The lab wiki: Contributing, collaborating, and documenting our work

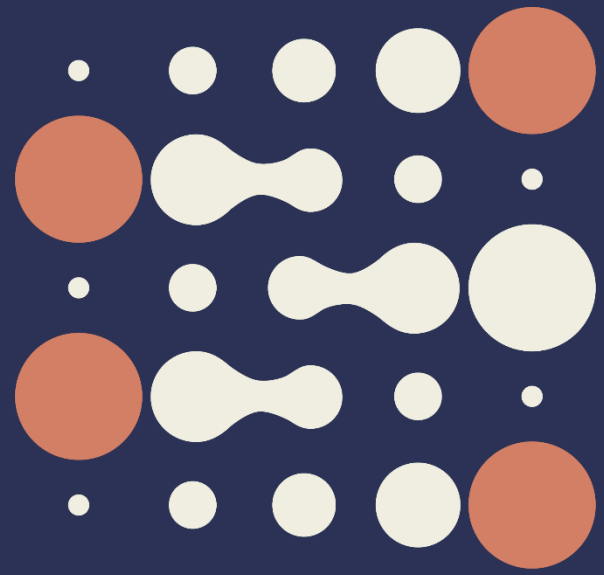
MET DataLab meeting

Laura Torrens

11/04/25

International Agency for Research on Cancer

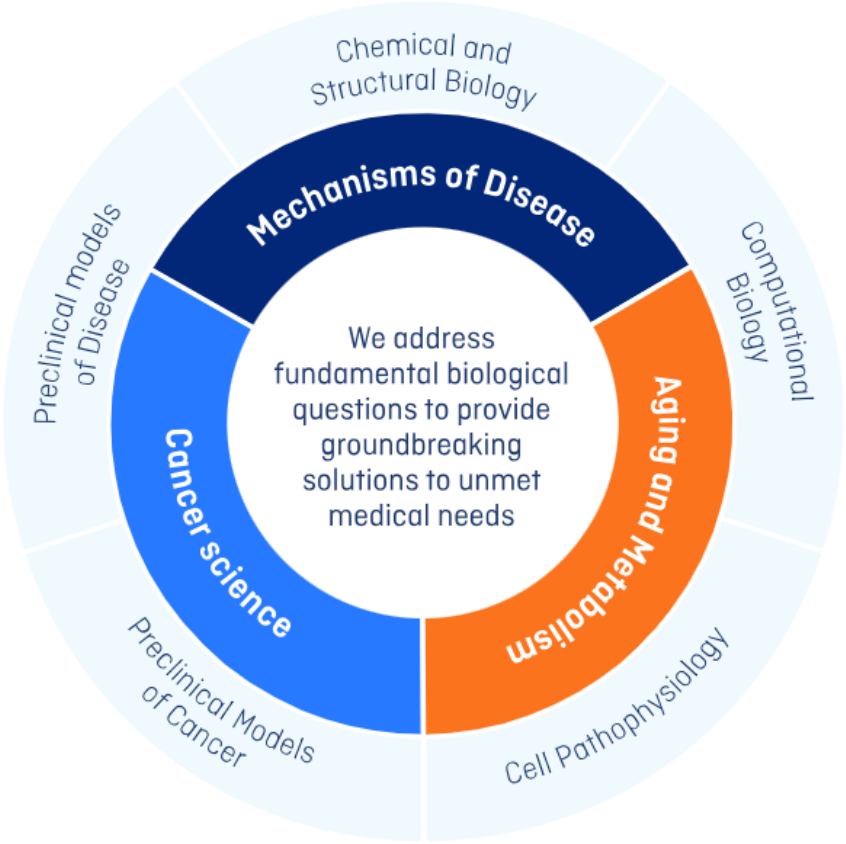
World Health Organization



How I learnt about Lab Wikis and how to contribute to them

The Institute for Research in Biomedicine (IRB)

- Multidisciplinary research center focused on understanding the development and prevention of human diseases.



Barcelona Biomedical Genomics Lab (BBG)

- Computational study of cancer at the genomic level.
- Study of the mutational processes across tissues and genomic regions.
- Bioinformatics tools to identify cancer driver genes or genes under positive selection based on its mutational patterns.
- Led by Nuria Lopez-Bigas.

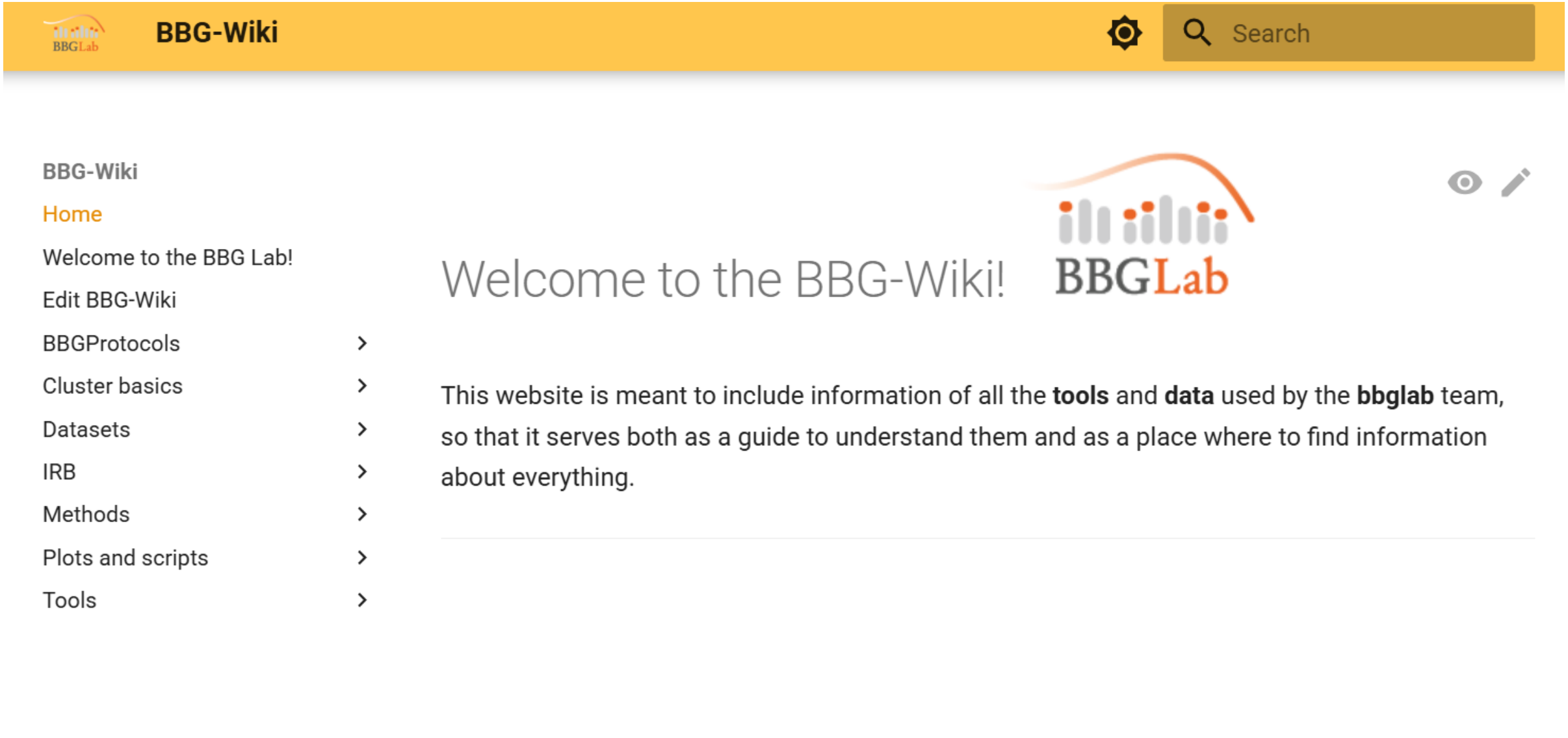
How I learnt about Lab Wikis and how to contribute to them

