ANITA B.ORG 21

GRACE HOPPER CELEBRATION

# GitHub 102

by

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Annu Joshi

# Quick Recap

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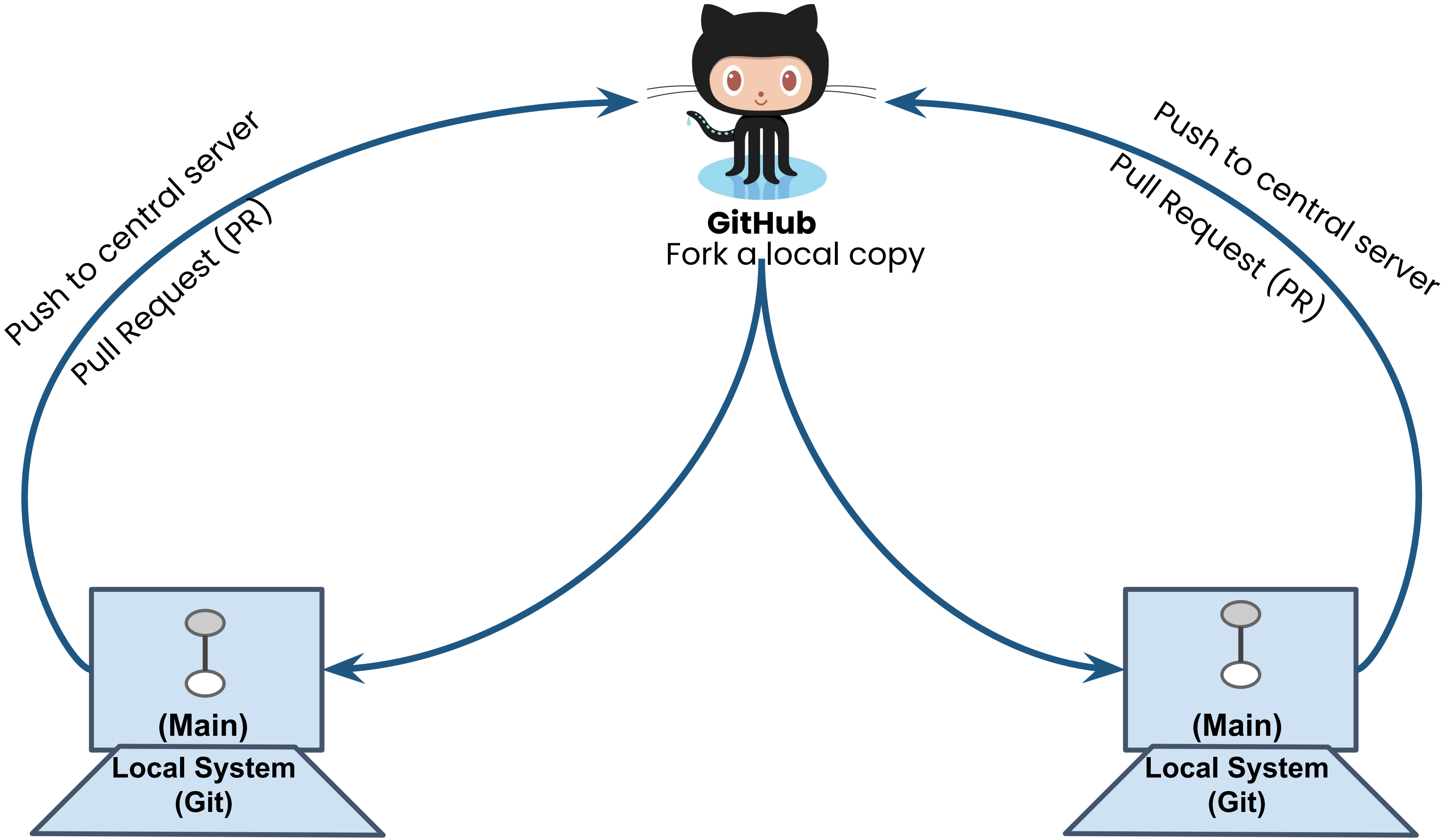
# Git vs GitHub

## Git

Git is a version control system that lets you manage and keep track of your source code history in your local system.

## GitHub

Cloud-based hosting service that lets you manage your Git repositories.


GitHub
Fork a local copy
Push to central server
Pull Request (PR)
Push to central server
Pull Request (PR)
(Main)
Local System
(Git)
(Main)
Local System
(Git)

# What you should already know:

**Git 101**

- git init
- git add
- git commit
- git clone
- git pull
- git push

**GitHub 101**

- Fork
- Clone
- Origin
- Fetch and Merge
- Making changes
- Creating a Pull Request

# Branches

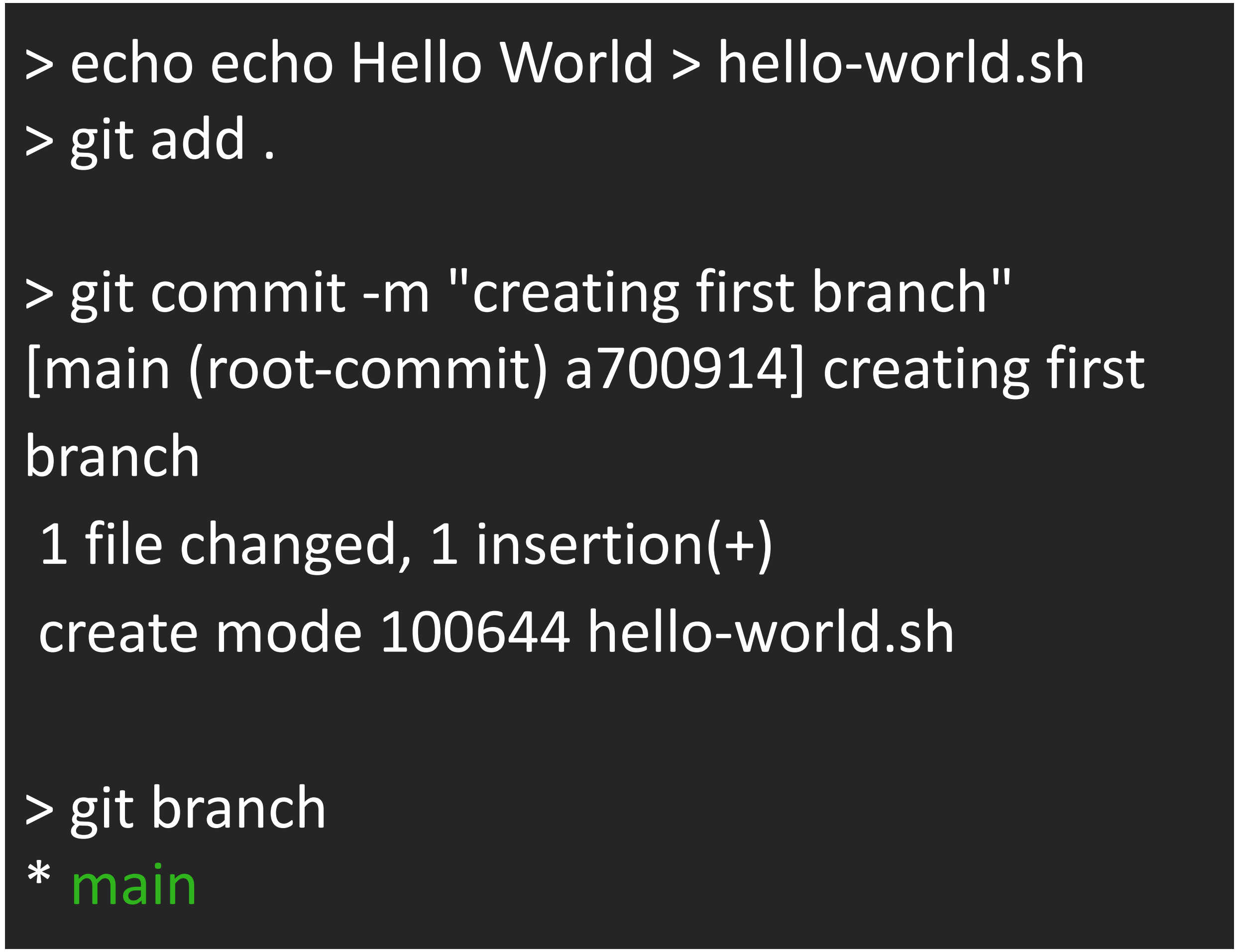
# Local branches

Let’s create our work environment:

```
> mkdir git-102
> cd git-102
> git init
> git branch
>
```

# Local branches

‘main’ branch was not created yet, let’s create it:



```
> echo echo Hello World > hello-world.sh
> git add .

> git commit -m "creating first branch"
[main (root-commit) a700914] creating first branch
 1 file changed, 1 insertion(+)
 create mode 100644 hello-world.sh


> git branch
* main
```

# ‘main’ branch

We usually start with branch ‘main’.

This is our default branch.

```
> git status
On branch main
nothing to commit, working tree clean
```

# Creating new local branch

Let’s create a new local branch.

Checkout command is the best option.

‘-b’ means create a new branch.

```
> git checkout -b my-first-branch
Switched to a new branch 'my-first-branch'
```

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# Congratulations!

You just created your second local branch.

# Edit local branch

Any commit will change only the branch:

```
> echo echo Hello World1 > hello-world.sh
> git add .
> git commit -m “Changed message to Hello World1”
[my-first-branch cc20e23] Changed message to Hello
World1
 1 file changed, 1 insertion(+), 1 deletion(-)
```

