Hands-on Lab: Complete User Stories

Estimated time needed: 60 minutes

Project overview

As a full-stack developer in the GiftLink project, your role is to develop both the backend and frontend components of the application. While the initial structure of GiftLink's backend services exists, they are not yet complete. Your task involves further developing these backend services, ensuring they are robust, secure, and scalable. Alongside backend development, you will also create the front-end application. This front end will serve as the primary user interface for the GiftLink community, designed to provide a seamless and engaging user experience. The first step in this journey is to convert the requirements into user stories the team can work on together.

User stories

In this lab, you will build a sprint plan for the project. User stories are a fundamental component in Agile methodologies, serving as a simple yet powerful tool for understanding end-user requirements. They are typically written from a user's perspective and focus on what they need from the system to achieve a specific goal. A well-crafted user story is concise and focuses on a single functionality or feature, helping to break down complex projects into manageable work units. In this lab, you'll have the opportunity to apply these principles to create and refine user stories.

> Note: For this lab, you will not be using the lab environment, but will work directly in GitHub.

Objectives

In this lab, you will:

- Establish a new GitHub repository using a provided template
- Formulate a template for user stories
- Add user stories as GitHub issues
- Organize user stories in preparation for enhancing the backlog

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Exercise 1: Create a GitHub repository

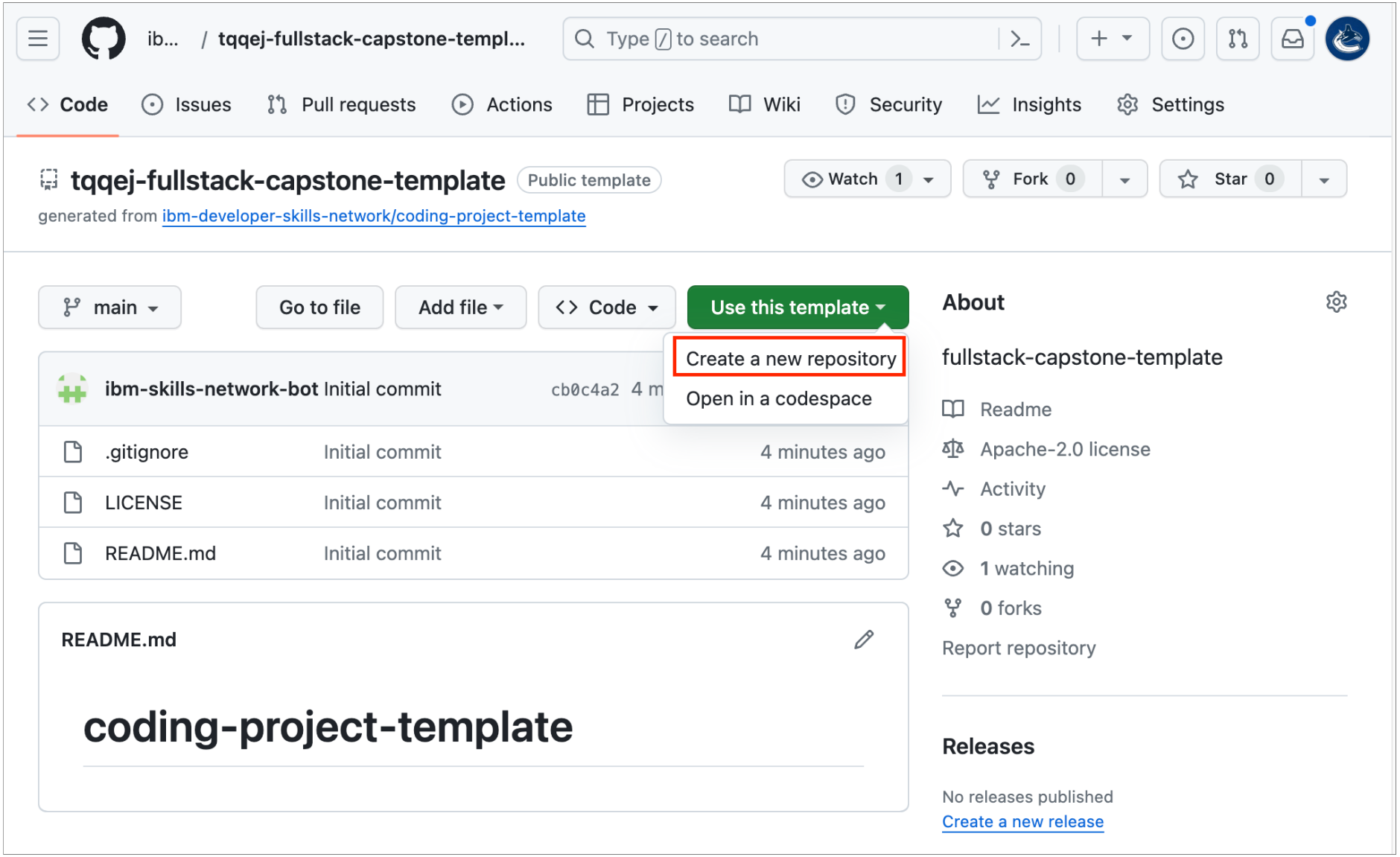
You will need your repository to complete the final project. We have provided a GitHub Template to create your repository in your own GitHub account. **Do not Fork the repository as it's already a template**. This action will avoid confusion when making Pull Requests in the future.

Tasks

1. In a browser, visit this GitHub repository:
   https://github.com/ibm-developer-skills-network/tqqej-fullstack-capstone-template

2. From the GitHub **Code** tab, use the green **Use this template** to create your repository from this template.

3. Select **Create a new repository** from the dropdown menu. On the next screen, fill out these prompts following the screenshot below:



1. Select your GitHub account from the drop-down list.
2. Name the new repository: `fullstack-capstone-project`
3. (Optional) Add a description to let people know the purpose of the repo.
4. Make the repo **Public** so that others can see it (and grade it).
5. Select **Create repository** to create the repository in your GitHub account.

Create a new repository

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

Required fields are marked with an asterisk (*).

Repository template

ibm-developer-skills-network/tqqej-fullstack-capstone-template

Start your repository with a template repository's contents.

Include all branches

Copy all branches from ibm-developer-skills-network/tqqej-fullstack-capstone-template and not just the default branch.

Owner *

captainfedoraskillup

/

Repository name *

fullstack-capstone-temp

fullstack-capstone-template is available.

Great repository names are short and memorable. Need inspiration? How about fuzzy-telegram ?