*"The time has come: this Thursday there is the **BBGwiki Hackathon** - sharing is caring. The first 2025 edition!* 🎉 *"*

🤔 🤔 🤔

The BBG-Wiki

https://bbglab.github.io/bbgwiki/



What is a Lab Wiki?

- A digital space to organize lab knowledge
- Think of it as a lab manual, FAQ, and resource hub
- Accessible via the web

How to contribute?

- Lab wikis are edited and maintained by group members
- Sessions when everyone get together to collaborate on the wiki are commonly called **hackathons**

But most importantly, WHY have a lab wiki?

- **Unify all relevant information in one place**
- **Share protocols and experimental workflows:** Ensure everyone uses the same up-to-date methods/code
- **Document scripts, tools, and software setups**: Ensure all analyses are reproducible
- **Capture best practices and troubleshooting tips:** Save time by avoiding repeated mistakes
- **Document decisions:** Keep track of why certain choices were made and keep things consistent

Key advantages:

🔁 Avoids inefficient re-discovering what was already known

🧠 Preserves expertise when someone leaves the lab

🧭 Speeds up learning for new members

Creating a Lab Wiki with GitHub Pages

GitHub

- Developer platform that allows developers to create, store, manage, and share their code.
- It uses Git, a distributed version control system that tracks versions of files.
- It lets you work with others without messing up each other’s changes.

GitHub Pages

- A way to publish websites from GitHub
- Free, easy to update, version-controlled
- Can be used to host a Lab Wiki

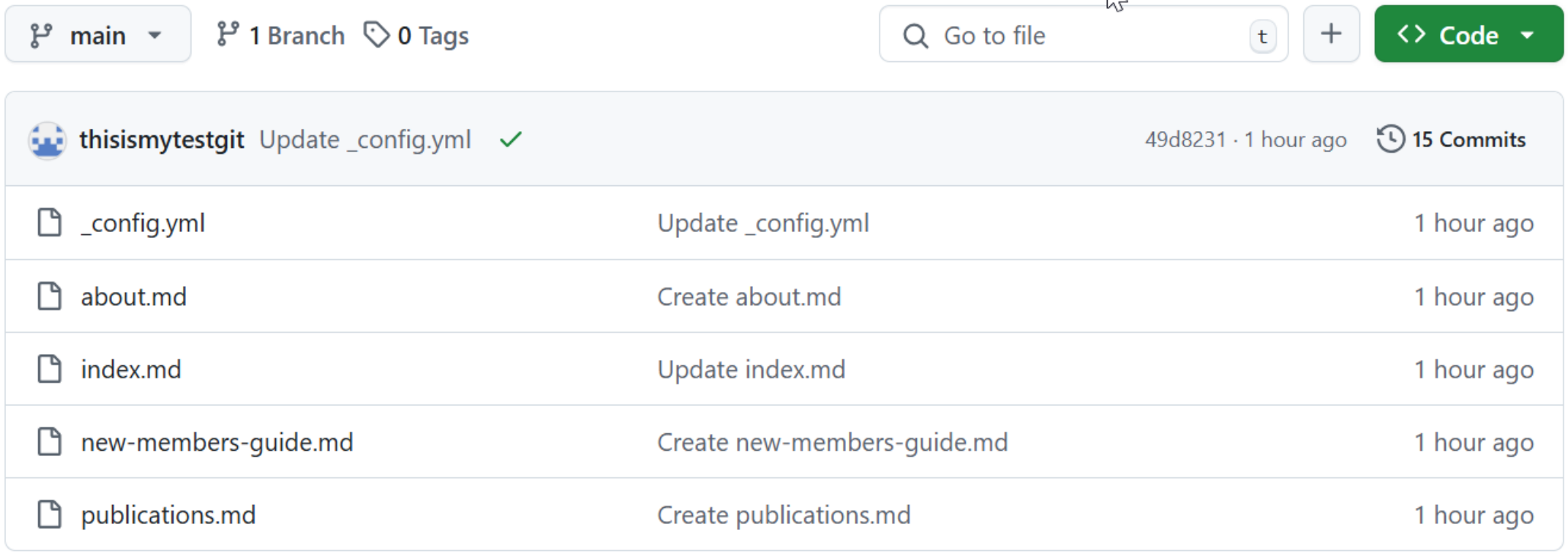
What we need to know

- Basic Git knowledge
- Basic markdown
- Navigating GitHub Projects

How it works

- The wiki lives in a GitHub repository
- Each page is a Markdown file (.md)
- GitHub Pages + a theme = clean, searchable site