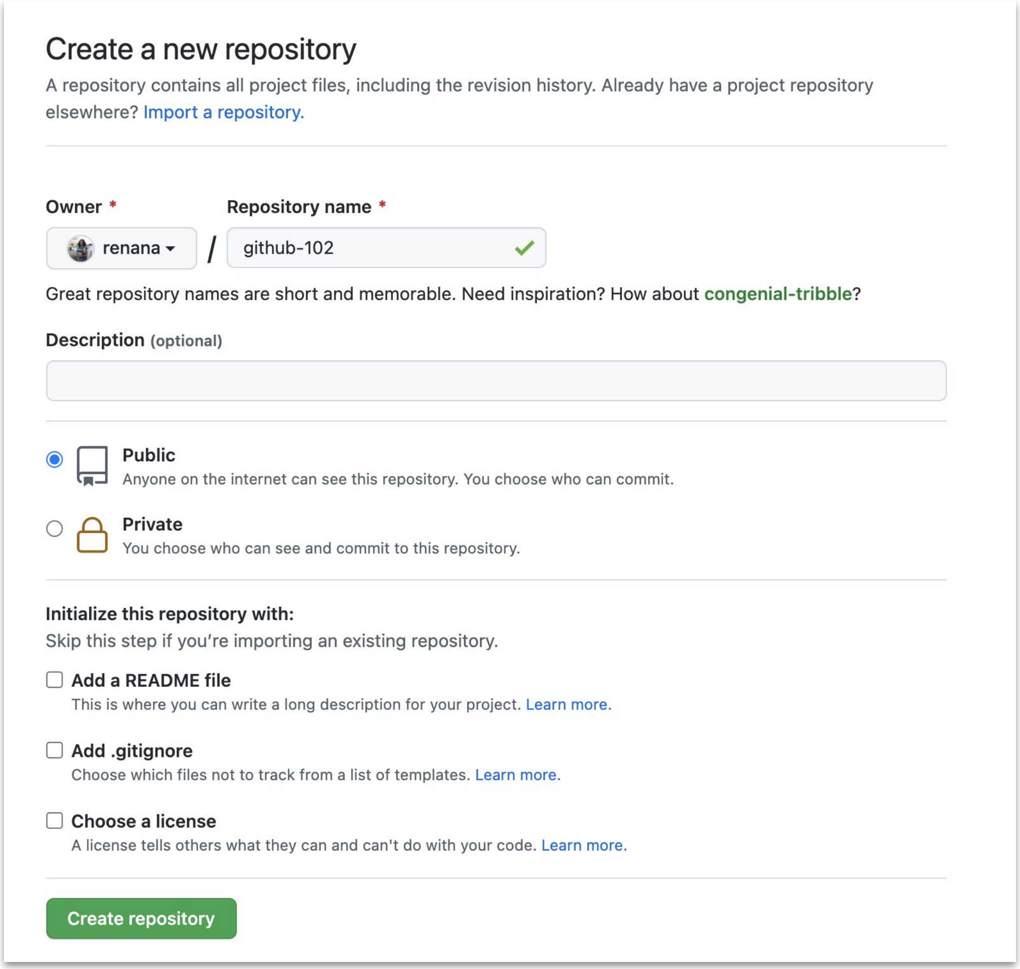
# Switching between local branches

Checkout command without ‘-b’ will switch between the branches.

```
> git checkout main
Switched to branch 'main'

> git checkout my-first-branch
Switched to branch 'my-first-branch'
```

# Create a remote repository



## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Owner * renana / Repository name * github-102 ✓

Great repository names are short and memorable. Need inspiration? How about congenial-tribble?

Description (optional)

● Public
Anyone on the internet can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

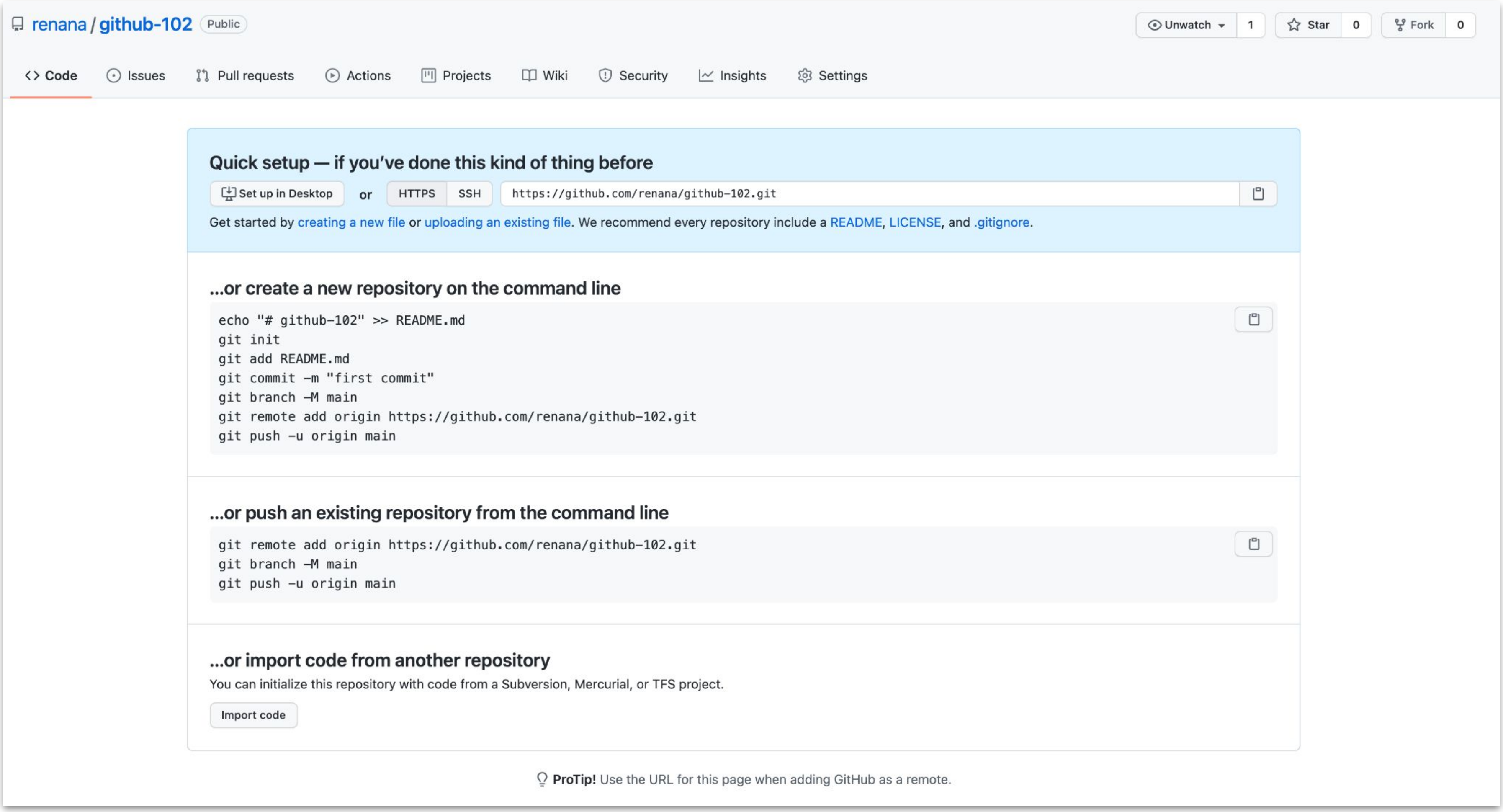
Initialize this repository with:
Skip this step if you're importing an existing repository.

□ Add a README file
This is where you can write a long description for your project. Learn more.

□ Add .gitignore
Choose which files not to track from a list of templates. Learn more.

□ Choose a license
A license tells others what they can and can't do with your code. Learn more.

# Your new remote repository



## Quick setup — if you've done this kind of thing before

```
https://github.com/renana/github-102.git
```

Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.

## ...or create a new repository on the command line

```
echo "# github-102" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/renana/github-102.git
git push -u origin main
```

## ...or push an existing repository from the command line

```
git remote add origin https://github.com/renana/github-102.git
git branch -M main
git push -u origin main
```

## ...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

**ProTip!** Use the URL for this page when adding GitHub as a remote.

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# Sync your local and remote repositories

Let’s push our local repository to the newly created remote repository:

```
> git remote add origin https://github.com/renana/github-102.git

> git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 240 bytes | 240.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/renana/github-102.git
 * [new branch]      main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
```

# Remote & local branches

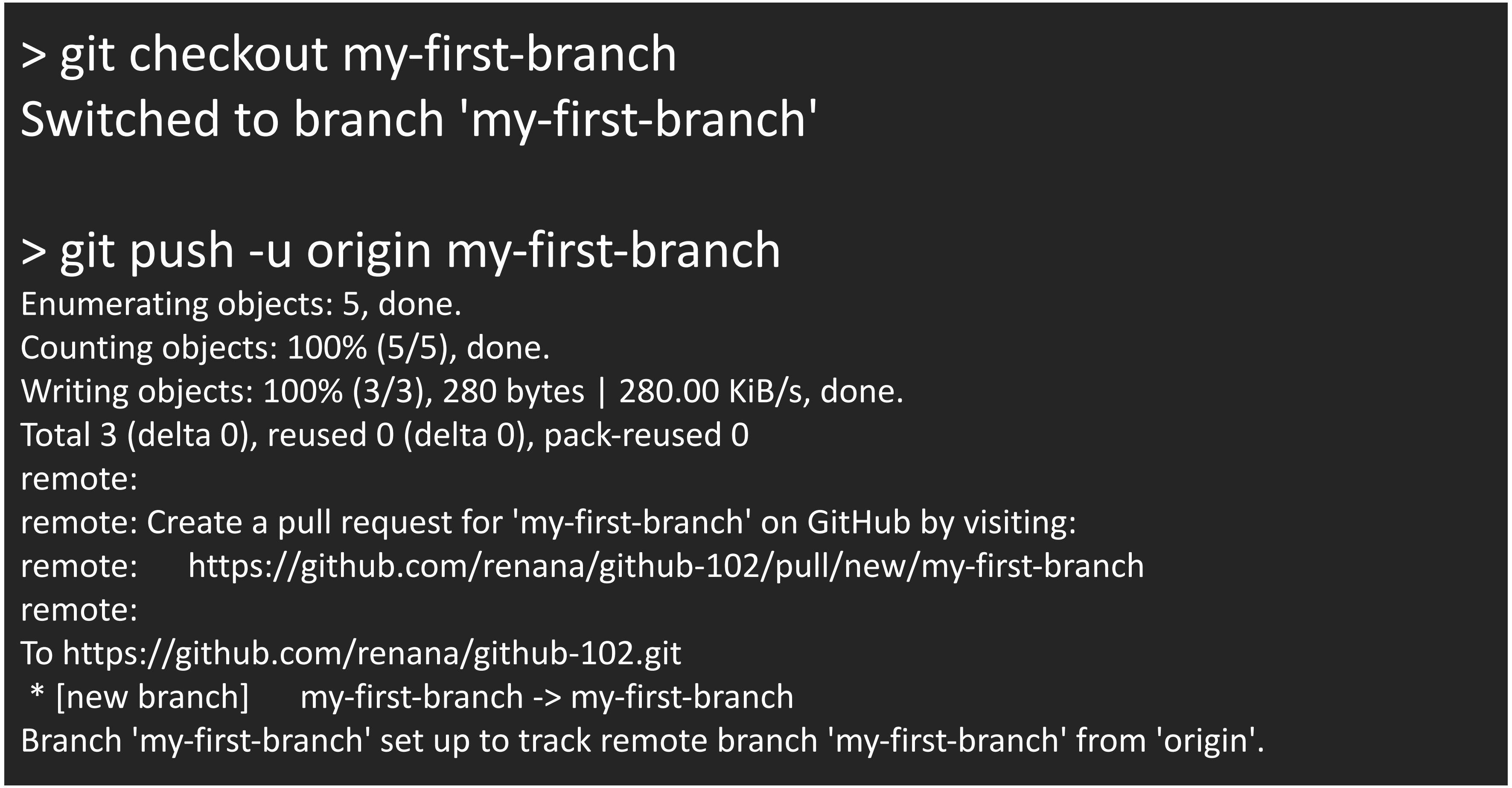
‘main’ branch is now sync with the remote ‘main’ branch:

```
> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

> git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

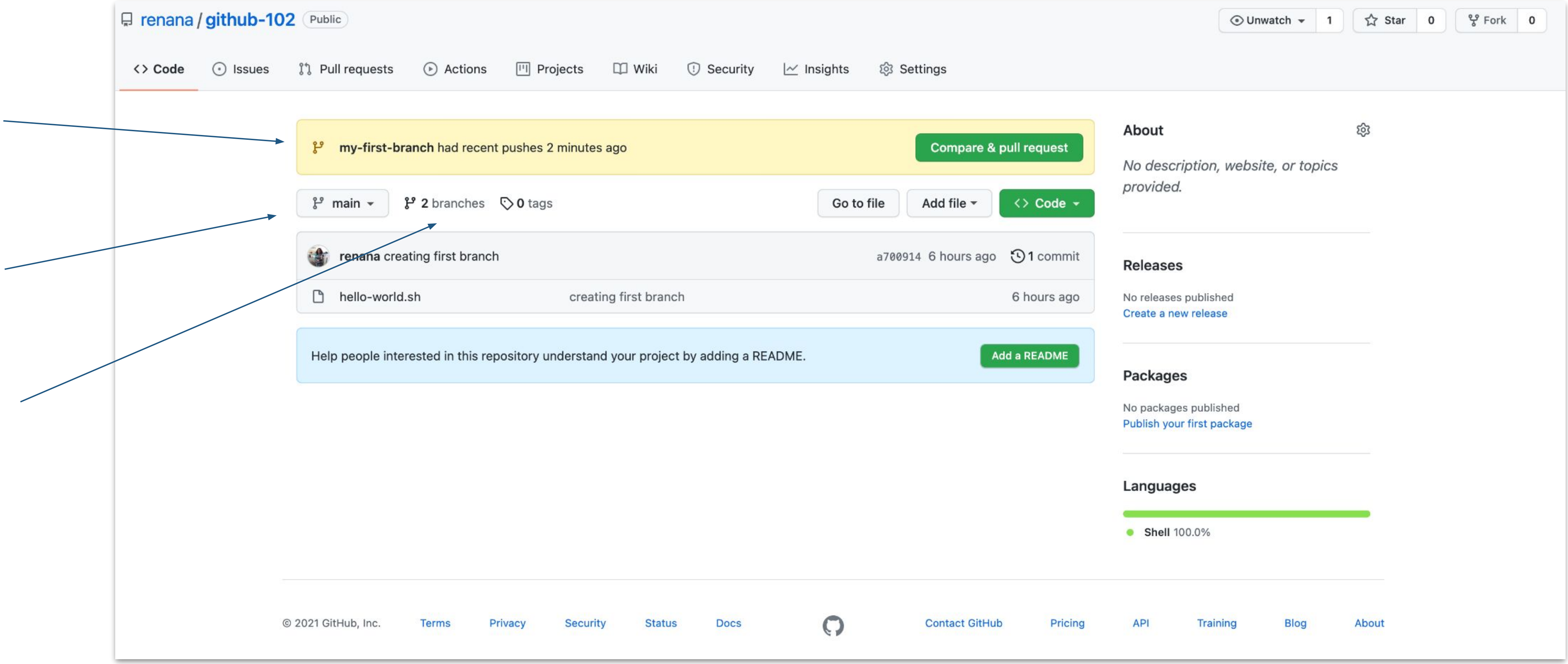
# Remote & local branches