Description (optional)

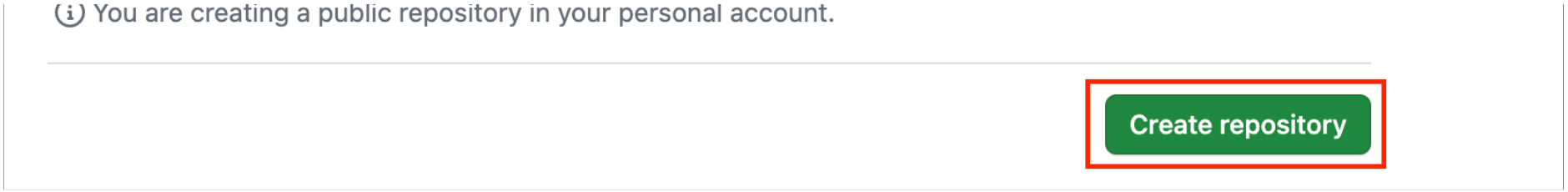
Repository for capstone project

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.



You may use GitHub's built-in kanban board for managing your project.

Alternatively, if you have a zenhub account and prefer to use Zenhub Kanban board, you can connect your GitHub repository to your ZenHub Account and optionally install the ZenHub plugin in your browser.

Exercise 2: Create a user story template

In this exercise, you will create a user story template in GitHub to help you write well-formatted user stories for your kanban board.

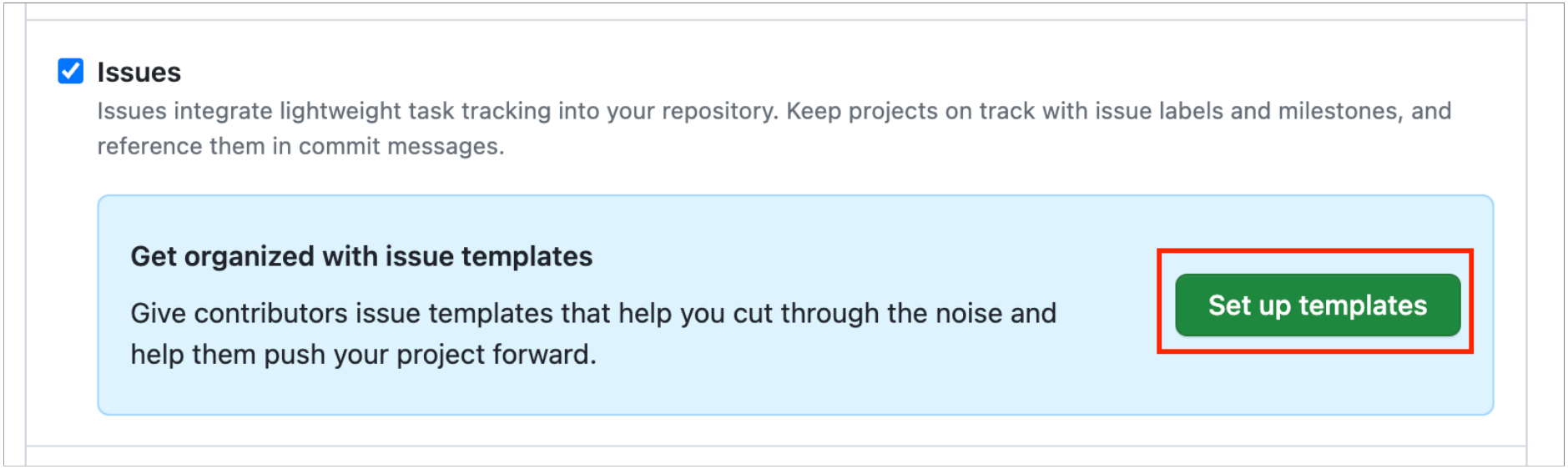
Steps to complete

1. Create an issue template in GitHub for your project's GitHub repository. Ensure the template includes the components listed below. You may want to copy, paste, and edit this text because it contains the correct markdown syntax you will need for the template. You can learn more about creating the issues template using the GitHub UI in the **hints** section below.

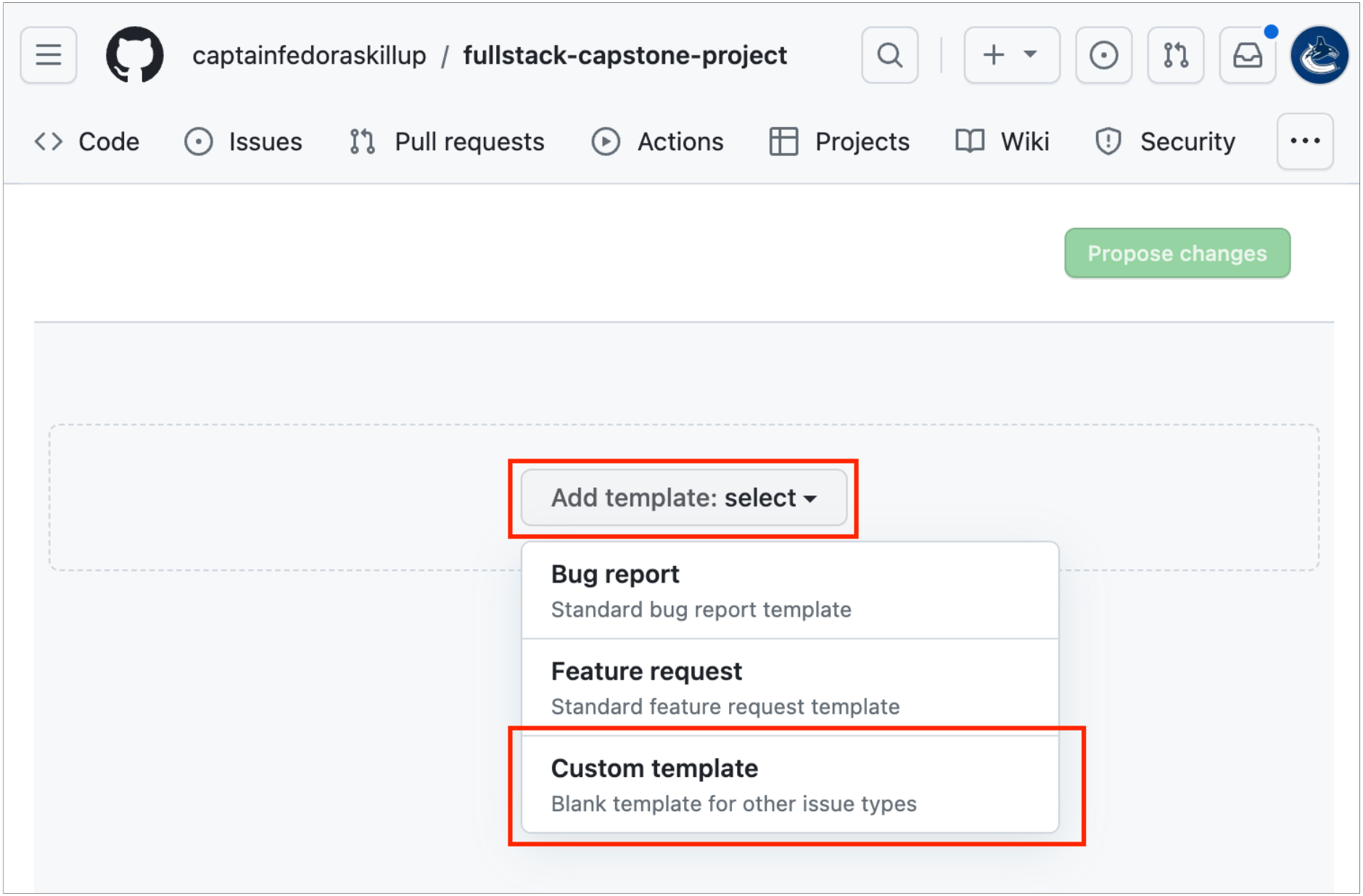
```
**As a** [role]
**I need** [function]
**So that** [benefit]
### Details and Assumptions
    * [document what you know]
### Acceptance Criteria
    gherkin
    Given [some context]
    When [certain action is taken]
    Then [the outcome of action is observed]
```