thisismytestgit.github.io



Quick example

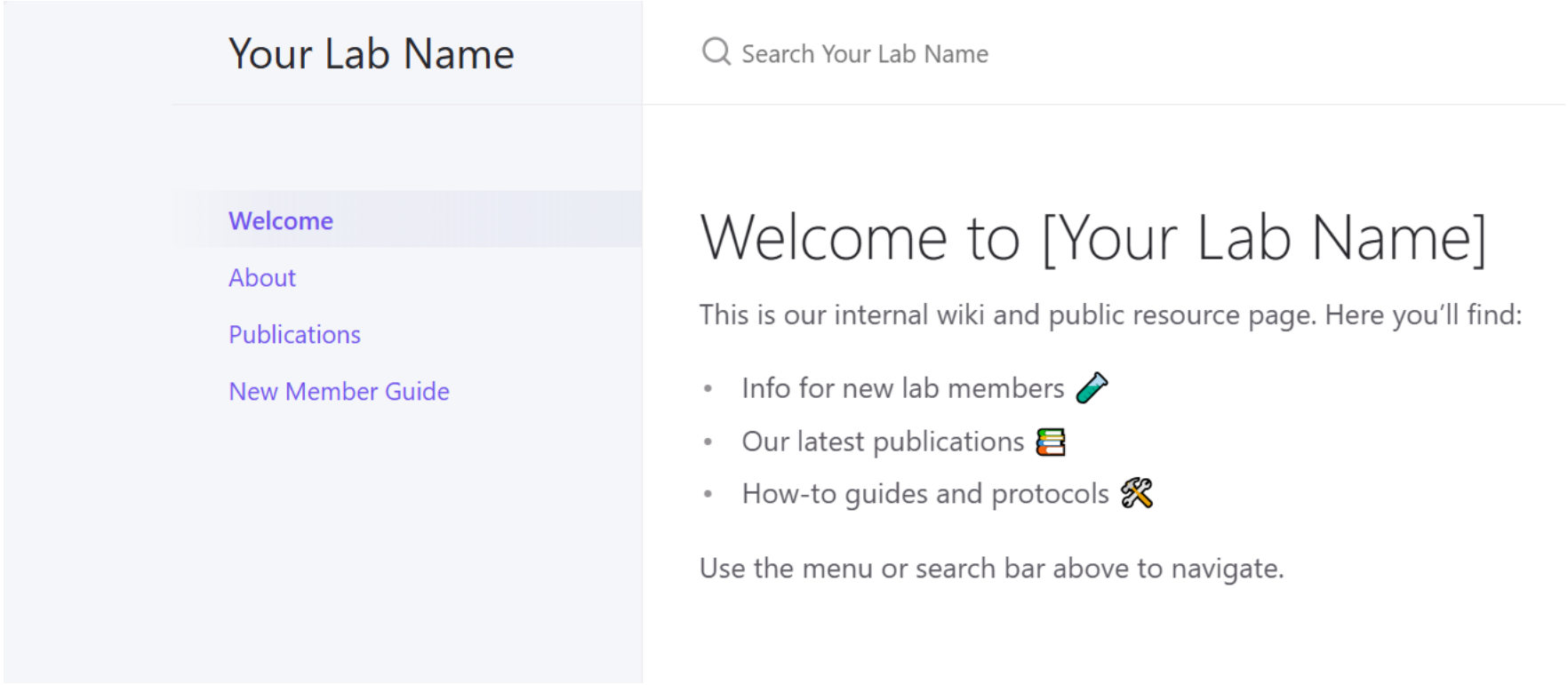
Creating an index markdown file

Edit | Preview | Spaces | 2 | Soft wrap

```
---
title: Welcome
nav_order: 1
---

# Welcome to [Your Lab Name]

This is our internal wiki and public resource page. Here you'll find:

- Info for new lab members 🧪
- Our latest publications 📚
- How-to guides and protocols 🛠️

Use the menu or search bar above to navigate.

```

Quick example

https://thisismytestgit.github.io/



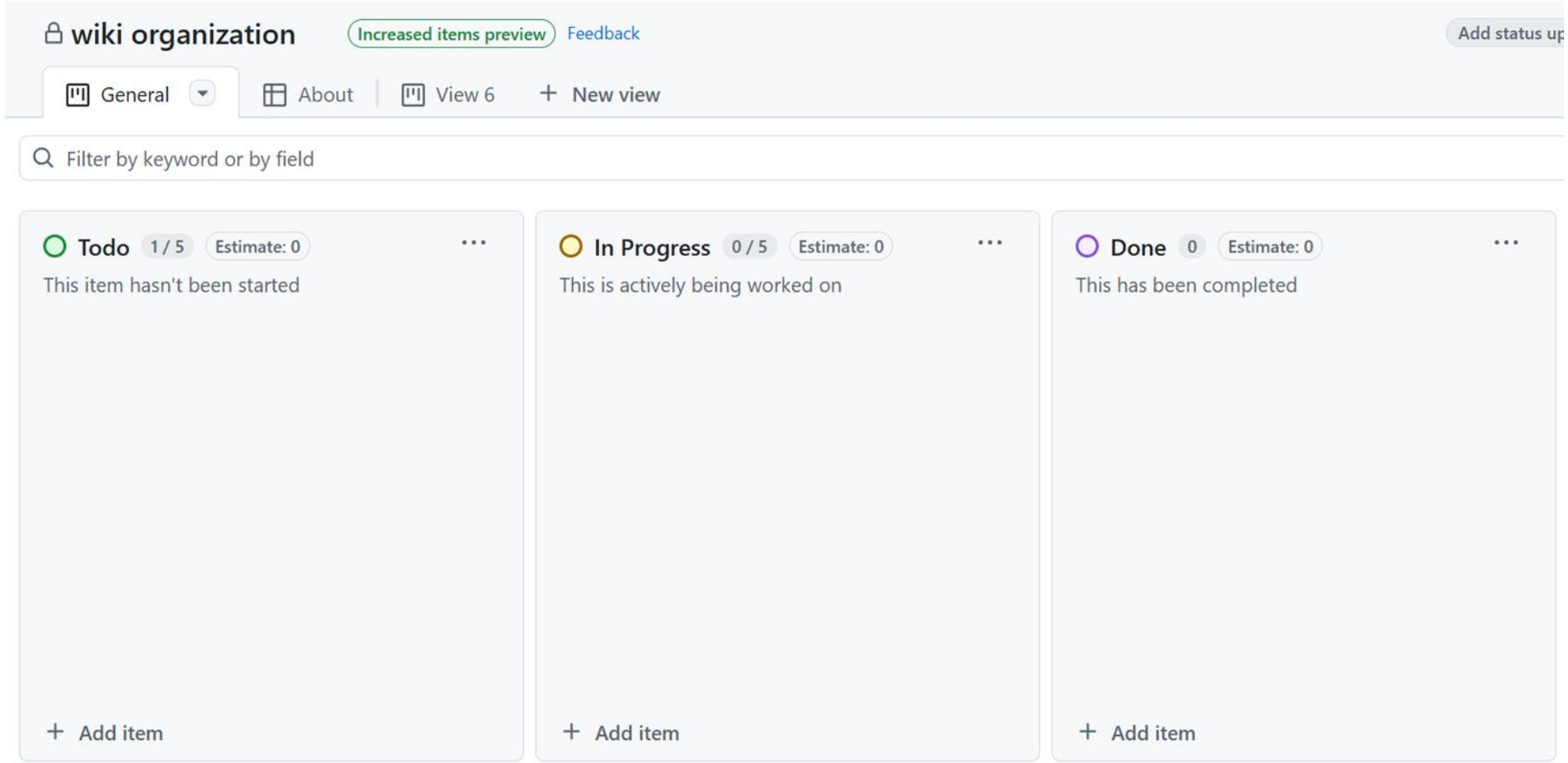
Collaborative Editing

Why it matters:

- 🧠 Collective Brainpower – Everyone contributes what they know
- 📄 Keeps everyone on the same page
- 🔁 Prevents duplicated effort
- 📌 Tracks who’s doing what
- 👀 Helps everyone see what’s happening in real time