```
> git checkout my-first-branch
Switched to branch 'my-first-branch'

> git push -u origin my-first-branch
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 280 bytes | 280.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'my-first-branch' on GitHub by visiting:
remote:      https://github.com/renana/github-102/pull/new/my-first-branch
remote:
To https://github.com/renana/github-102.git
 * [new branch]      my-first-branch -> my-first-branch
Branch 'my-first-branch' set up to track remote branch 'my-first-branch' from 'origin'.
```

# Remote branches



renana / github-102 Public

Unwatch 1 | Star 0 | Fork 0

Code | Issues | Pull requests | Actions | Projects | Wiki | Security | Insights | Settings

**my-first-branch** had recent pushes 2 minutes ago

Compare & pull request

main | 2 branches | 0 tags | Go to file | Add file | Code

**renana** creating first branch — a700914 6 hours ago — 1 commit

| | | |
|---|---|---|
| hello-world.sh | creating first branch | 6 hours ago |

Help people interested in this repository understand your project by adding a README. Add a README

**About**

*No description, website, or topics provided.*

**Releases**

No releases published
Create a new release

**Packages**

No packages published
Publish your first package

**Languages**

Shell 100.0%

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# Congratulations!

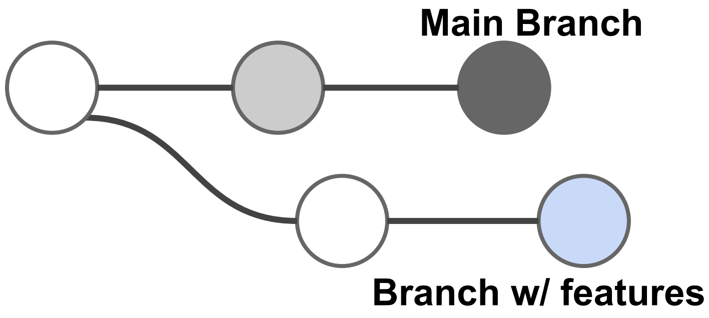
This Photo by Unknown Author is licensed under CC BY-SA

You just created your second remote branch.

# Local and Remote Branches

### Branches

Branches allow you to test different approaches and fix different issues in the same repository.



### Local

Branch that only you (the local user) can see. It exists only on your local machine.

### Remote

Branch on the remote server. Other users can also see it.

# Contributing to open source projects

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# Ways to contribute

### Creating issues

- Report a bug
- Propose a new feature

### Fixing issues

- Claim issues and submit pull requests with your work.

### Review proposed solutions

- Participate in issues discussions
- Comment on pull requests

# GitHub Issues

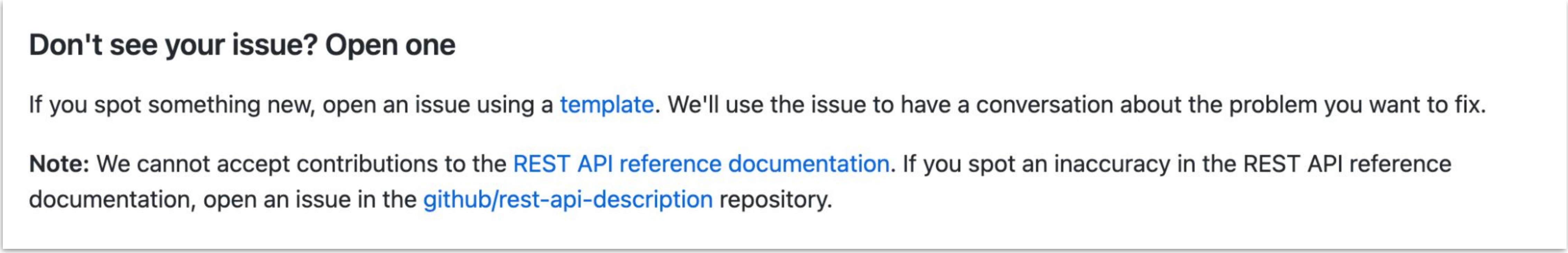
Why do we need them?

- Keep track of tasks and bugs
- Keep track of enhancement proposals

# Reporting an issue

Step 1: RTM - Read the manual, or more precise the contribution guide.

For example this is from https://github.com/github/docs/blob/main/CONTRIBUTING.md



### Don't see your issue? Open one

If you spot something new, open an issue using a template. We'll use the issue to have a conversation about the problem you want to fix.

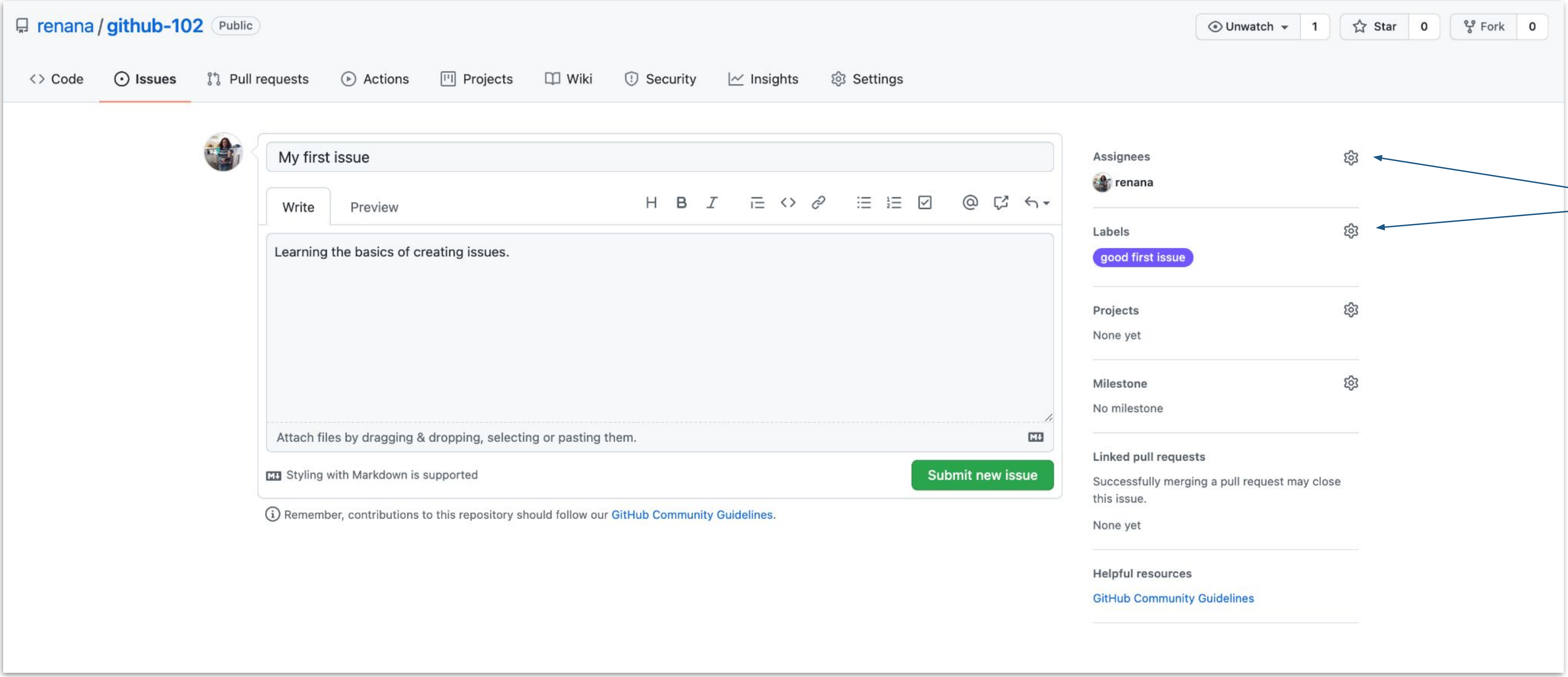
**Note:** We cannot accept contributions to the REST API reference documentation. If you spot an inaccuracy in the REST API reference documentation, open an issue in the github/rest-api-description repository.

# Reporting an issue

Step 2: follow the instructions and create an issue.

Let’s create one in our own repository to get the feel of it.

# Reporting an issue



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My first issue

Learning the basics of creating issues.

Assignees: renana

Labels: good first issue

Projects: None yet

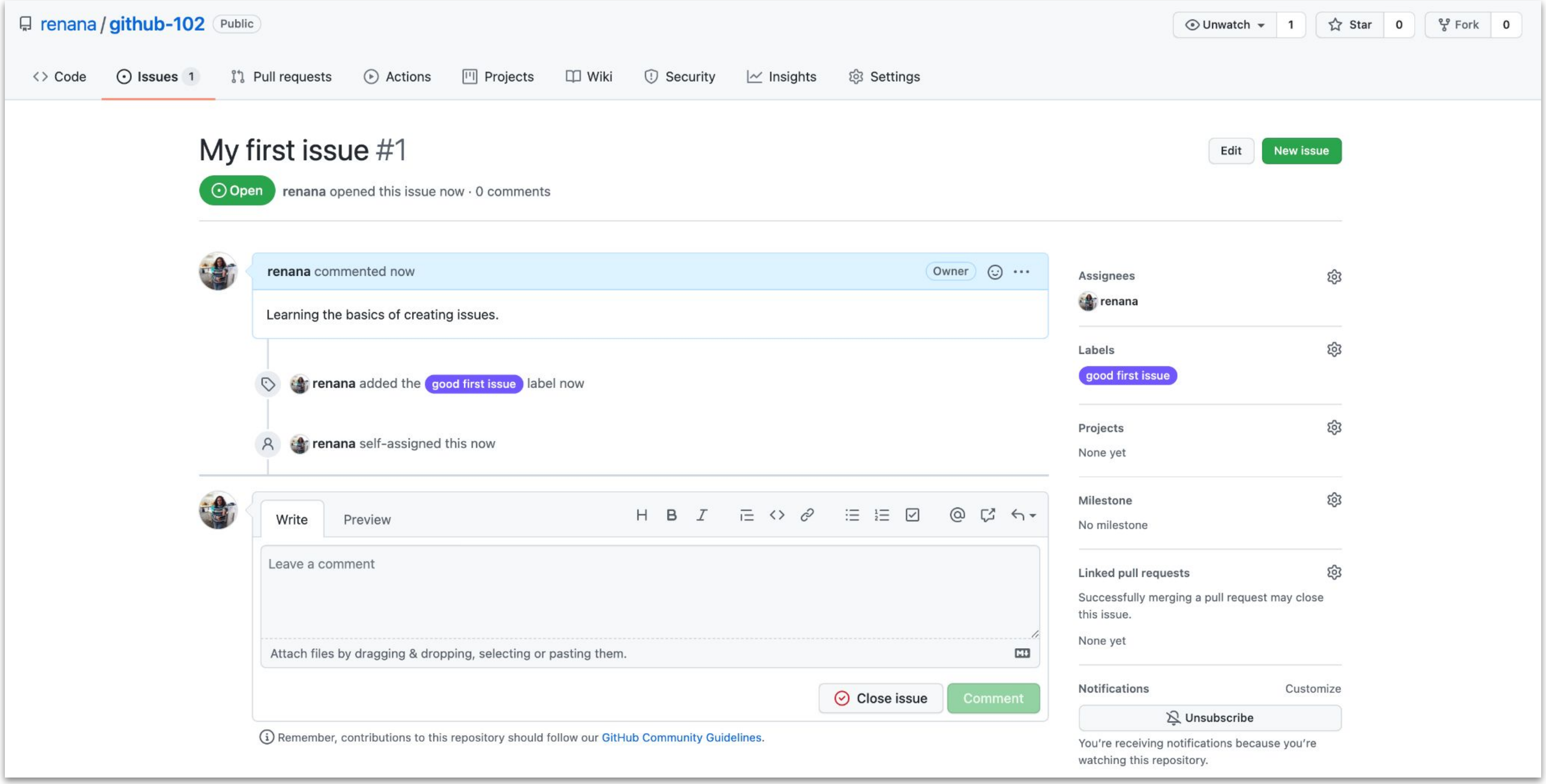
Milestone: No milestone

Linked pull requests: Successfully merging a pull request may close this issue. None yet

