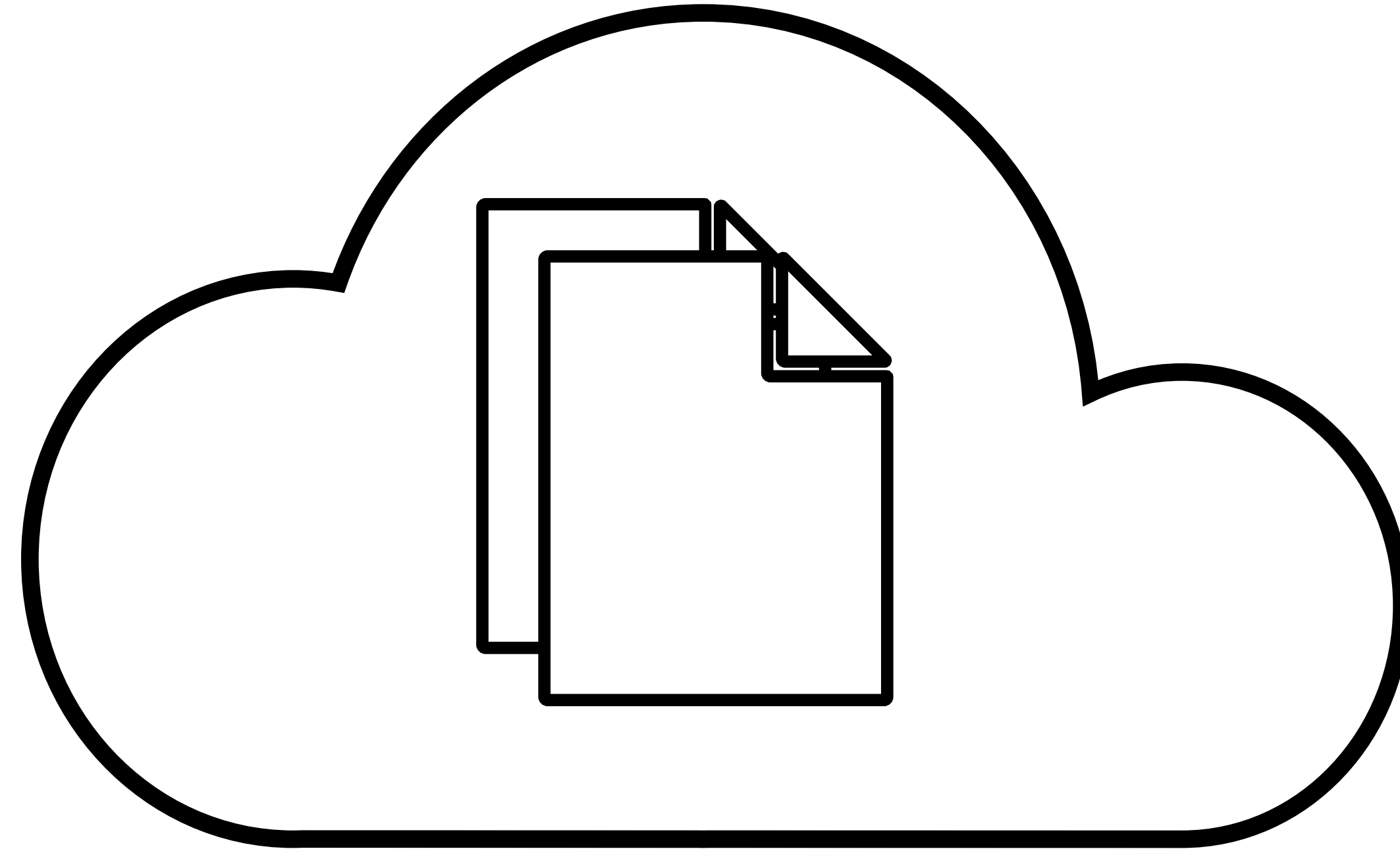


"Remote" repository

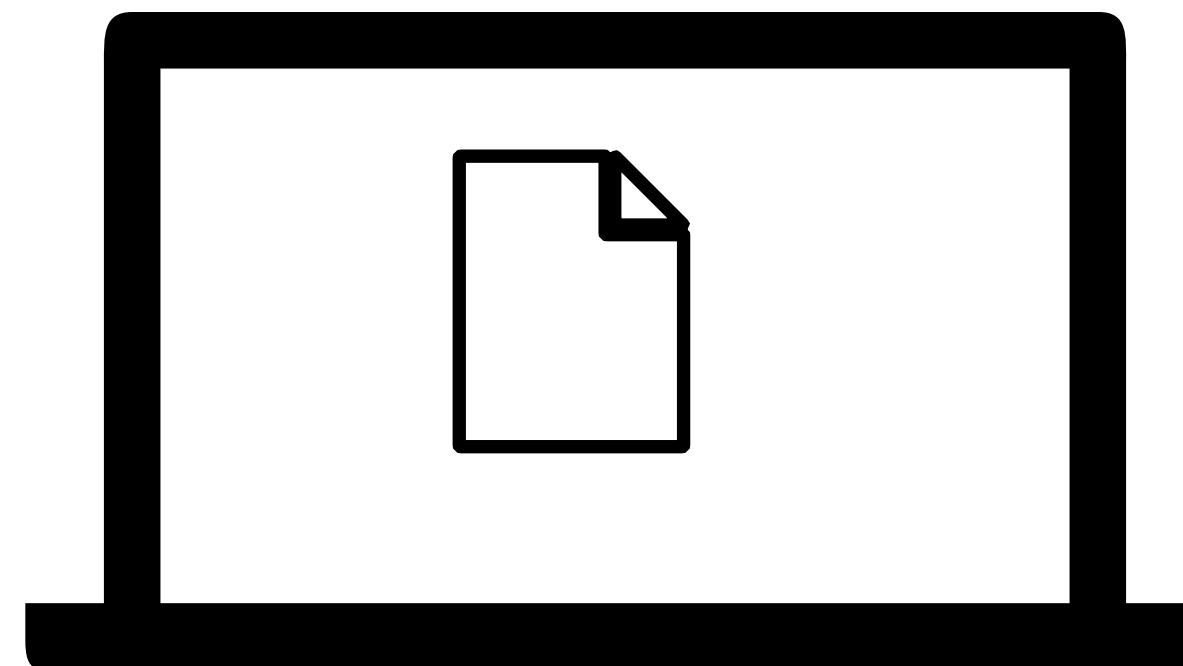


