GitHub for Mathematicians

JMM 2024 Professional Enhancement Program

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Website: jmm2024.clontz.org

[1] creativecommons.org/licenses/by-sa/4.0

Contents

Abstract

Increasingly, the cyberinfrastructure of mathematics and mathematics education is built using GitHub to organize projects, courses, and their communities. In this PEP, participants will learn the basic features of GitHub available using only a web browser, and how to use these features to participate in GitHub-hosted mathematical projects with colleagues and/or students.

Workshop Details

This workshop will take place on Wednesday January 3, 2024, 1:00 p.m.-3:00 p.m, and Thursday January 4, 2024, 1:00 p.m.-3:00 p.m.

We will be located at Foothill E, Marriott Marquis San Francisco.

More information about JMM 2024 in San Francisco can be found at Joint-MathematicsMeetings.org[2].

[2] www.jointmathematicsmeetings.org/meetings/national/jmm2024/2300_program.html

Chapter 1

Git vs. GitHub asdfsadfas

1.1 What Is Git?

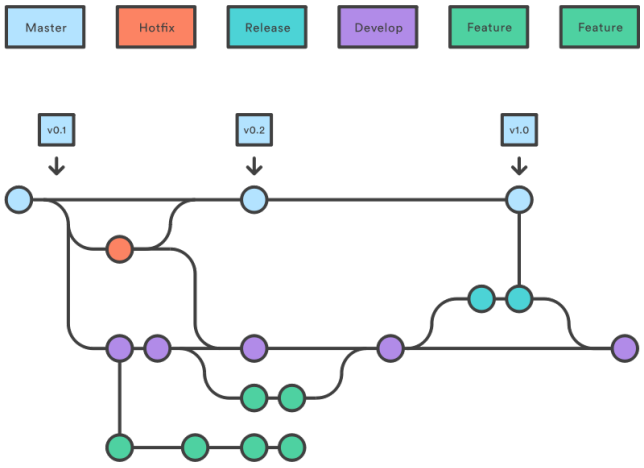
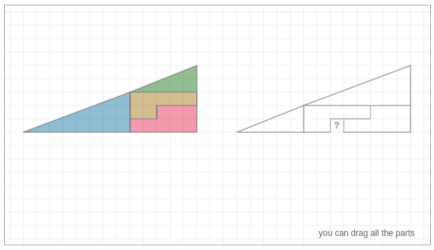


Figure 1.1.1 An illustration of a project's history controlled by Git



Interactive[1]

Git is a distributed version control system that tracks changes in any set of computer files. sadfsadf Git was originally authored by Linus Torvalds in 2005 for development of the Linux kernel. Git is free and open-source software shared under the GPL-2.0-only license.

[1] `jmm.clontz.org/interactive-1.html`

Two core concepts of Git are **commits** (illustrated in Figure 1.1.1 by circles) and **branches** (illustrated in Figure 1.1.1 by lines).

1.2 What Is Git*Hub*?

Hello

Chapter 2

Your First Repository

Hello

2.1 Creating the repo

Hello

2.2 Using GitHub.dev

Hello

2.3 Commiting and syncing

Hello

Chapter 3

Websites with GitHub Pages

Hello

3.1 Starting with a template

Hello

$$e = mc^2$$

3.2 Posts and pages

Hello

3.3 Tweaking the layout

Hello

3.4 Just let me host some HTML!

Hello

Chapter 4

Writing and Running Code

Hello

4.1 Codespaces

Hello

4.2 Jupyter notebooks

Hello

Chapter 5

Open Educational Resources

Hello

5.1 PreTeXt

Hello

5.2 CheckIt

Hello

Chapter 6

Collaborating with Students and Colleagues

Hello

6.1 Adding collaborators

Hello

6.2 Forks and Pull Requests

Hello

Colophon

This book was authored in PreTeXt.