Helpful resources: GitHub Community Guidelines

Remember, contributions to this repository should follow our GitHub Community Guidelines.

# Reporting an issue



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My first issue #1

Open renana opened this issue now · 0 comments

renana commented now Owner

Learning the basics of creating issues.

renana added the good first issue label now

renana self-assigned this now

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Remember, contributions to this repository should follow our GitHub Community Guidelines.

Assignees: renana

Labels: good first issue

Projects: None yet

Milestone: No milestone

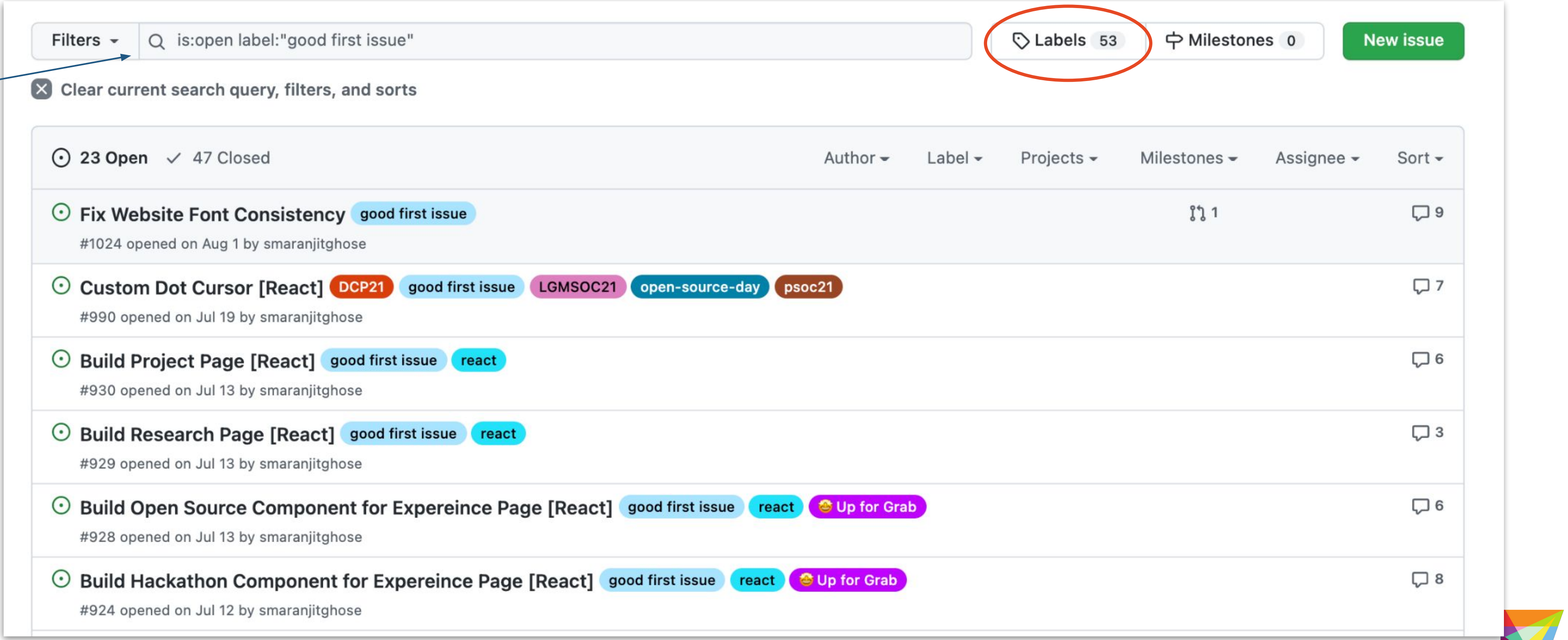
Linked pull requests: Successfully merging a pull request may close this issue. None yet

Notifications Customize

You're receiving notifications because you're watching this repository.

# Finding an issue

Use ‘good first issue’ label to find an issue to work on.



Filters ▾ is:open label:"good first issue"

Labels 53 Milestones 0 New issue

☒ Clear current search query, filters, and sorts

23 Open ✓ 47 Closed Author ▾ Label ▾ Projects ▾ Milestones ▾ Assignee ▾ Sort ▾

Fix Website Font Consistency good first issue 1 9
#1024 opened on Aug 1 by smaranjitghose

Custom Dot Cursor [React] DCP21 good first issue LGMSOC21 open-source-day psoc21 7
#990 opened on Jul 19 by smaranjitghose

Build Project Page [React] good first issue react 6
#930 opened on Jul 13 by smaranjitghose

Build Research Page [React] good first issue react 3
#929 opened on Jul 13 by smaranjitghose

Build Open Source Component for Expereince Page [React] good first issue react Up for Grab 6
#928 opened on Jul 13 by smaranjitghose

Build Hackathon Component for Expereince Page [React] good first issue react Up for Grab 8
#924 opened on Jul 12 by smaranjitghose

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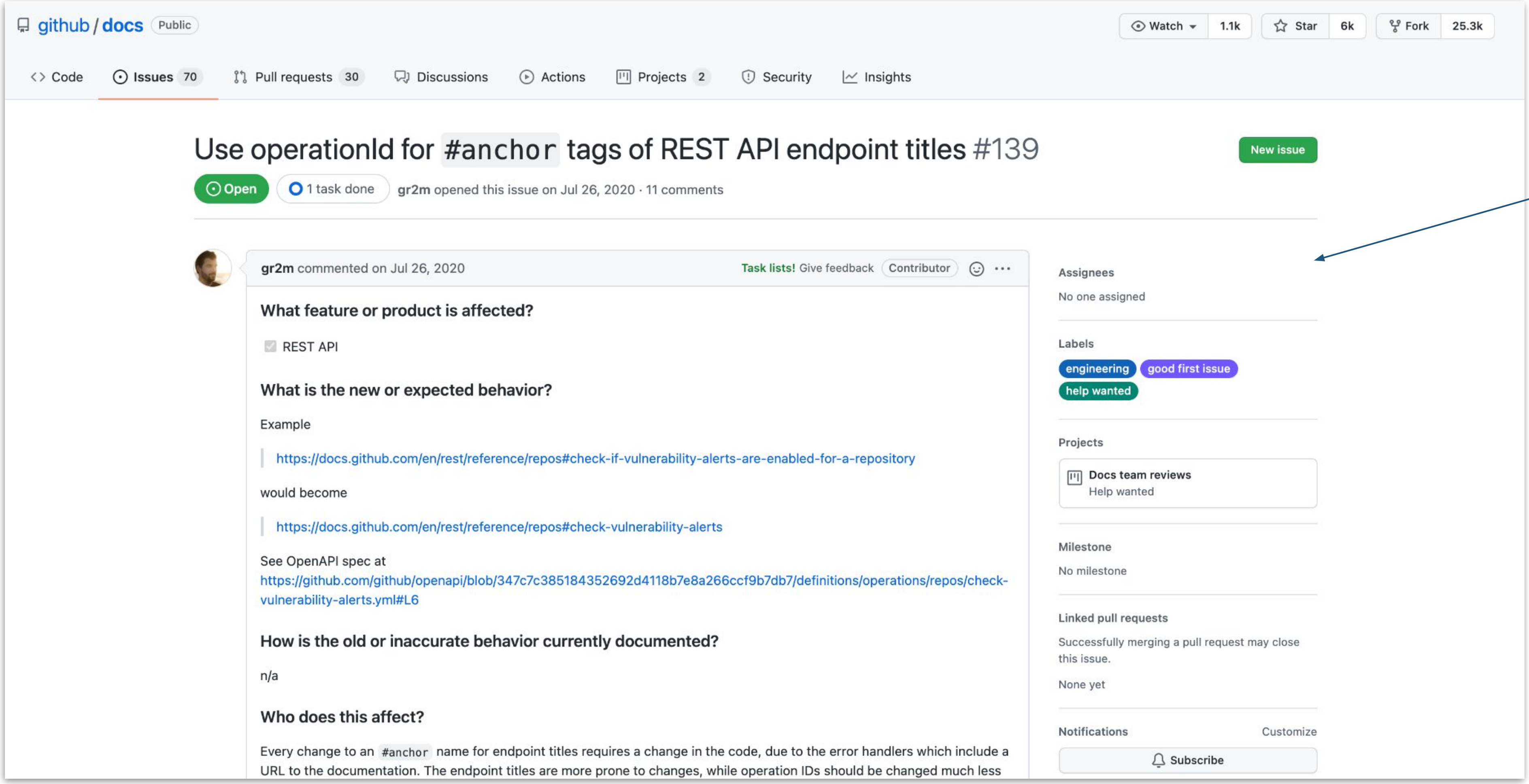
# Claiming an issue 💪



## Use operationId for `#anchor` tags of REST API endpoint titles #139

Open · 1 task done · **gr2m** opened this issue on Jul 26, 2020 · 11 comments

**gr2m** commented on Jul 26, 2020 — Task lists! Give feedback · Contributor

### What feature or product is affected?

☑ REST API

### What is the new or expected behavior?

Example

> https://docs.github.com/en/rest/reference/repos#check-if-vulnerability-alerts-are-enabled-for-a-repository

would become

> https://docs.github.com/en/rest/reference/repos#check-vulnerability-alerts

See OpenAPI spec at https://github.com/github/openapi/blob/347c7c385184352692d4118b7e8a266ccf9b7db7/definitions/operations/repos/check-vulnerability-alerts.yml#L6

### How is the old or inaccurate behavior currently documented?

n/a

### Who does this affect?

Every change to an `#anchor` name for endpoint titles requires a change in the code, due to the error handlers which include a URL to the documentation. The endpoint titles are more prone to changes, while operation IDs should be changed much less

**Assignees**

No one assigned

**Labels**

engineering · good first issue · help wanted

**Projects**

Docs team reviews — Help wanted

**Milestone**

No milestone

**Linked pull requests**

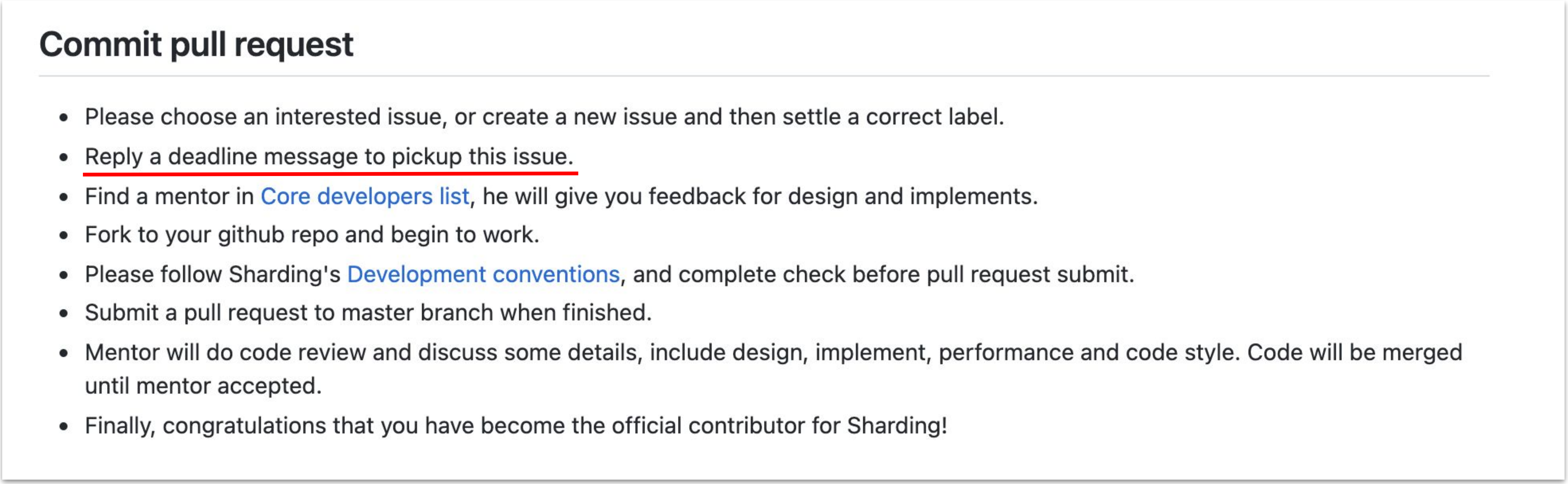
Successfully merging a pull request may close this issue.

None yet

**Notifications** — Customize

Subscribe

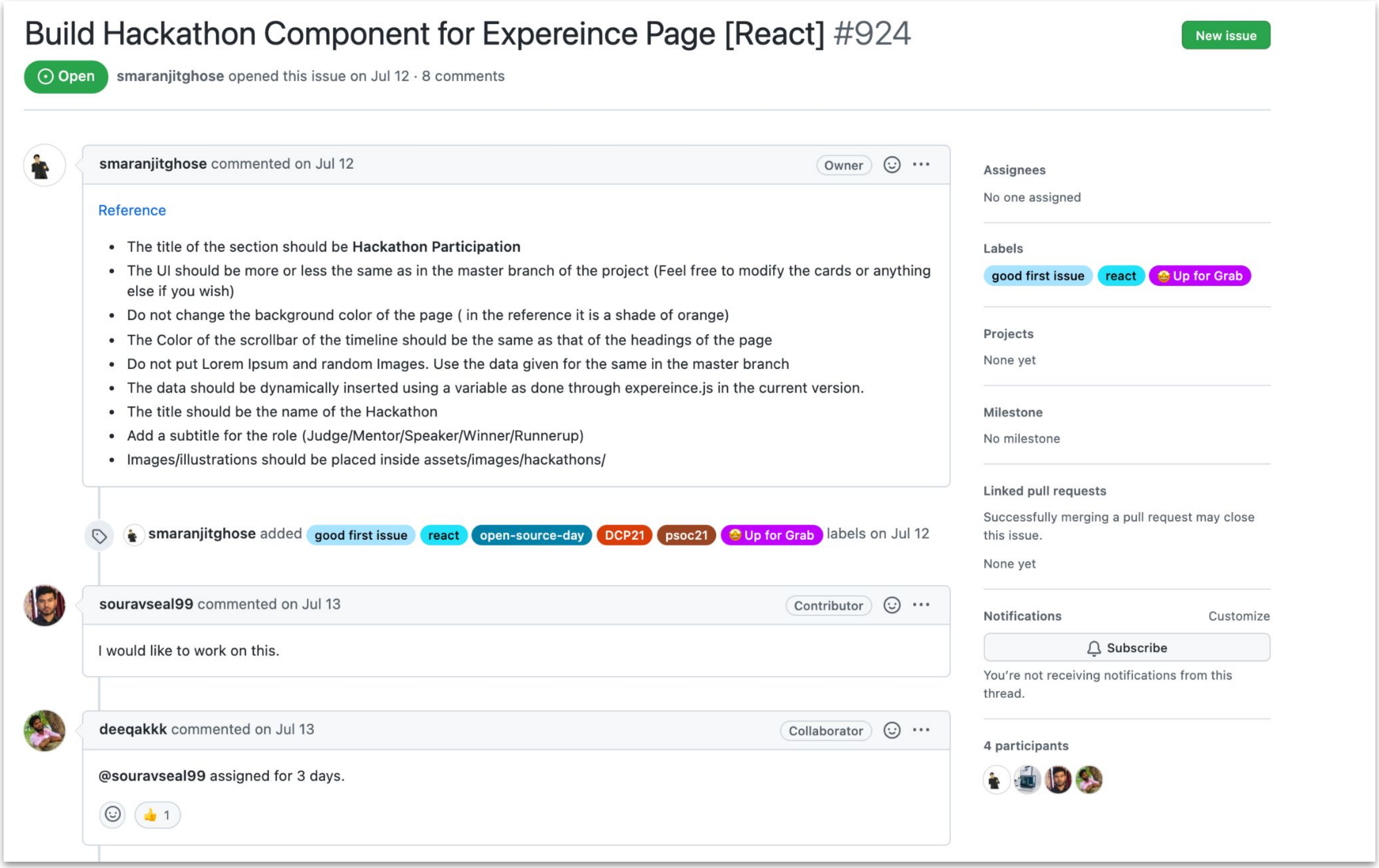
# Claiming an issue 💪



## Commit pull request

- Please choose an interested issue, or create a new issue and then settle a correct label.