"Local" repository

Pushing

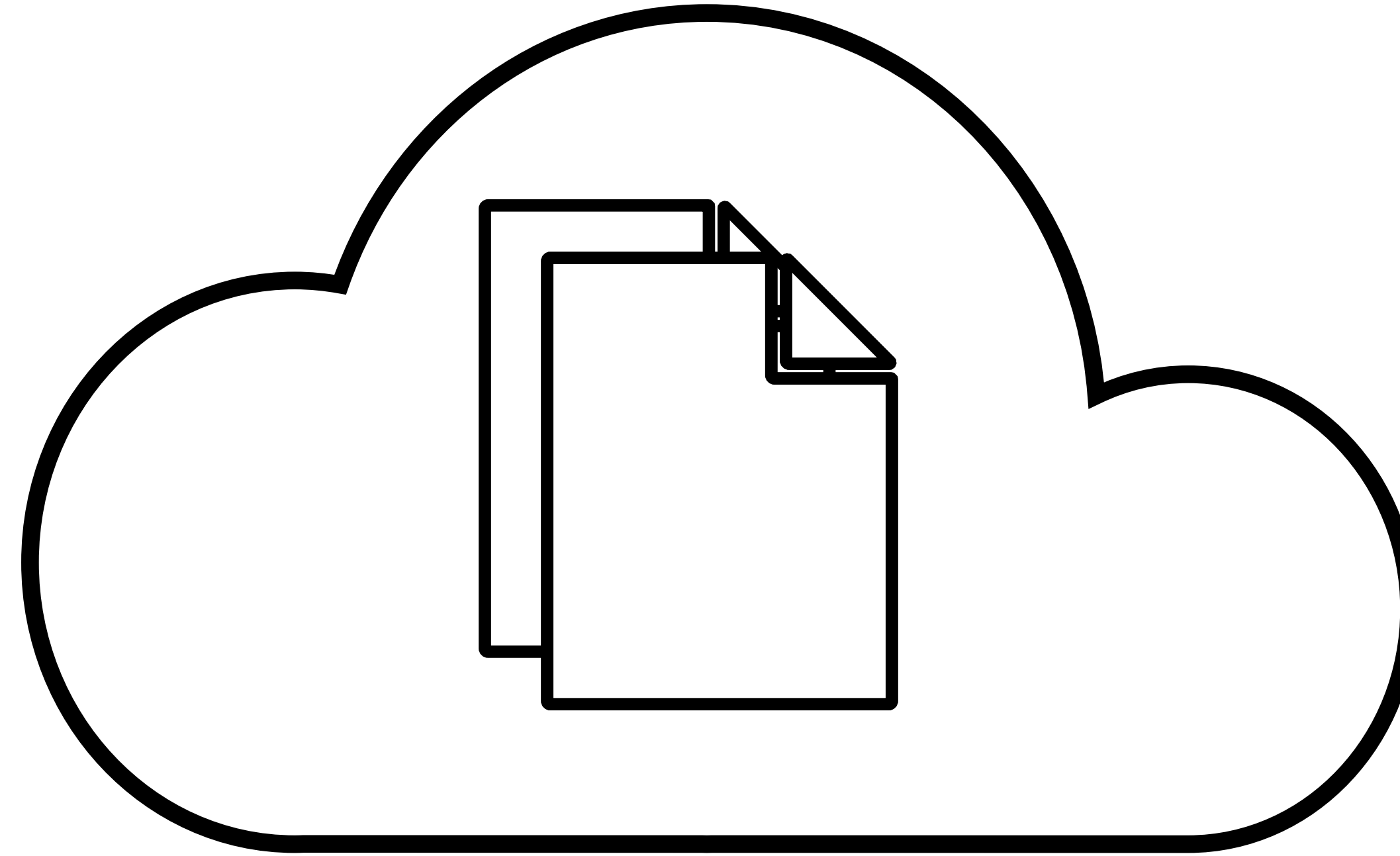


"Remote" repository



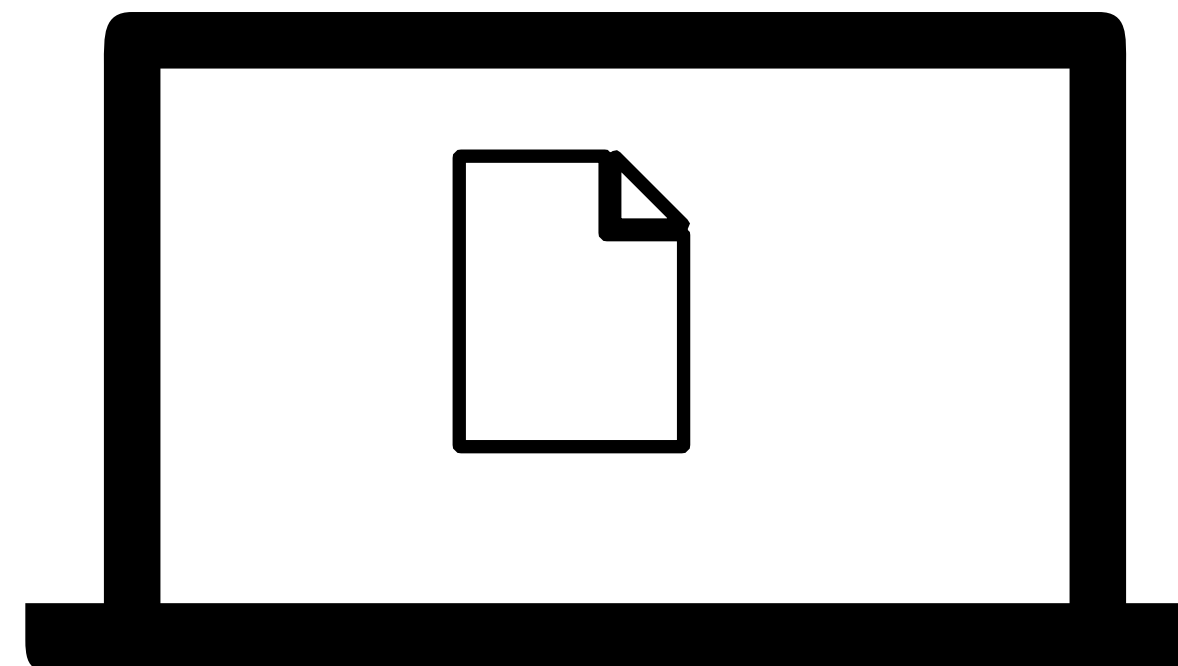