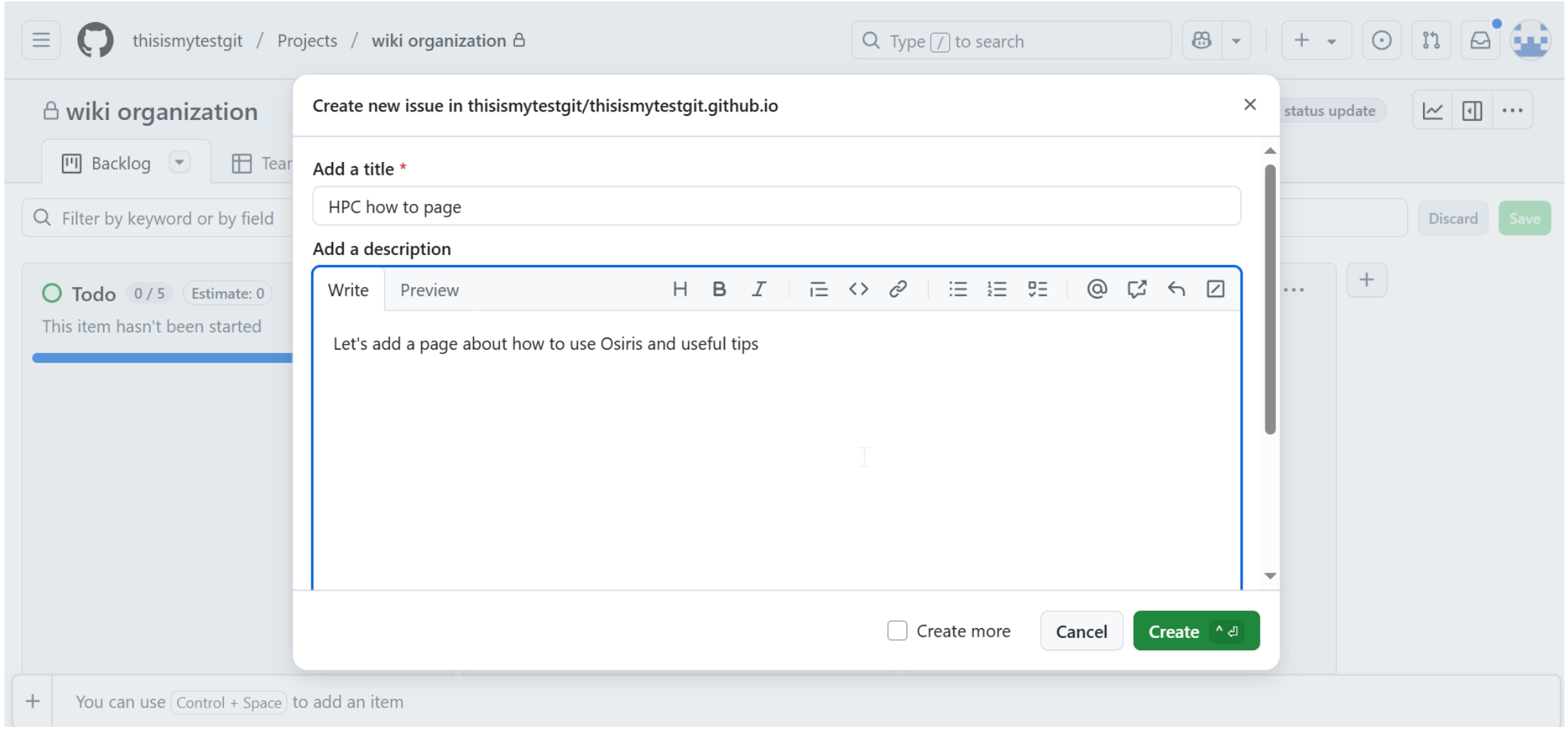
Using GitHub Projects to organize the tasks

- A tool to manage and track tasks (issues) directly inside GitHub
- Tasks move through columns, e.g.: "To do" → "In progress" → "Done"
- Helps organize work within a group of contributors