- Reply a deadline message to pickup this issue.
- Find a mentor in Core developers list, he will give you feedback for design and implements.
- Fork to your github repo and begin to work.
- Please follow Sharding's Development conventions, and complete check before pull request submit.
- Submit a pull request to master branch when finished.
- Mentor will do code review and discuss some details, include design, implement, performance and code style. Code will be merged until mentor accepted.
- Finally, congratulations that you have become the official contributor for Sharding!

# Claiming an issue 💪



## Build Hackathon Component for Expereince Page [React] #924

⊙ Open **smaranjitghose** opened this issue on Jul 12 · 8 comments

**smaranjitghose** commented on Jul 12

Reference

- The title of the section should be **Hackathon Participation**
- The UI should be more or less the same as in the master branch of the project (Feel free to modify the cards or anything else if you wish)
- Do not change the background color of the page ( in the reference it is a shade of orange)
- The Color of the scrollbar of the timeline should be the same as that of the headings of the page
- Do not put Lorem Ipsum and random Images. Use the data given for the same in the master branch
- The data should be dynamically inserted using a variable as done through expereince.js in the current version.
- The title should be the name of the Hackathon
- Add a subtitle for the role (Judge/Mentor/Speaker/Winner/Runnerup)
- Images/illustrations should be placed inside assets/images/hackathons/

**smaranjitghose** added good first issue react open-source-day DCP21 psoc21 😀 Up for Grab labels on Jul 12

**souravseal99** commented on Jul 13

I would like to work on this.

**deeqakkk** commented on Jul 13

@souravseal99 assigned for 3 days.

👍 1

**Assignees**

No one assigned

**Labels**

good first issue react 😀 Up for Grab

**Projects**

None yet

**Milestone**

No milestone

**Linked pull requests**

Successfully merging a pull request may close this issue.

None yet

**Notifications** Customize

You're not receiving notifications from this thread.

**4 participants**

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# Breakout rooms tasks

Round 1 of 2 - 10 minutes

1. Clone the repository assigned to your room
2. Find an issue and claim it
3. Make sure no-one else claimed it first
4. Work on the fix and create a pull request (PR)
5. Ask your peers to review and approve it
6. Merge your PR
7. Check if your peers need help

# Survey time

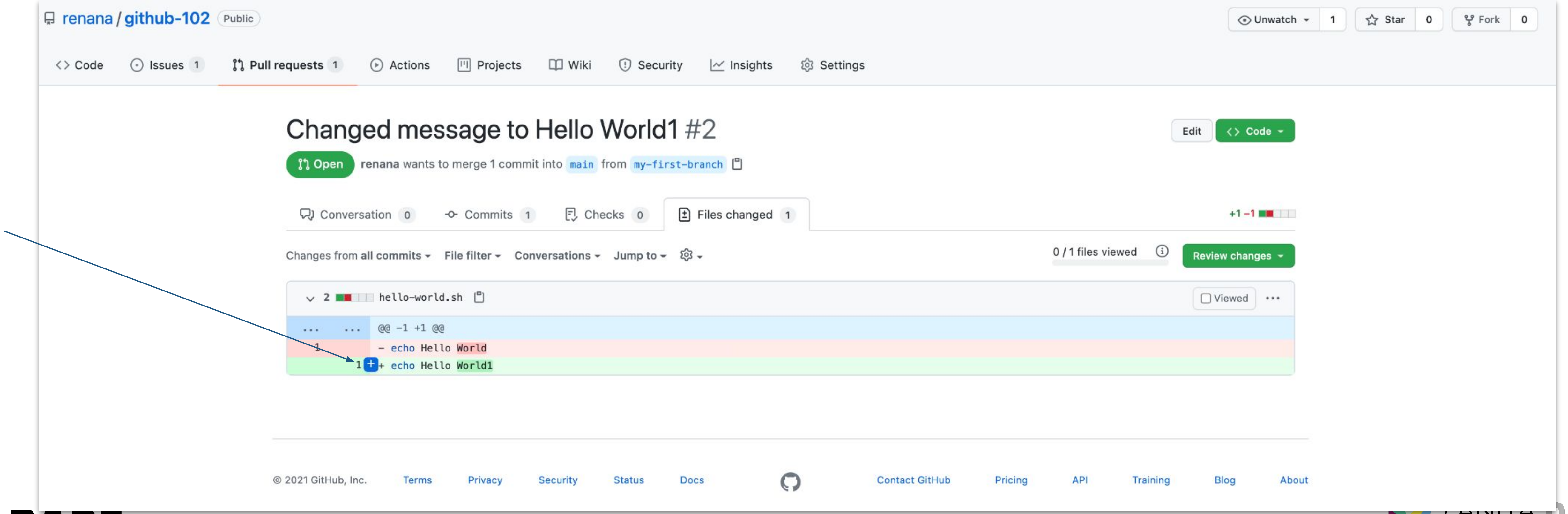
- How much were you able to finish in this time?
  - I wasn’t able to do anything
  - Claimed an issue
  - Claimed an issue and started working on it
  - Claimed an issue and opened a PR with solution
  - Claimed an issues, merged the solution and closed the issue
  - Completed several issues

# Reviewing a PR

- Comments should be relevant and discussion professional
- Comments should be clear and include all necessary information
- If you are not sure, tag a person that knows and can confirm your suspicion
- **Remember the code-of-conduct!**

# Adding comments to a PR

Add a comment by clicking the '+':



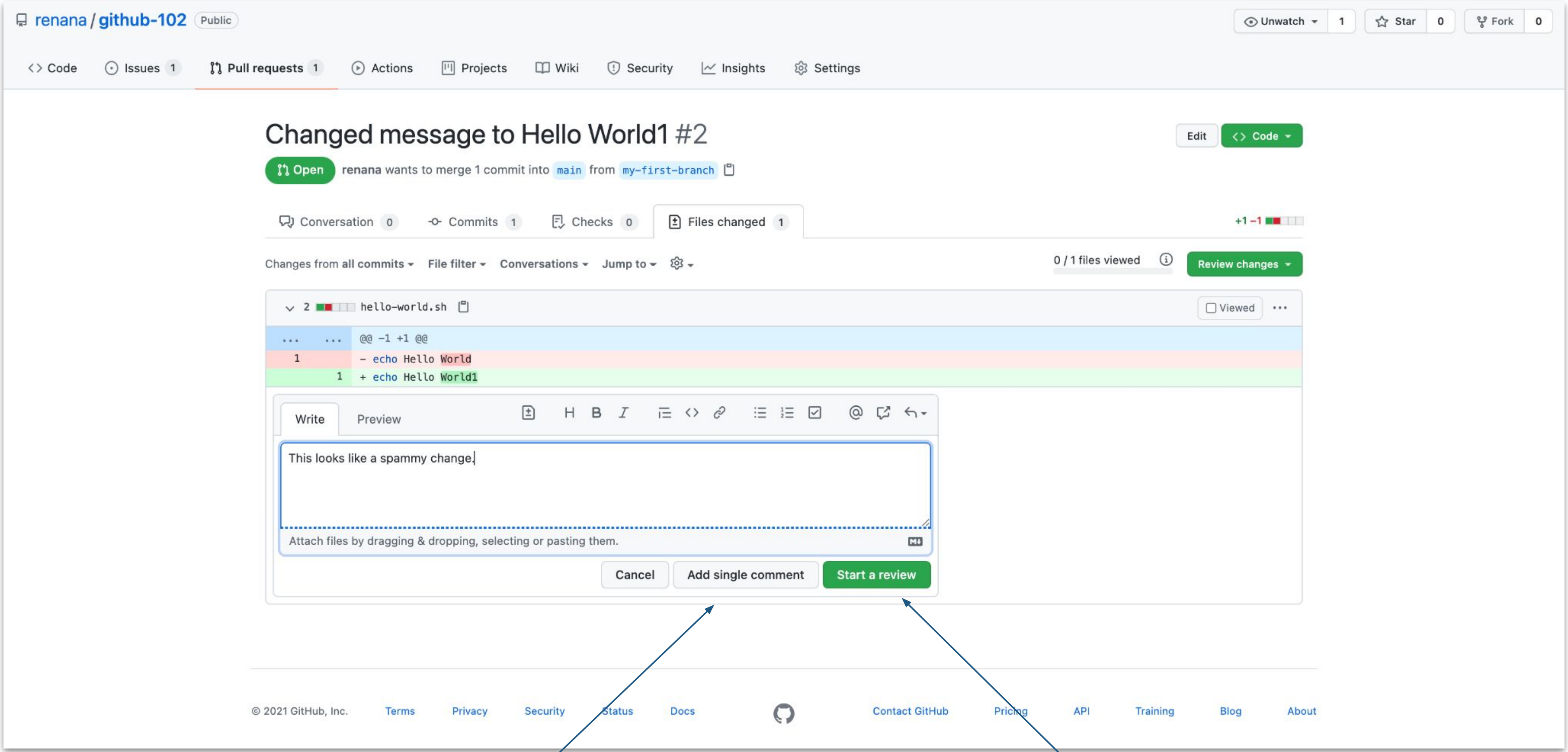
renana / github-102 Public

Changed message to Hello World1 #2

Open renana wants to merge 1 commit into `main` from `my-first-branch`