"Local" repository

Pulling



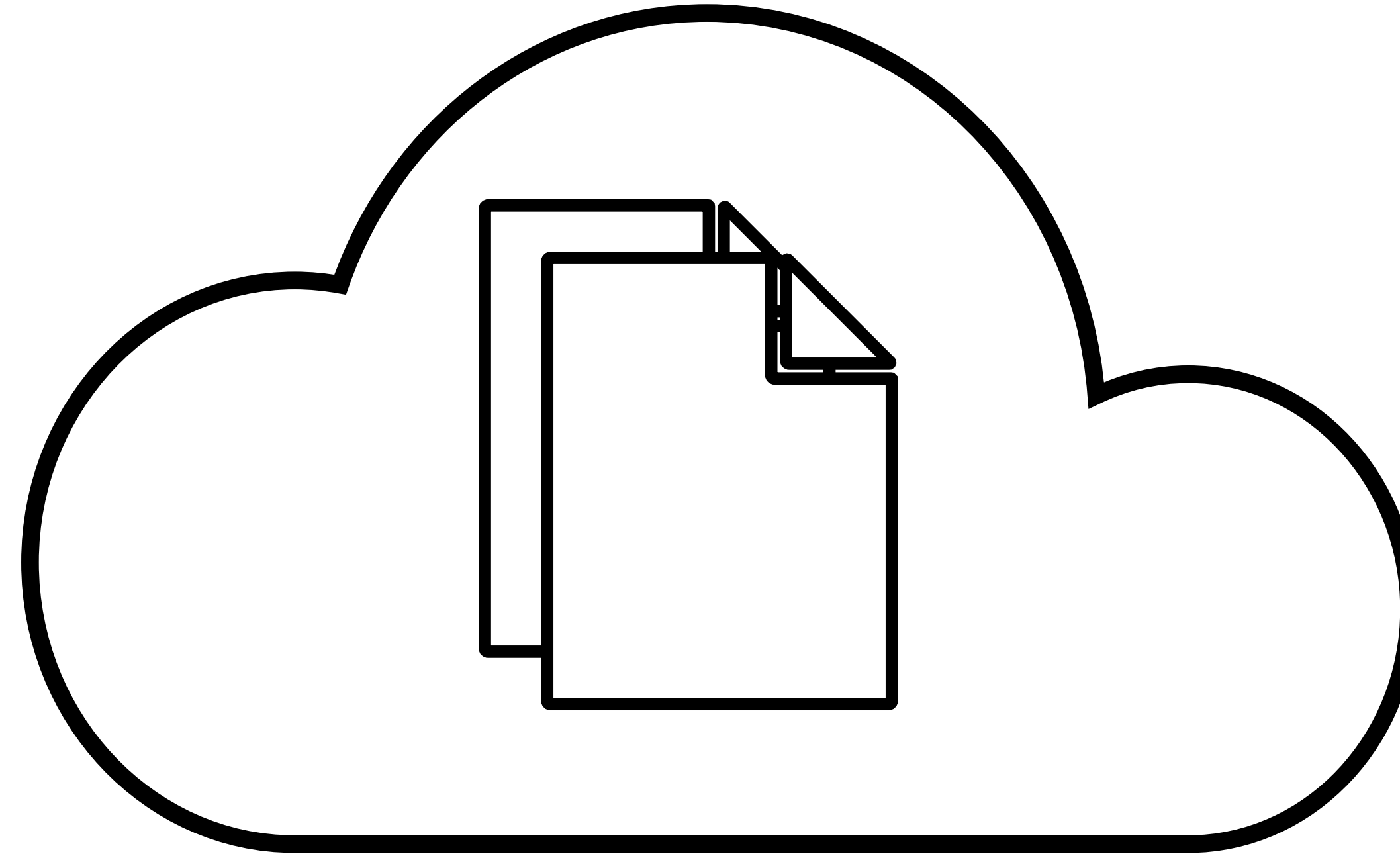
"Remote" repository