Hints

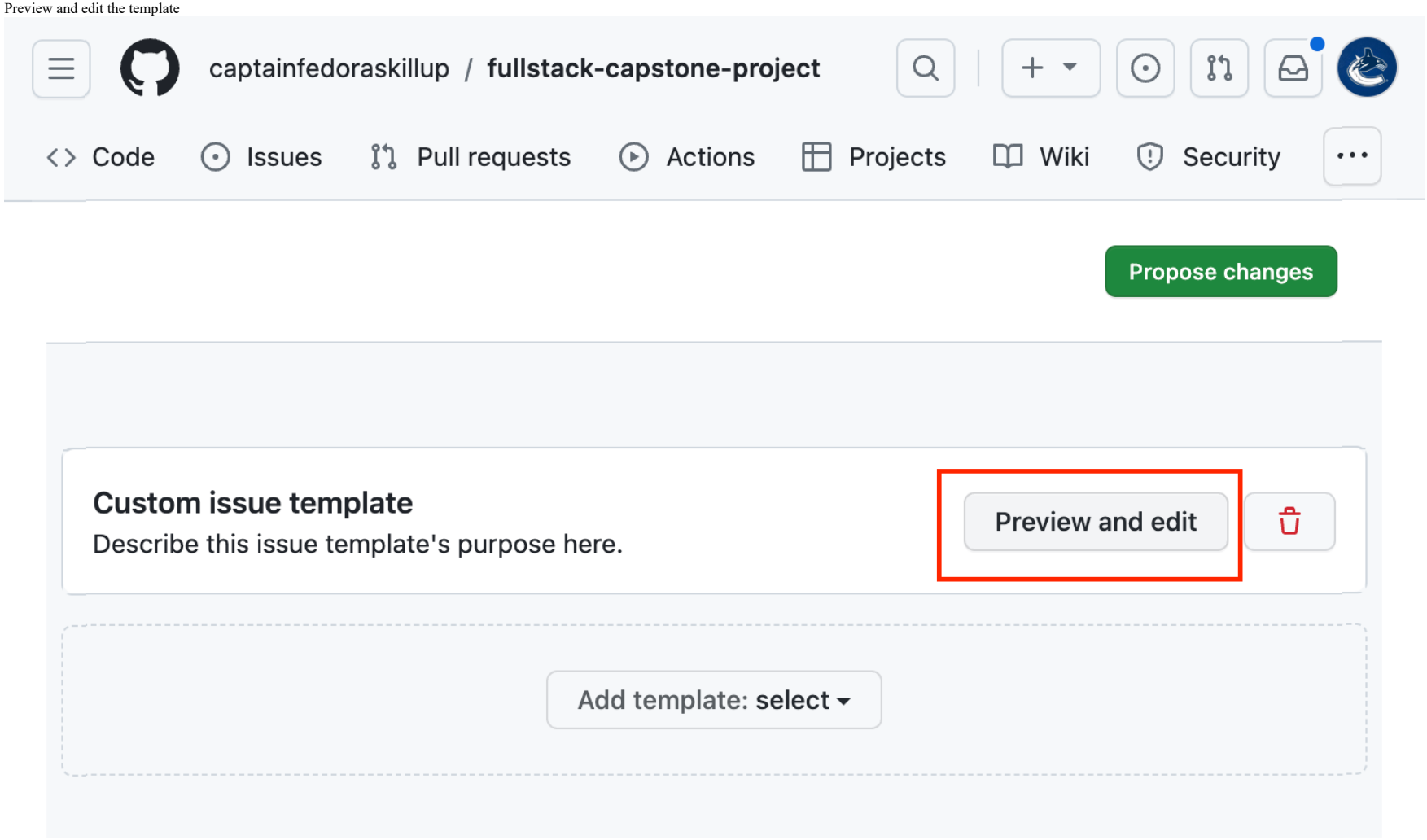
▼ Click here for a hint.
1. To set up the template for user stories, click settings in your repository and then Set up templates.