```
2 hello-world.sh
@@ -1 +1 @@
1   - echo Hello World
  1 + echo Hello World1
```

# Adding comments to a PR



## Changed message to Hello World1 #2

renana wants to merge 1 commit into `main` from `my-first-branch`

hello-world.sh

```
...   ...  @@ -1 +1 @@
1          - echo Hello World
      1    + echo Hello World1
```

This looks like a spammy change.

Attach files by dragging & dropping, selecting or pasting them.

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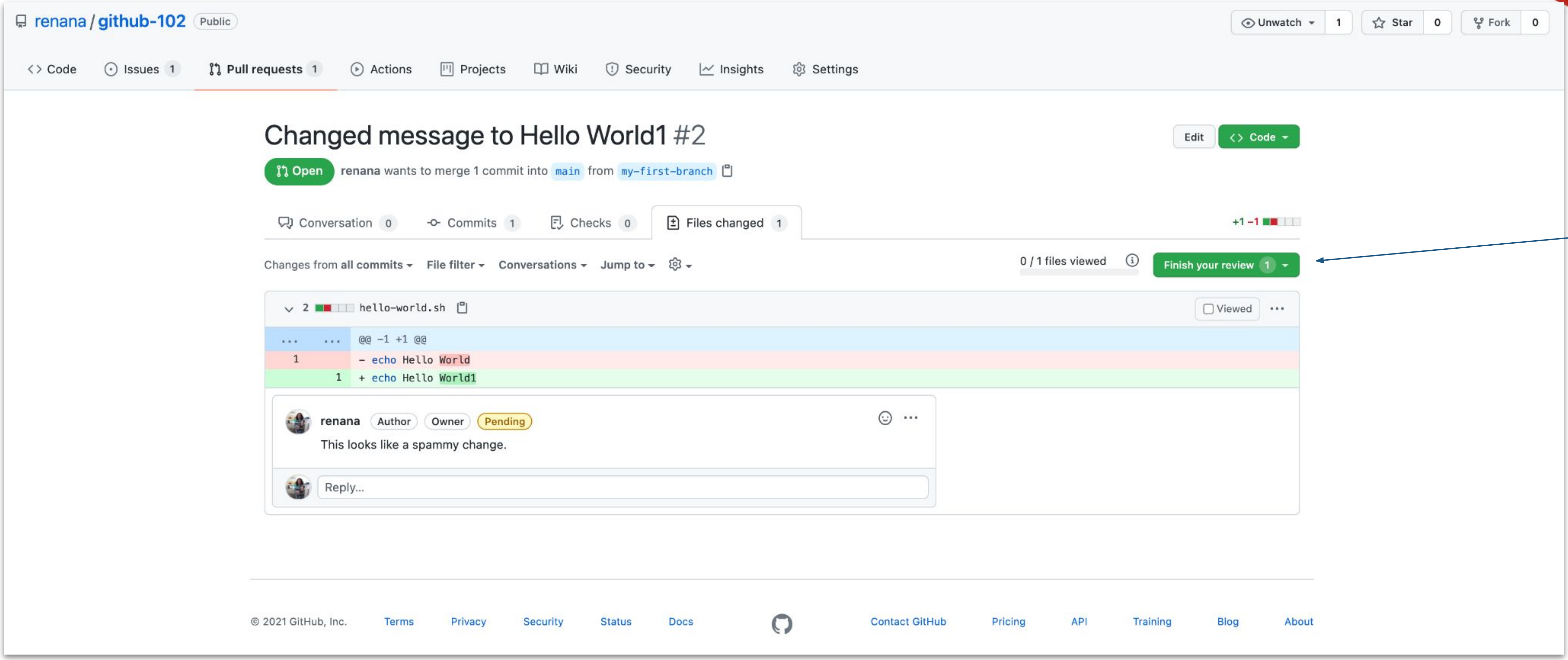
# Adding comments to a PR



renana / github-102 Public
Unwatch 1 Star 0 Fork 0
Code Issues 1 Pull requests 1 Actions Projects Wiki Security Insights Settings
Edit Code
Conversation 0 Commits 1 Checks 0 Files changed 1
+1 −1
Changes from all commits File filter Conversations Jump to
0 / 1 files viewed
Finish your review 1
Viewed

Changed message to Hello World1 #2

Open renana wants to merge 1 commit into `main` from `my-first-branch`