out of sync!

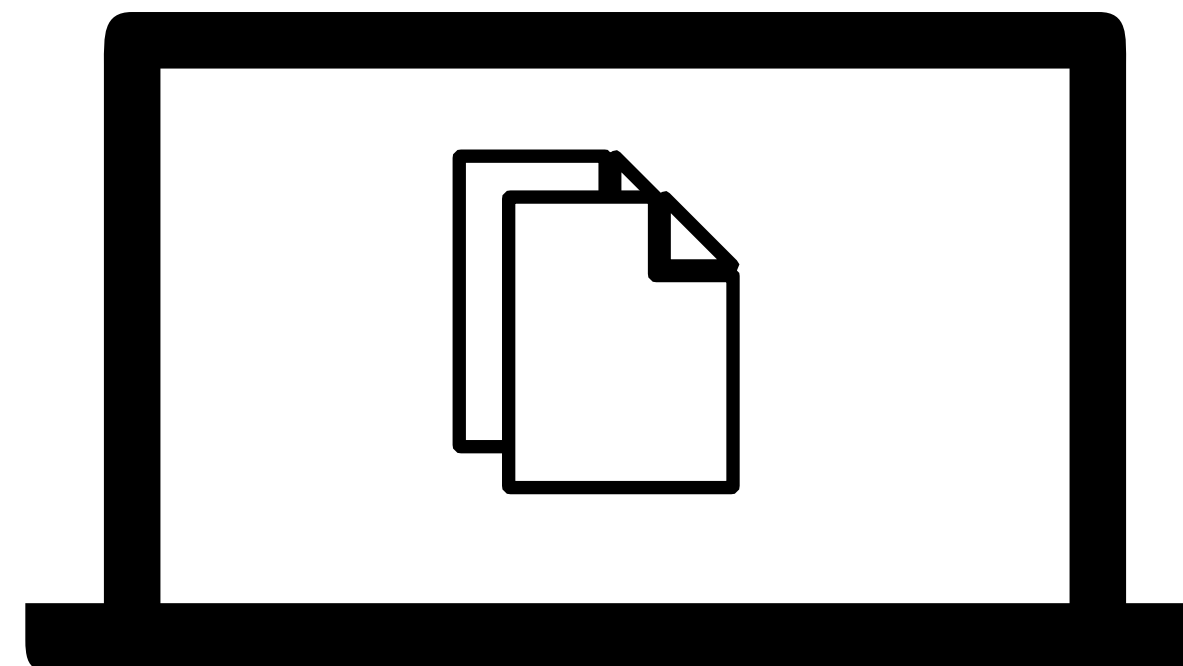


"Local" repository

Pulling



"Remote" repository



"Local" repository

Pulling

Submission

- **Submit files for your website to Gradescope by Friday, March 3, 3:10 PM.**