Proposing changes to the wiki

1. Open an Issue: “HPC how to page"



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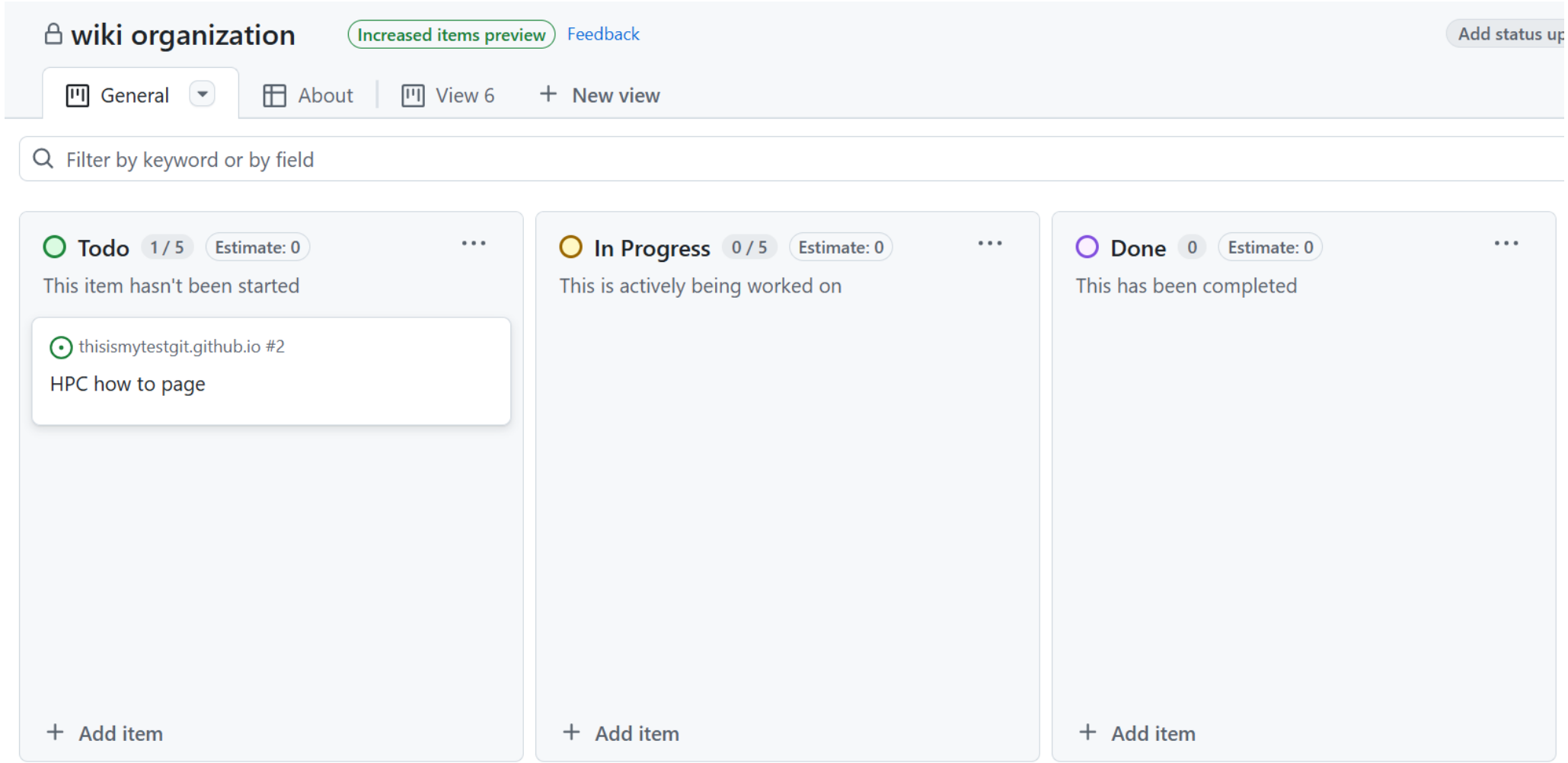
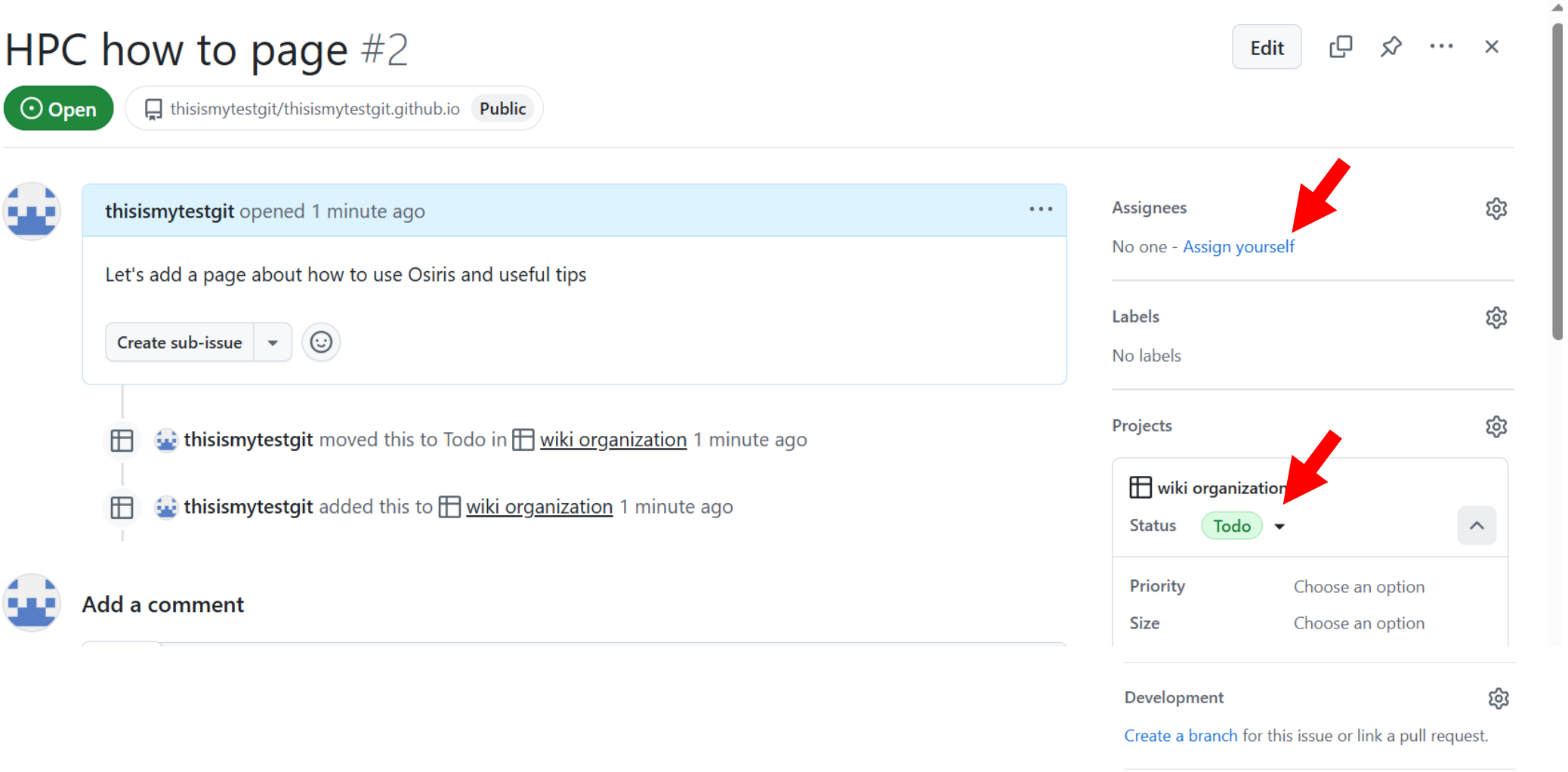