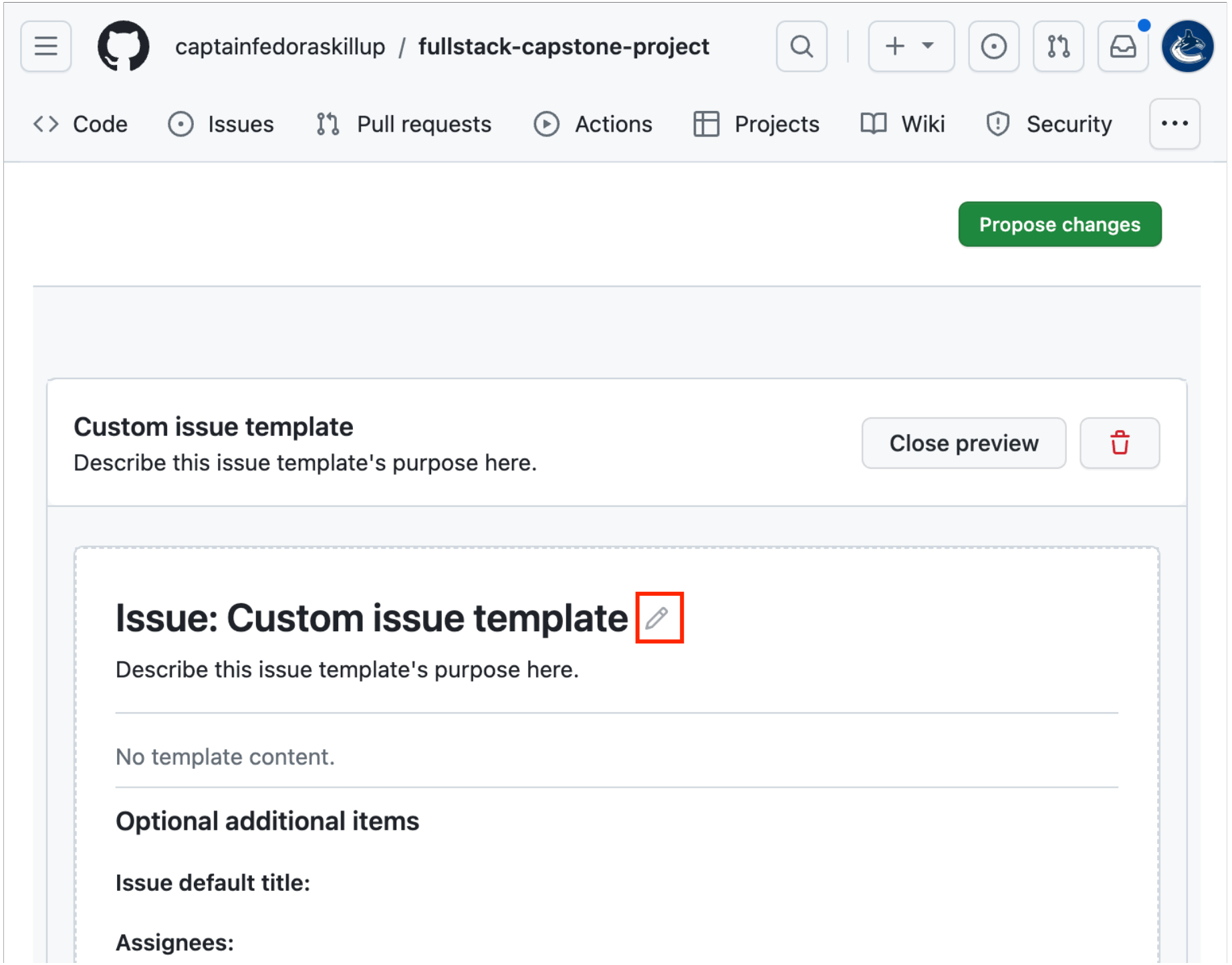
2. Add a custom template

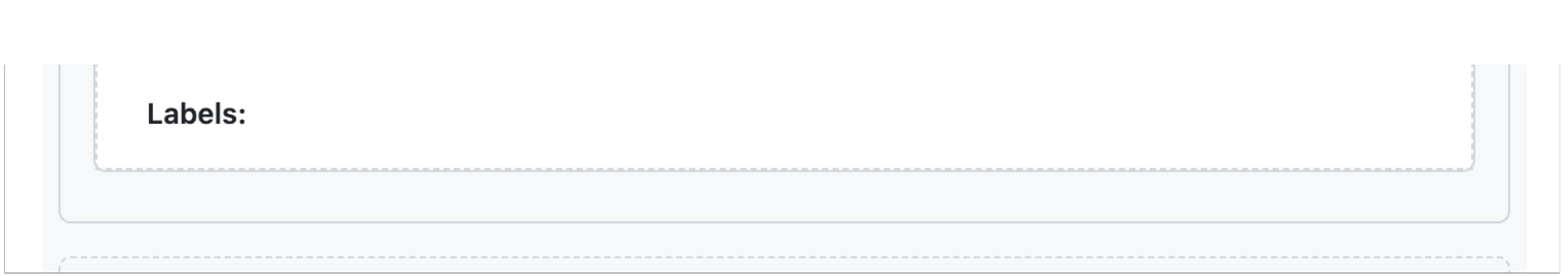

captainfedoraskillup / fullstack-capstone-project
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Propose changes
Add template: select
Bug report
Standard bug report template
Feature request
Standard feature request template
Custom template
Blank template for other issue types

3. Preview and edit the template



4. Click on the pencil button to edit the template


captainfedoraskillup / fullstack-capstone-project
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Propose changes
Custom issue template
Describe this issue template's purpose here.
Close preview
Issue: Custom issue template
Describe this issue template's purpose here.
No template content.
Optional additional items
Issue default title:
Assignees:



5. Fill in the form with the actual template provided to you.

User Story
This template defines a user story

Close preview

Template name

User Story

This file lives in **custom.md**

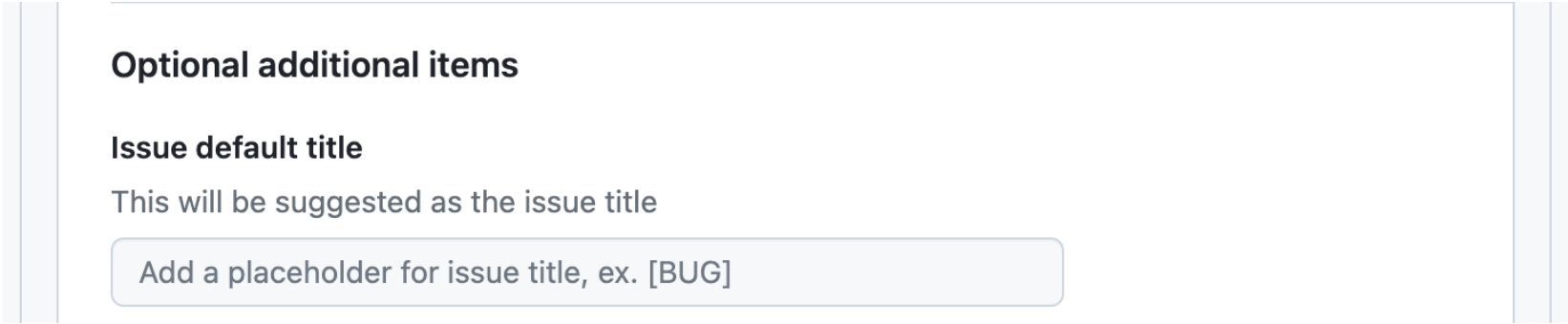
About

This template defines a user story

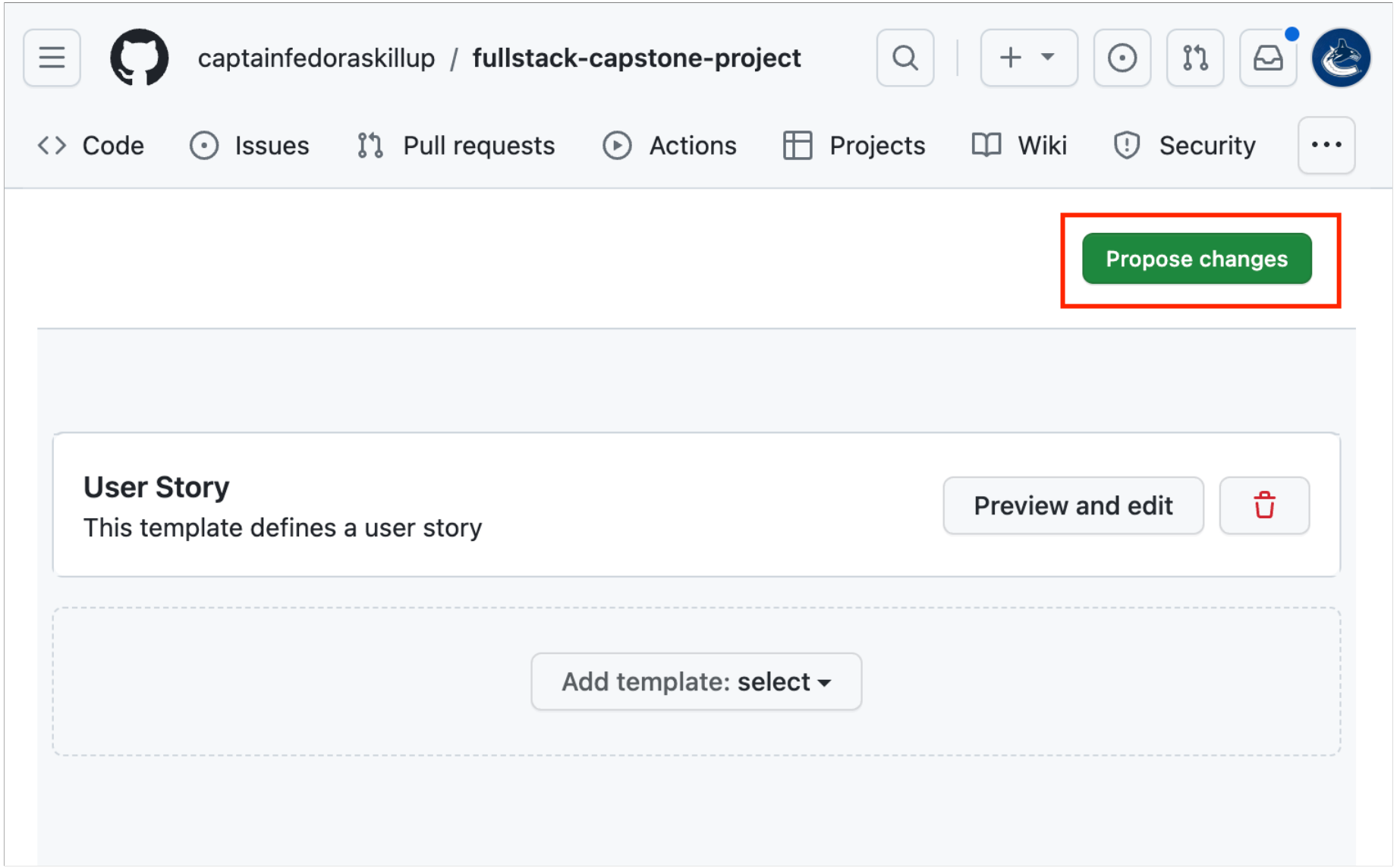
Template content

Styling with Markdown is supported

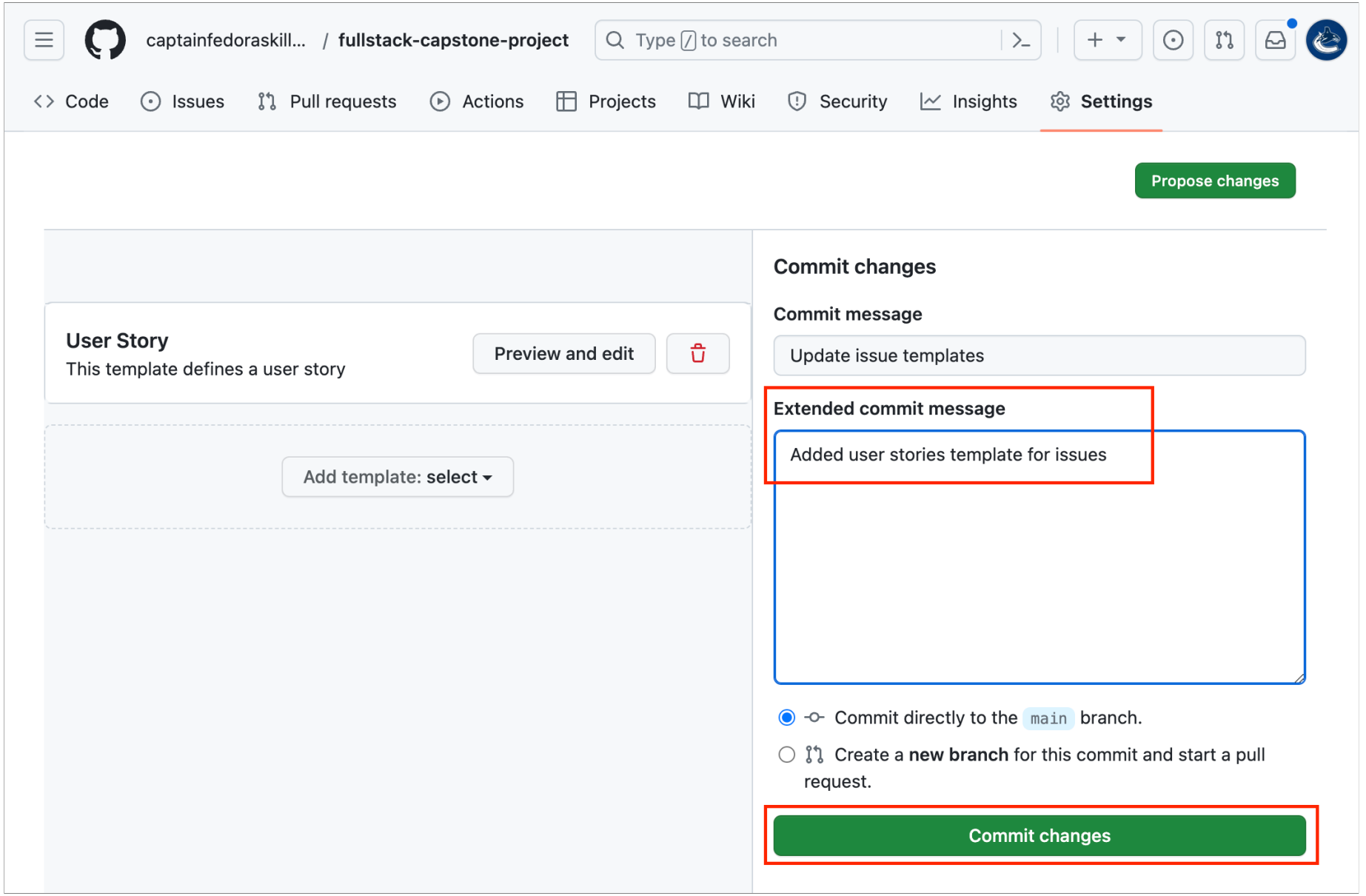
```
**As a** [role]
**I need** [function]
**So that** [benefit]

### Details and Assumptions
   * [document what you know]

### Acceptance Criteria
      gherkin
   Given [some context]
   When [certain action is taken]
   Then [the outcome of action is observed]
```