```
2 hello-world.sh
... ... @@ -1 +1 @@
1      - echo Hello World
   1   + echo Hello World1
```

renana Author Owner Pending

This looks like a spammy change.

Reply...

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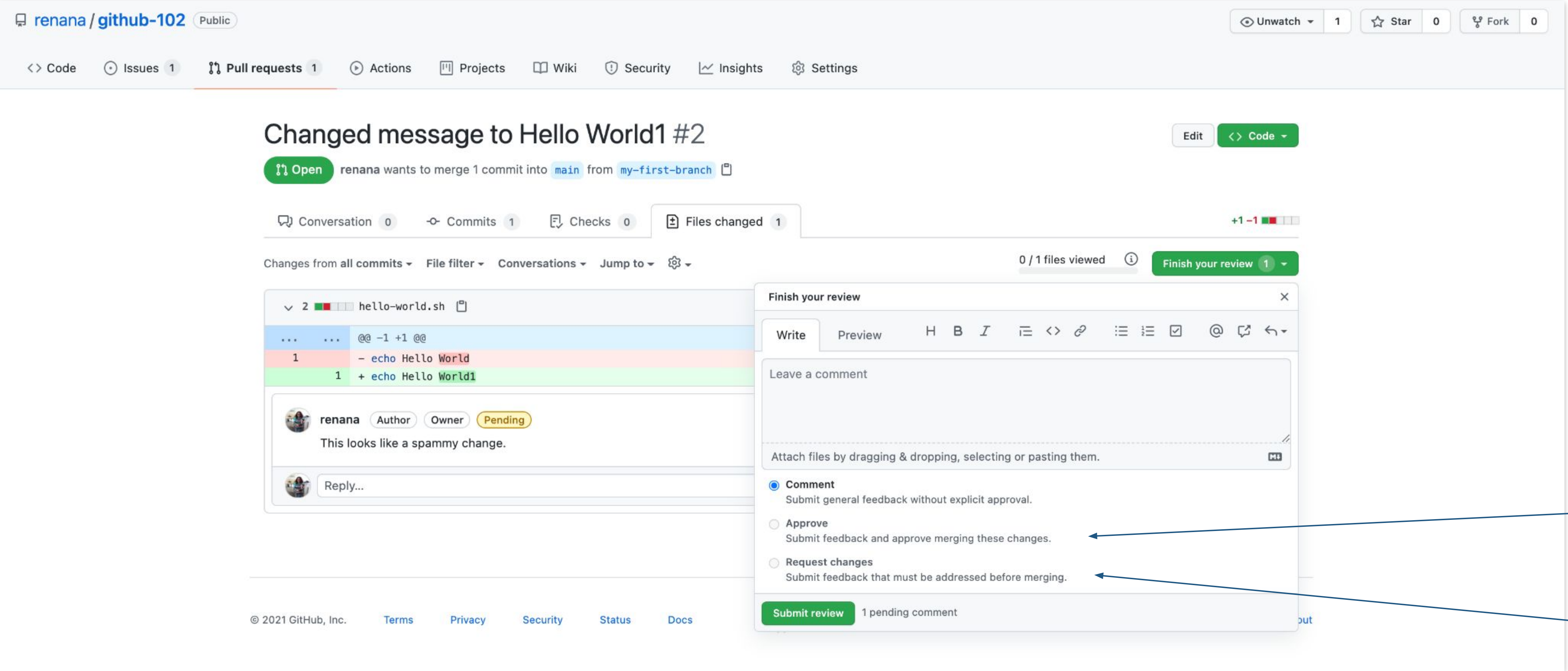
# Adding comments to a PR



renana / github-102 Public

Unwatch 1 | Star 0 | Fork 0

<> Code | Issues 1 | Pull requests 1 | Actions | Projects | Wiki | Security | Insights | Settings

## Changed message to Hello World1 #2

Edit | <> Code

Open renana wants to merge 1 commit into `main` from `my-first-branch`

Conversation 0 | Commits 1 | Checks 0 | Files changed 1 +1 −1

Changes from all commits ▾ File filter ▾ Conversations ▾ Jump to ▾

0 / 1 files viewed

Finish your review 1 ▾

2 hello-world.sh

```
...   ...  @@ -1 +1 @@
1          - echo Hello World
       1   + echo Hello World1
```

renana Author Owner Pending

This looks like a spammy change.

Reply...

**Finish your review**

Write | Preview

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

● **Comment**
Submit general feedback without explicit approval.

○ **Approve**
Submit feedback and approve merging these changes.

○ **Request changes**
Submit feedback that must be addressed before merging.

Submit review 1 pending comment

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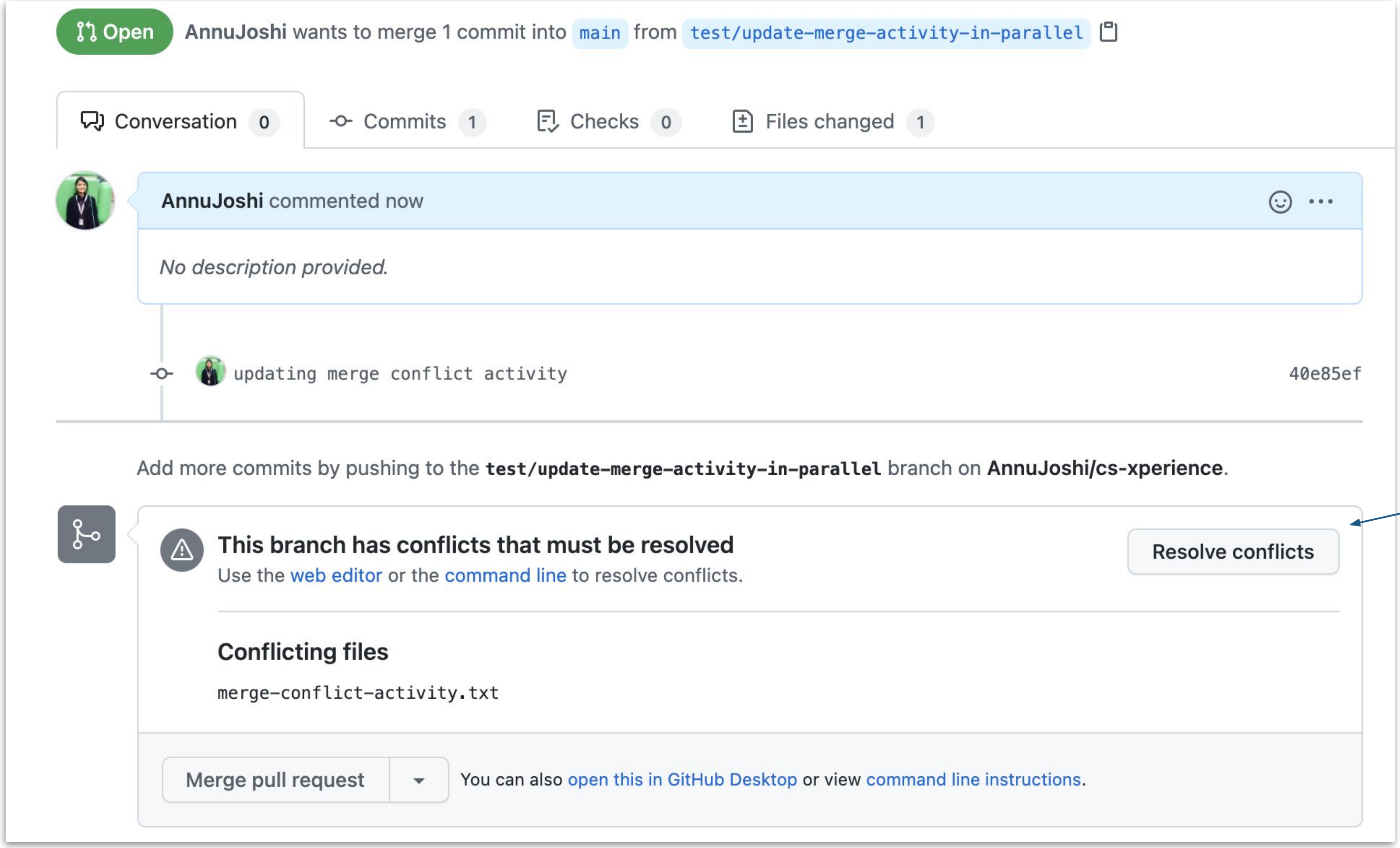
# Resolving a merge conflict



Open AnnuJoshi wants to merge 1 commit into `main` from `test/update-merge-activity-in-parallel`

**AnnuJoshi** commented now

*No description provided.*