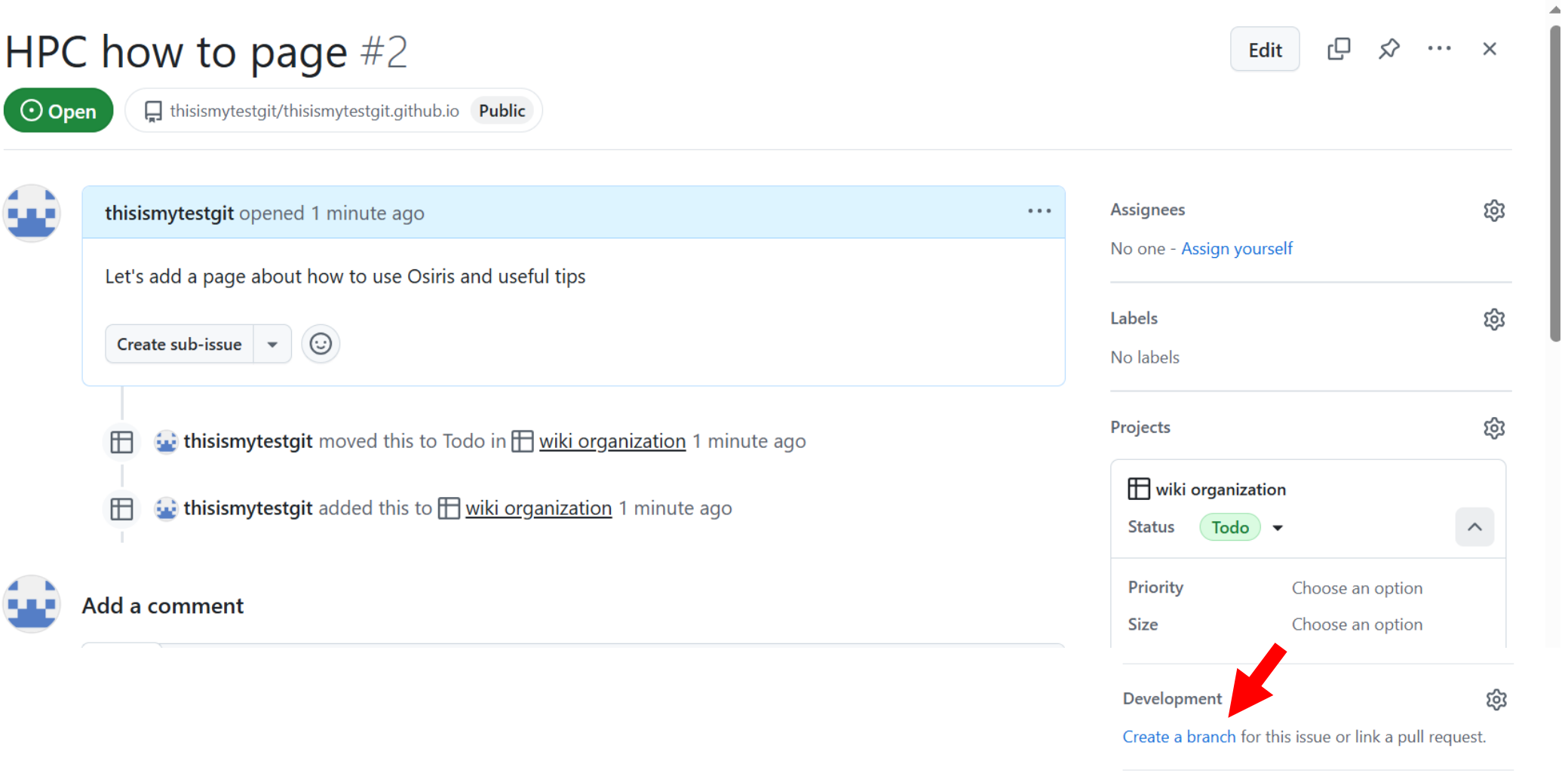
Proposing changes to the wiki

2. Assign the issue to yourself or a colleague
3. Add to the project board ("To Do“ or “In Progress”)



Proposing changes to the wiki

4. Create a branch and work on it



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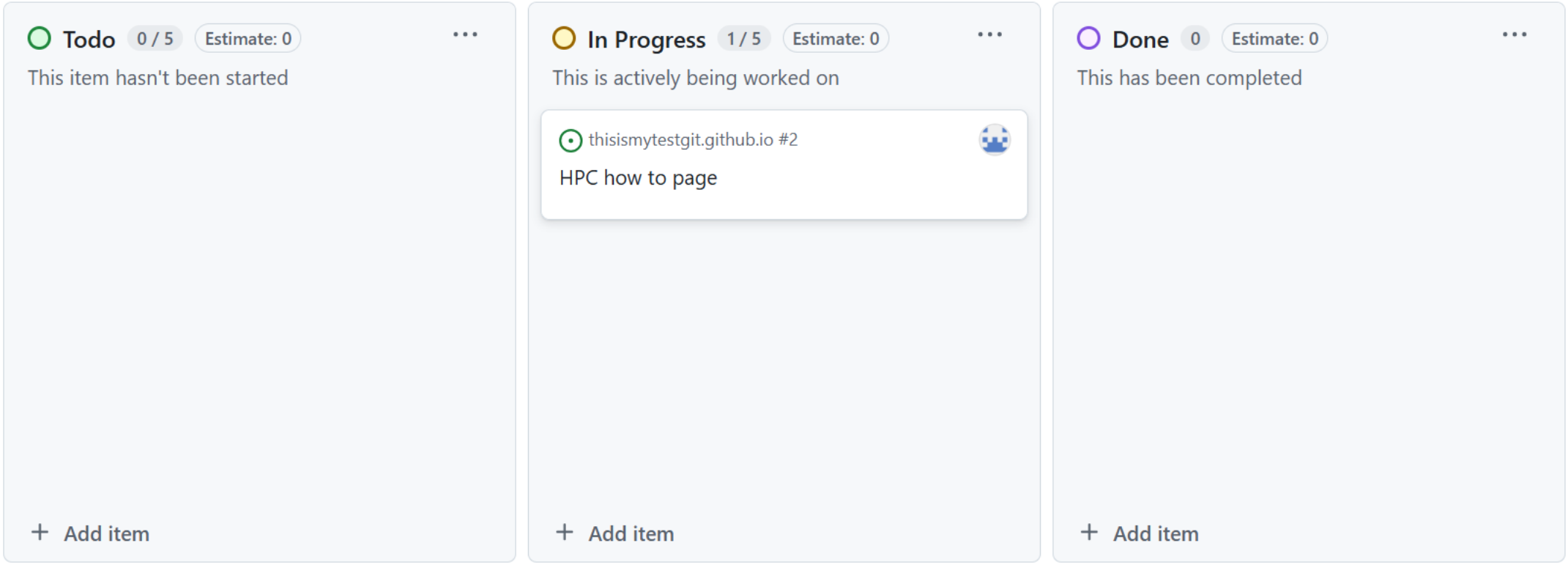
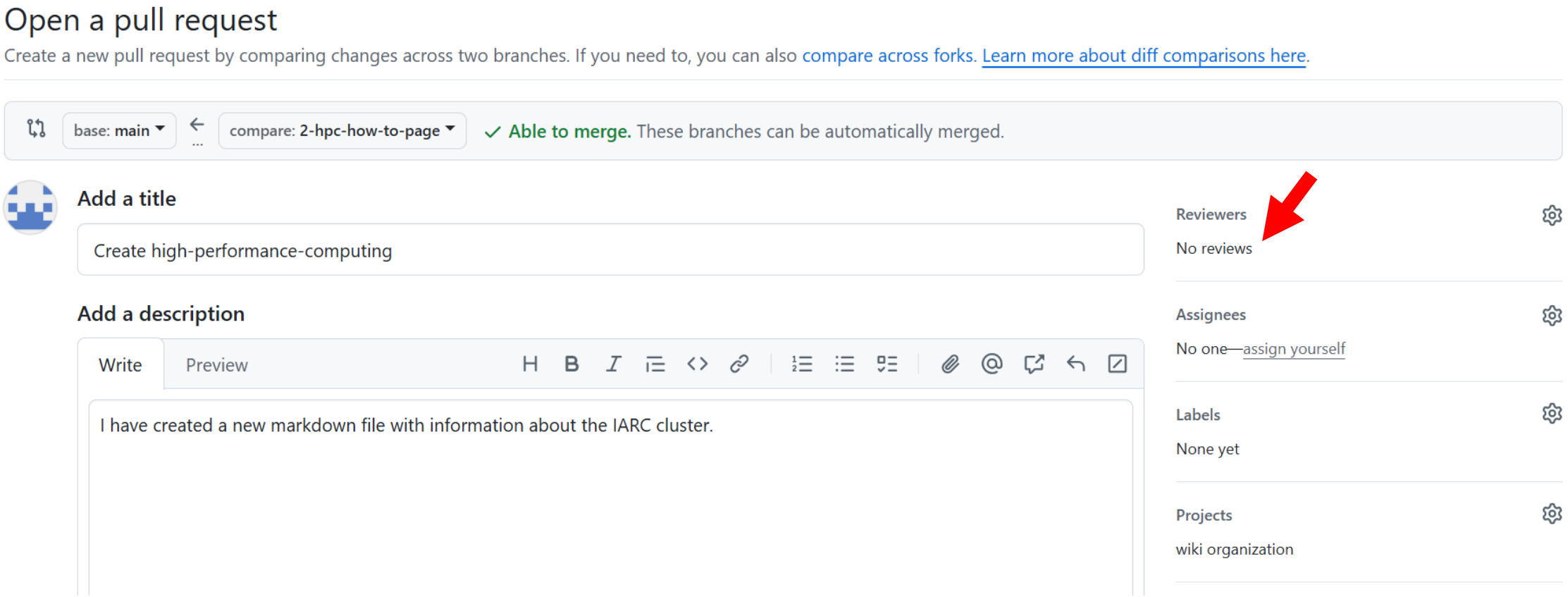


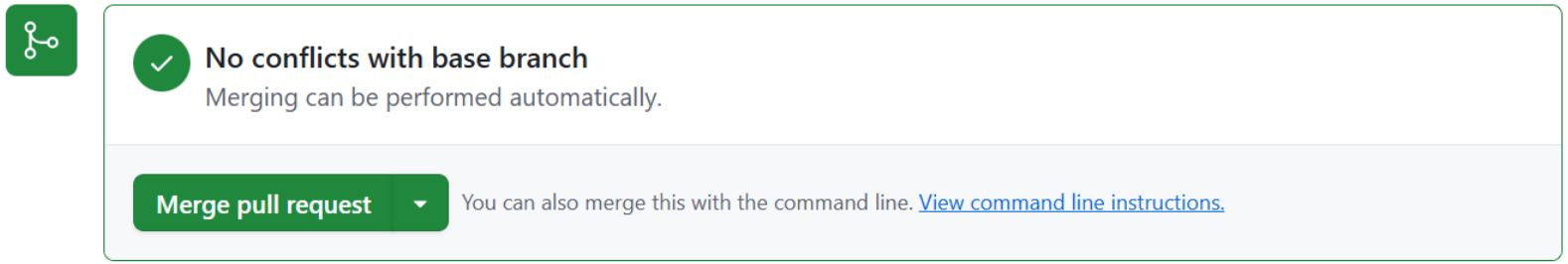
Proposing changes to the wiki

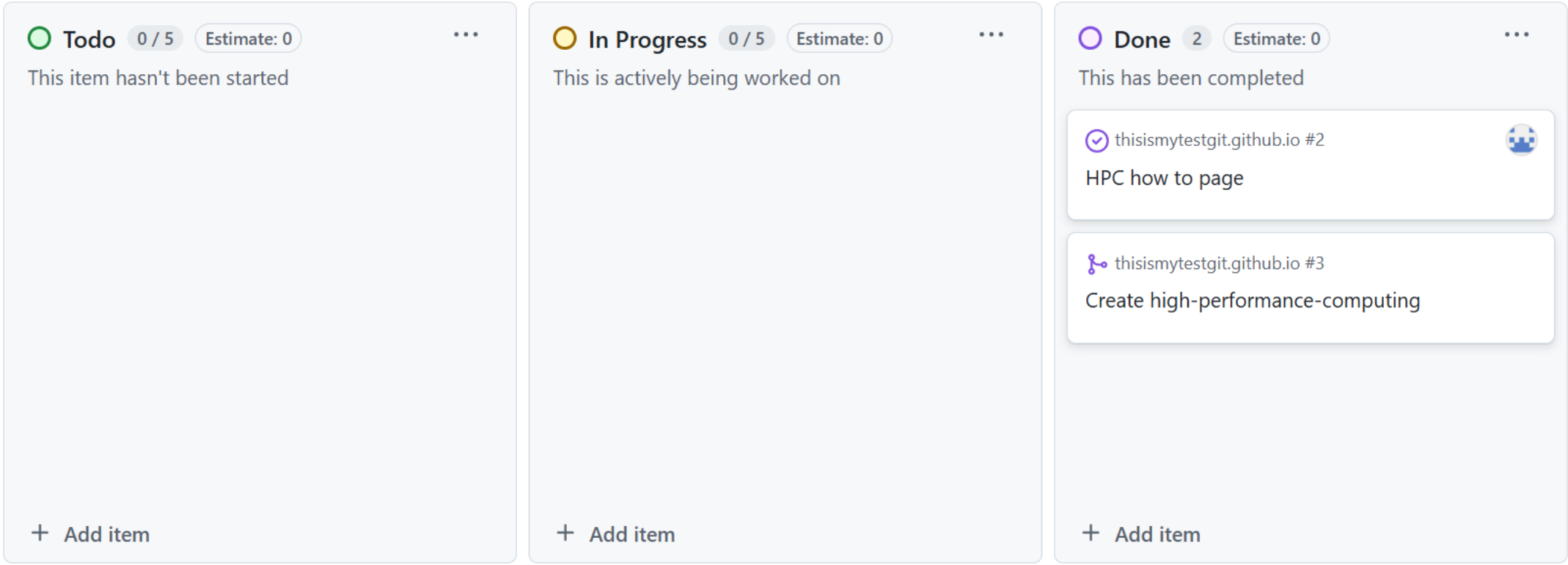
5. Open a Pull Request to propose your changes to the Wiki.
6. Request reviewers (e.g., someone familiar with the topic)
7. Reviewers can comment, approve, or suggest edits before merging



Proposing changes to the wiki

8. Merge after review
9. Move task to "Done"





https://thisismytestgit.github.io/

High Performance Computing

At IARC, HPC (High Performance Computing), HTC (High Throughput Computing) or simply cluster refer to the same system. It is a set of powerful computers (servers) that interact together to run intensive calculations or tasks, usually called “jobs”.

Named Osiris, IARC HPC/HTC/cluster is the computing engine “behind the scene” for the SIT platform.

Check the Scientific IT documentation for more information.

Step 1: Request Access

To get access to the HPC cluster:

- Contact: [Your IT contact or lab manager]
- Fill out the request form here: [Insert link if applicable]
- Wait for confirmation and credentials