```
updating merge conflict activity                                    40e85ef
```

Add more commits by pushing to the **`test/update-merge-activity-in-parallel`** branch on **AnnuJoshi/cs-xperience**.

**This branch has conflicts that must be resolved**

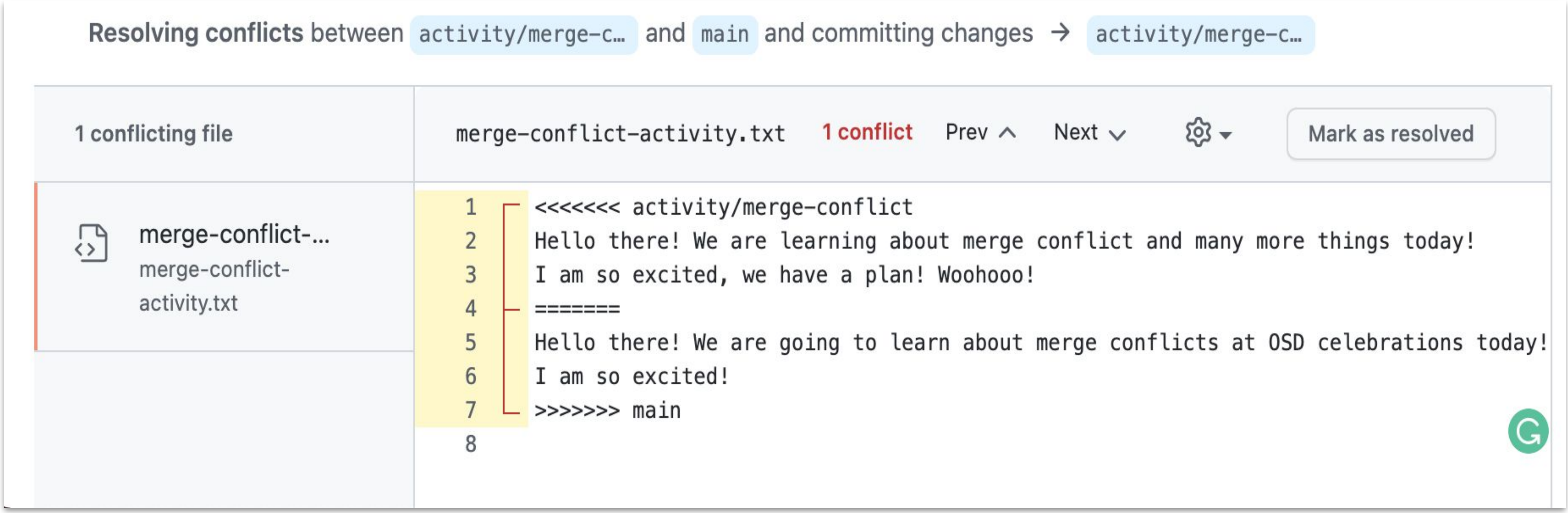
Use the web editor or the command line to resolve conflicts.

**Conflicting files**

```
merge-conflict-activity.txt
```

You can also open this in GitHub Desktop or view command line instructions.

# Resolving a merge conflict

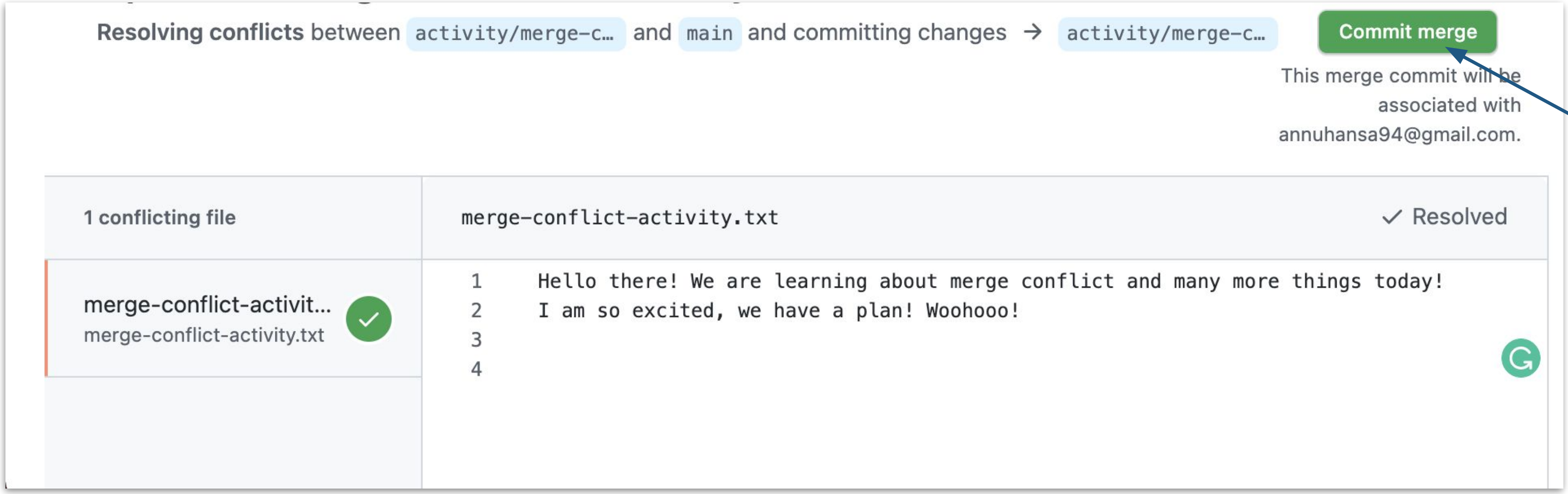


**Resolving conflicts** between `activity/merge-c…` and `main` and committing changes → `activity/merge-c…`

```
<<<<<<< activity/merge-conflict
Hello there! We are learning about merge conflict and many more things today!
I am so excited, we have a plan! Woohooo!
=======
Hello there! We are going to learn about merge conflicts at OSD celebrations today!
I am so excited!
>>>>>>> main

```

# Resolving a merge conflict



Resolving conflicts between `activity/merge-c…` and `main` and committing changes → `activity/merge-c…`

This merge commit will be associated with annuhansa94@gmail.com.

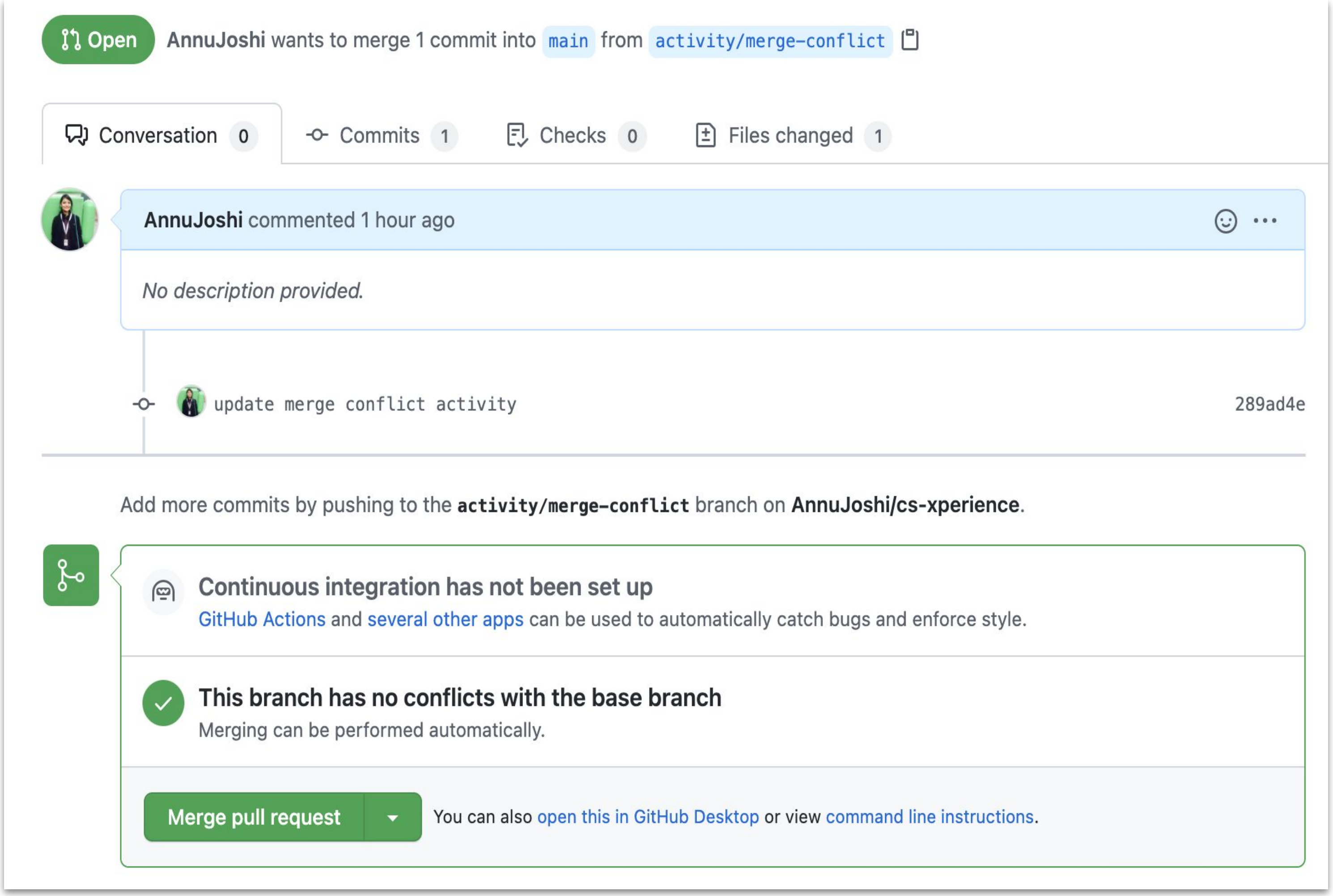
1 conflicting file

merge-conflict-activit…
merge-conflict-activity.txt ✓

merge-conflict-activity.txt ✓ Resolved

```
Hello there! We are learning about merge conflict and many more things today!
I am so excited, we have a plan! Woohooo!
```

# Resolving a merge conflict



Open AnnuJoshi wants to merge 1 commit into `main` from `activity/merge-conflict`

AnnuJoshi commented 1 hour ago

*No description provided.*

```
update merge conflict activity                                     289ad4e
```

Add more commits by pushing to the **`activity/merge-conflict`** branch on **AnnuJoshi/cs-xperience**.

**Continuous integration has not been set up**
GitHub Actions and several other apps can be used to automatically catch bugs and enforce style.

**This branch has no conflicts with the base branch**
Merging can be performed automatically.

You can also open this in GitHub Desktop or view command line instructions.

# Breakout rooms tasks

Round 2 of 2

1. Clone the repository assigned to your room
2. Find an issue and claim it
3. Make sure no-one else claimed it first
4. Work on the fix and create a pull request (PR)
5. Ask your peers to review and approve it
6. Merge your PR
7. Check if your peers need help
8. Assign a person to notify me that your room is ready

# Survey time

- How much were you able to finish in this time?
    - I wasn’t able to do anything
    - Claimed an issue
    - Claimed an issue and started working on it
    - Claimed an issue and opened a PR with solution
    - Claimed an issues, merged the solution and closed the issue
    - Completed several issues

# Good open source citizenship

ANITA B.ORG 21
GRACE HOPPER CELEBRATION

# Working as a team

- Were all PRs reviewed?
- Is anyone blocked?
- Did you encounter merge conflicts?

# Dos when contributing to open source projects

- Contribute to open source projects
- Read the project's code-of-conduct before starting to contribute to it
- Report any violation of the code-of-conduct
- Follow the contributing guide

# Dos when contributing to open source projects

- Open issues to report bugs and suggest improvements, even if you will not be able to work on them
- Before opening an issue, ensure there isn’t an existing one covering this already
- Review other people’s pull requests
- Claim issues before starting to work on them

# Dos when contributing to open source projects

- Address comments and continue discussions in issues and pull requests
- Report progress on claimed issues, especially when blocked
- Connect with other contributors

# Don’ts when contributing to open source projects

- Don’t violate the code-of-conduct
- Don’t forget to update progress on claimed issues
- Personal preference issues, pull requests or comments are unprofessional and should rarely be used

# Thank You

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