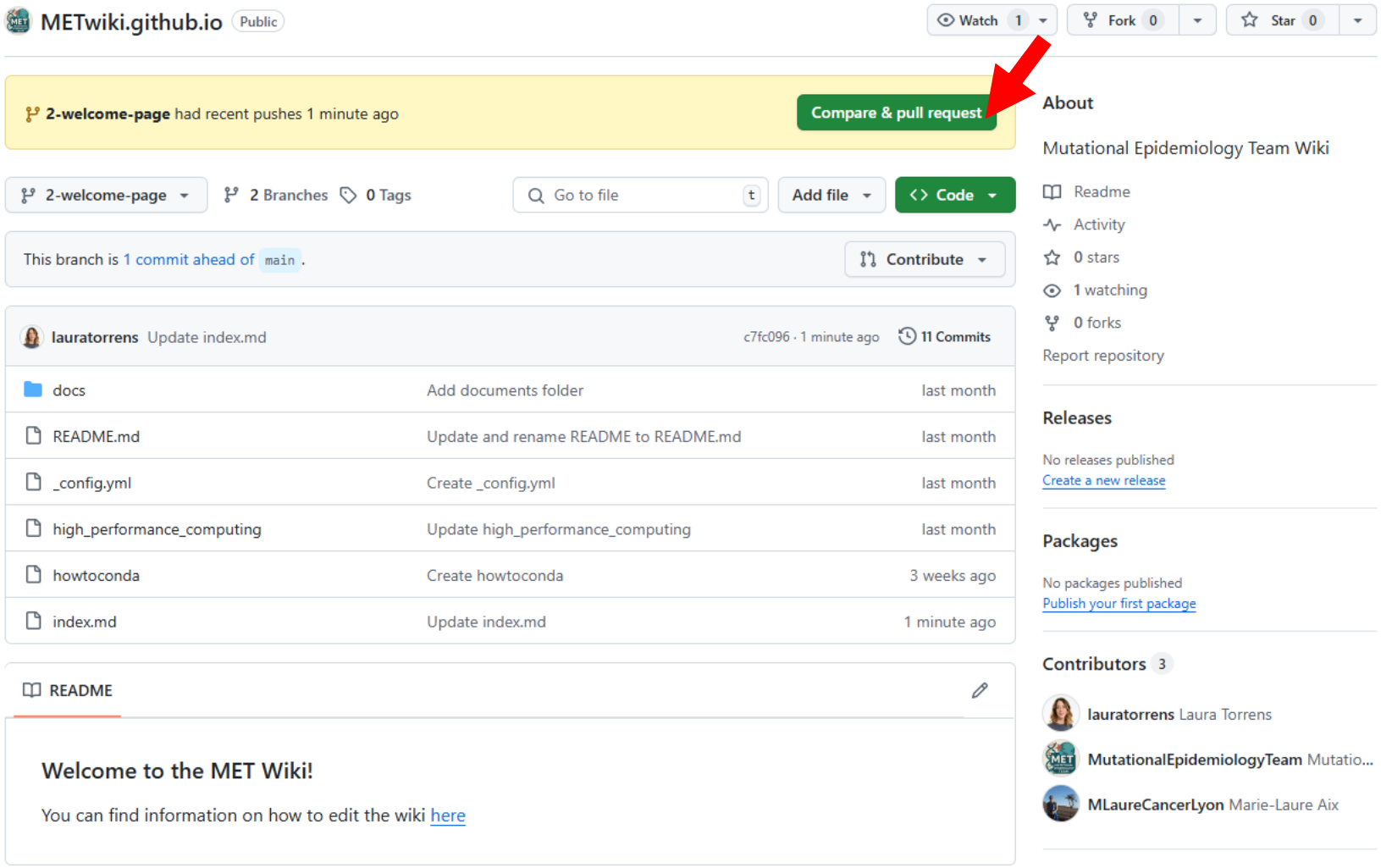
Step 2: Connect via SSH

Use the terminal to connect:

```
ssh your-username@hpc.cluster.edu
```

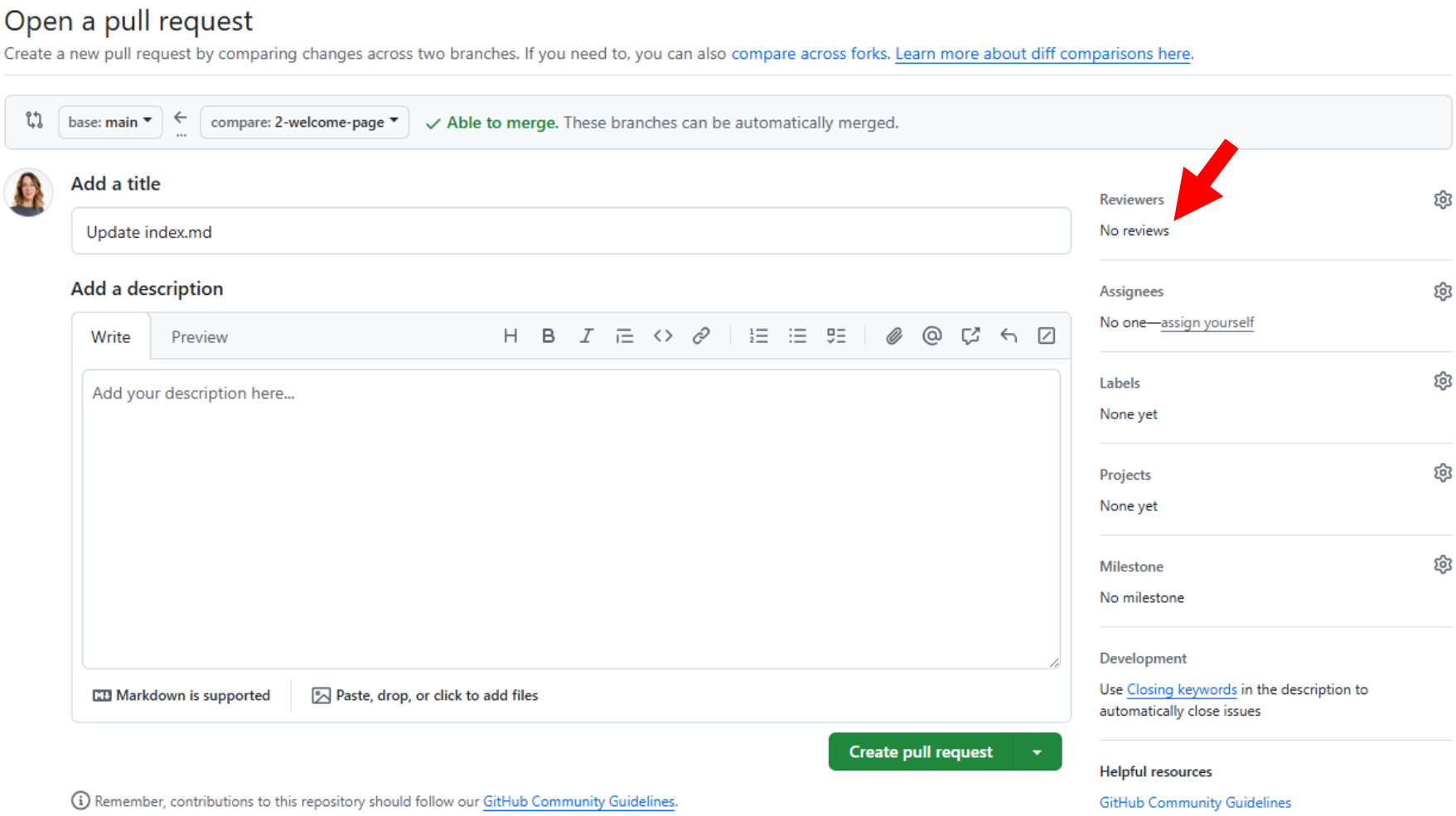
Pull request

Once you’re done, pull your changes



Pull request

Don’t forget to add a description and assign the Reviewer!



Google Sites

Website builder from Google

Example: Google Sites Wiki

	GitHub Page	Google site
👩‍💻 **Ease of Use**	basic Git and Markdown knowledge	beginner-friendly (no coding)
🤝 **Collaboration**	Pull requests, reviews, version control	Real-time editing (like Google Docs)
📝 **Version Control**	Full Git history	No built-in versioning
📦 **Hosting Code & Data**	Yes — it's built for that	No
🔐 **Access Control**	Not private in the free version (only Git repo)	Can be private

Keeping the wiki updated

Anyone can open a GitHub Issue when:

- They detect something is missing
- Instructions are unclear or outdated
- A tool or workflow has changed

Schedule Wiki Hackathons every few months to:

- Review open issues
- Add missing pages or sections
- Assign one “Wiki watcher” each time — just to help organize updates (not do all the work!).