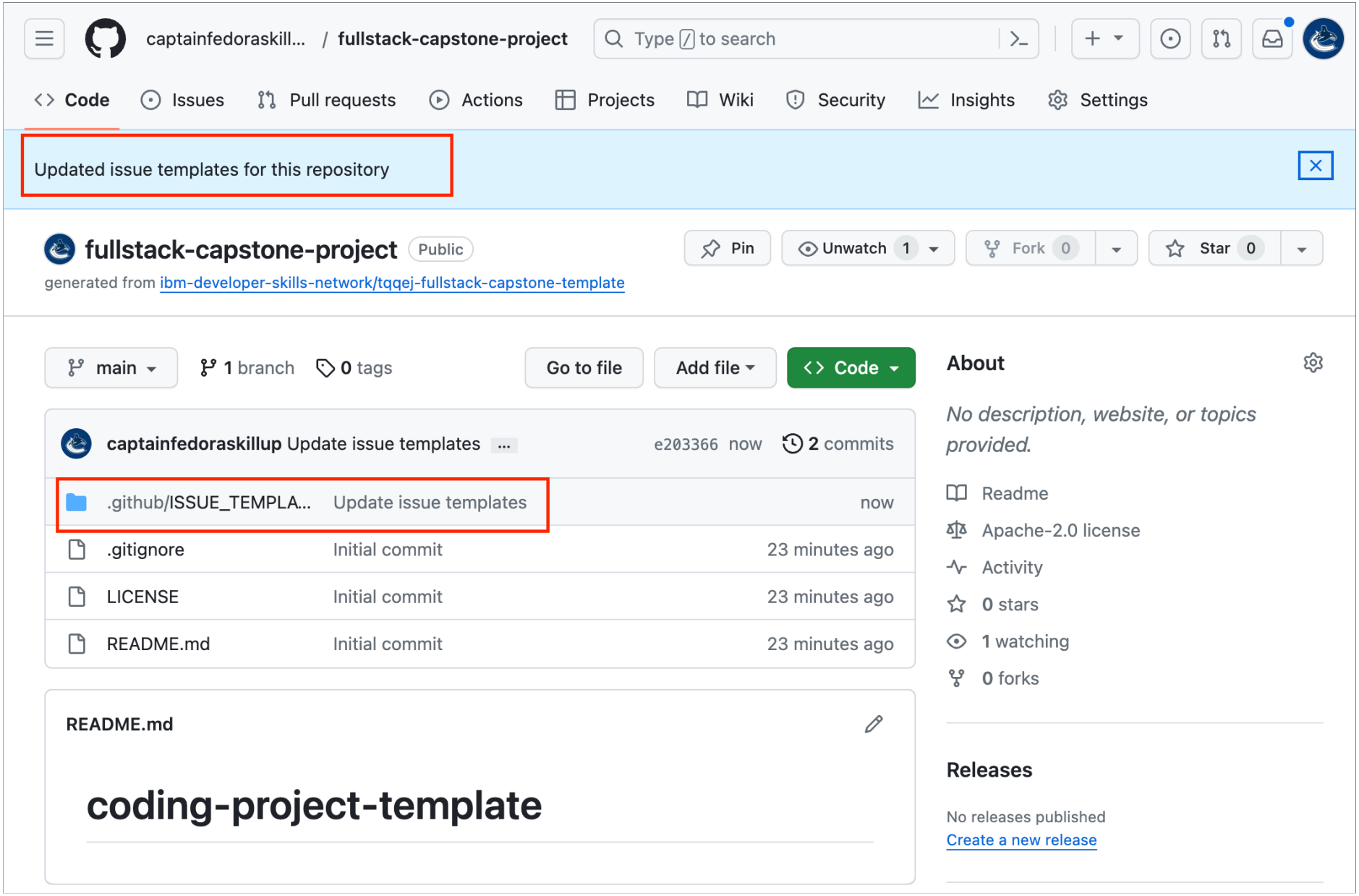
6. Propose and commit changes.



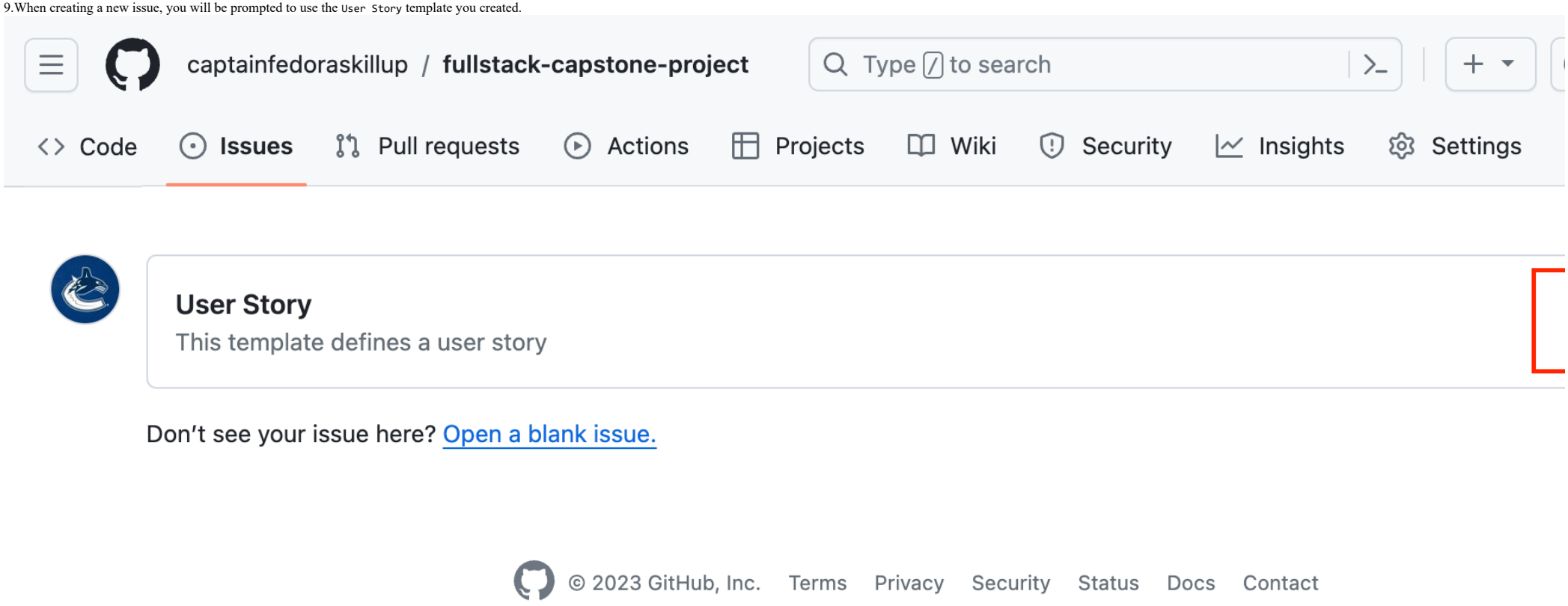
7. Commit changes as follows:



8. This should create a new directory in the repository's main branch.


captainfedoraskill... / fullstack-capstone-project
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Updated issue templates for this repository
fullstack-capstone-project
Public
generated from ibm-developer-skills-network/tqqej-fullstack-capstone-template
Pin
Unwatch 1
Fork 0
Star 0
main
1 branch
0 tags
Go to file
Add file
Code
captainfedoraskillup Update issue templates ...
e203366 now
2 commits
.github/ISSUE_TEMPLA... Update issue templates now
.gitignore Initial commit 23 minutes ago
LICENSE Initial commit 23 minutes ago
README.md Initial commit 23 minutes ago
README.md
coding-project-template
About
No description, website, or topics provided.
Readme
Apache-2.0 license
Activity
0 stars
1 watching
0 forks
Releases
No releases published
Create a new release

9.When creating a new issue, you will be prompted to use the `User Story` template you created.



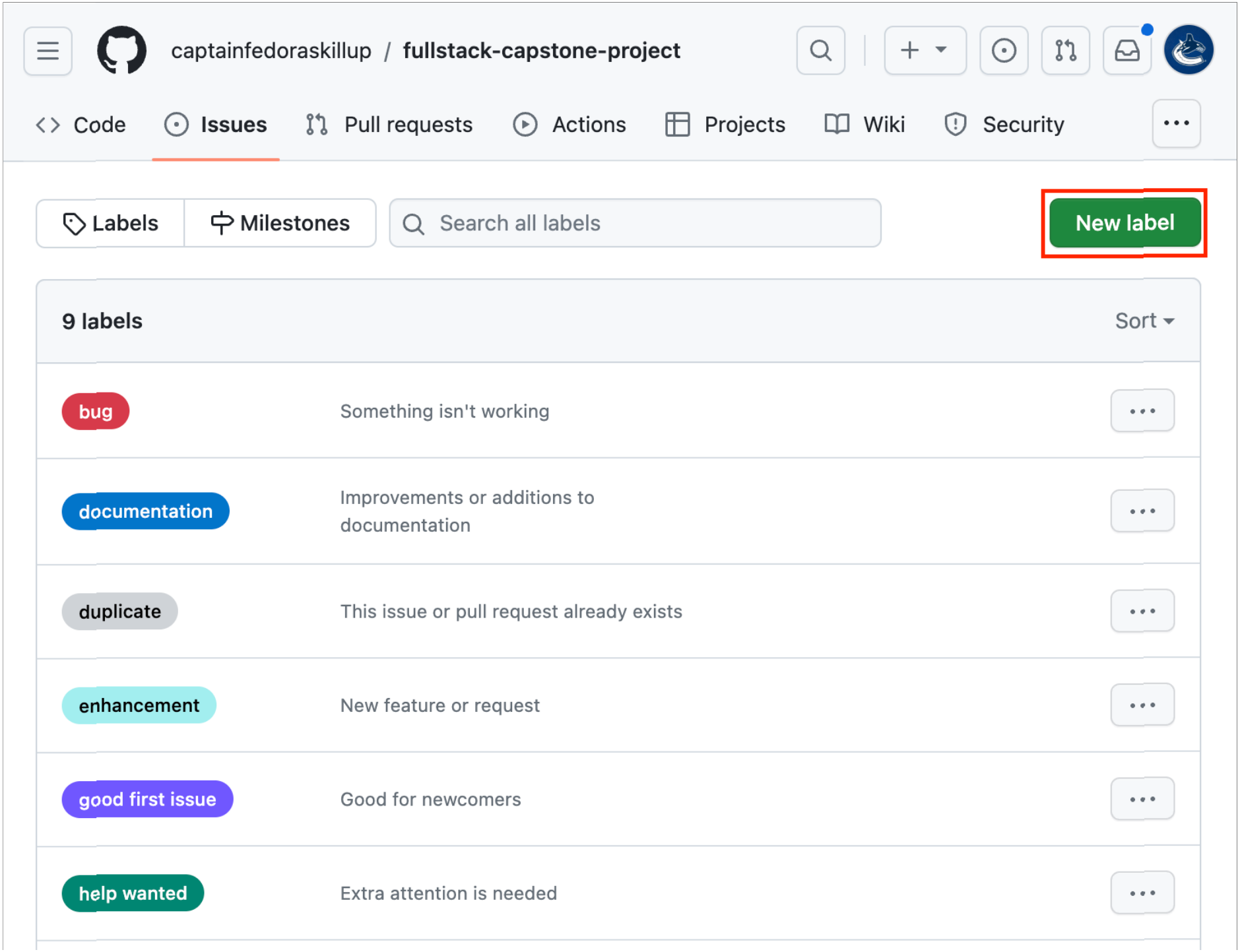
Exercise 3: Create new labels and user stories

You need three labels for the rest of the lab:

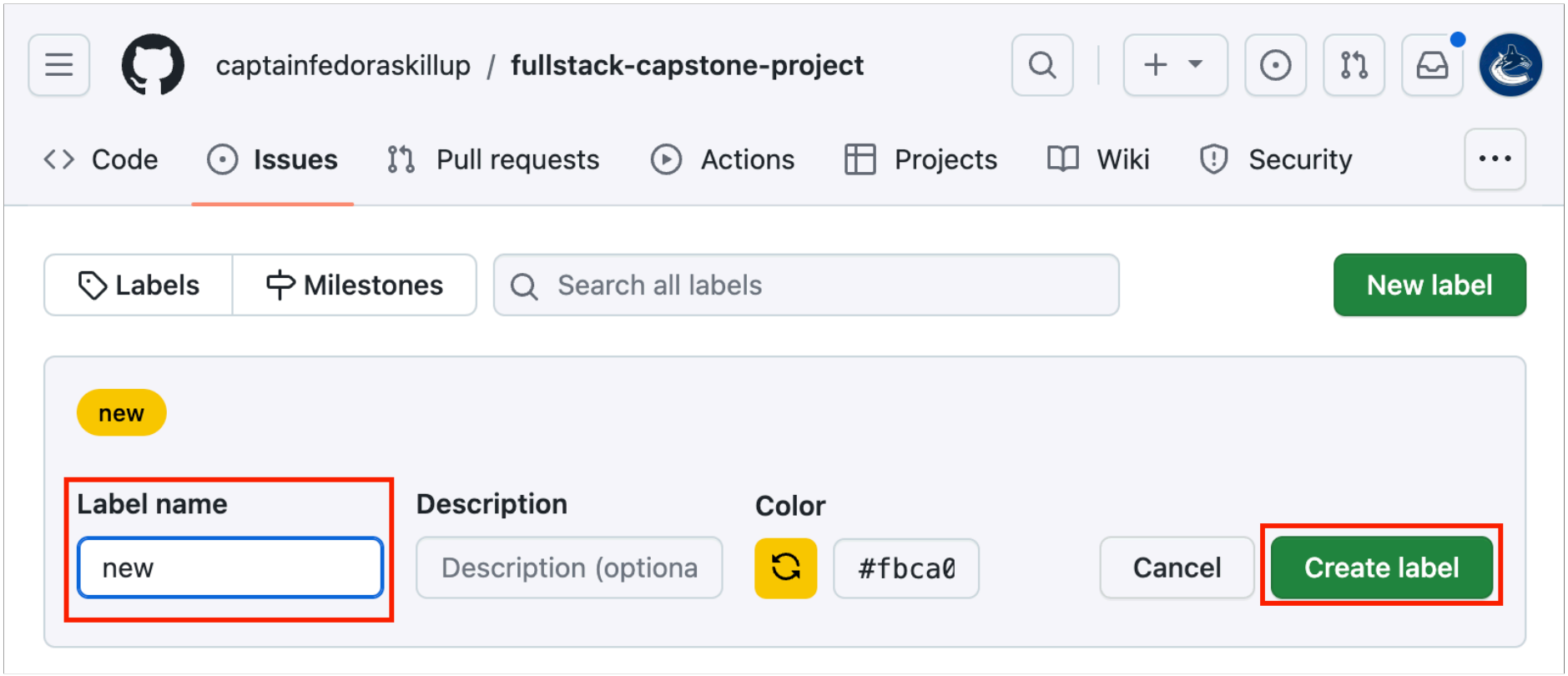
- *new* - The stories you need to prioritize.
- *backlog* - The stories picked up in the current sprint.
- *icebox* - The stories that don't need to be worked on immediately, but you will work on later.

Steps to complete

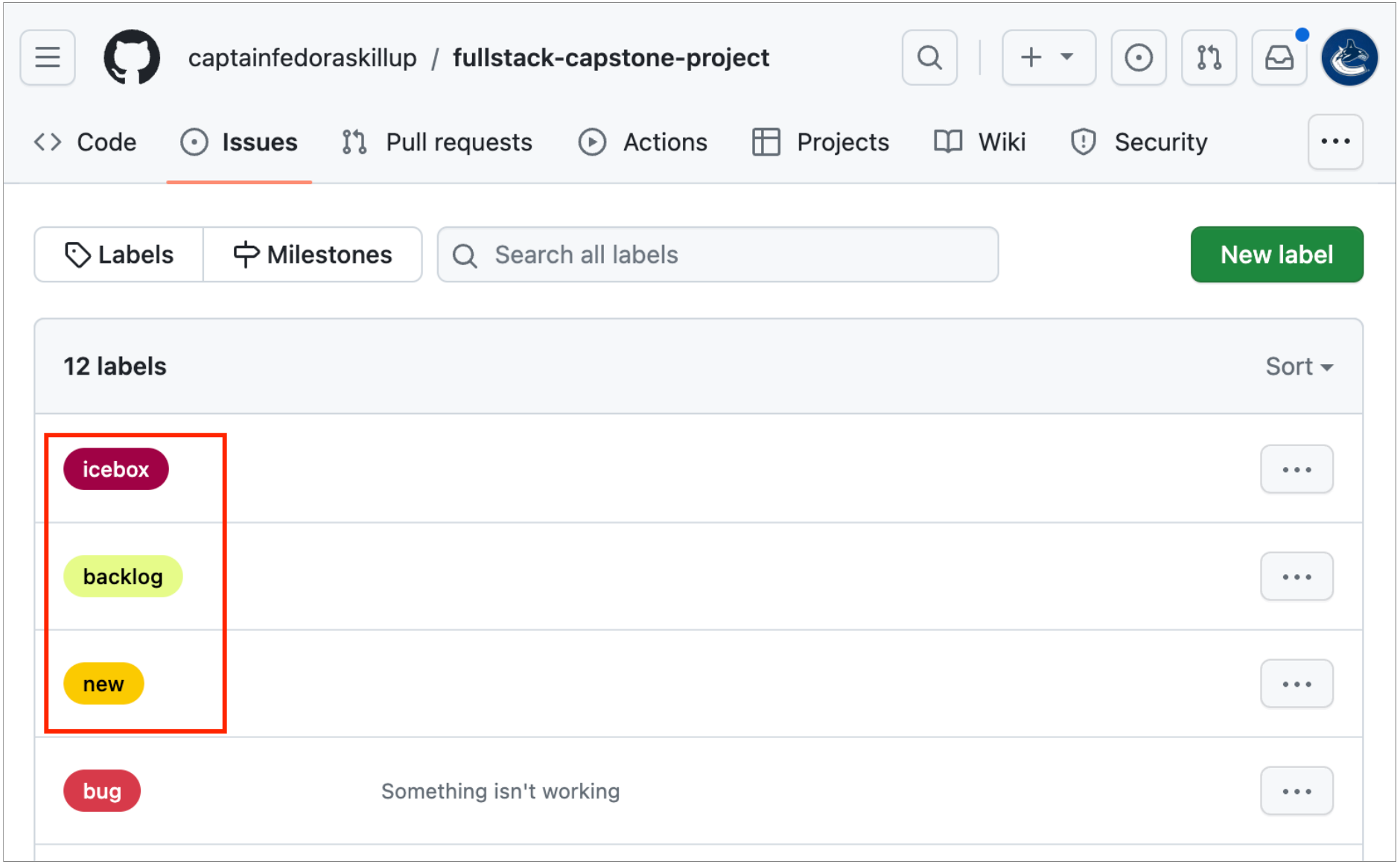
1. Open the labels page for your GitHub repository. You can use this URL after replacing the REPO_URL with your repository URL `https://REPO_URL/issues/labels`. You will use the `New Label` button to create the three labels.


captainfedoraskillup / fullstack-capstone-project
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Labels
Milestones
Search all labels
New label
9 labels
Sort
bug
Something isn't working
documentation
Improvements or additions to documentation
duplicate
This issue or pull request already exists
enhancement
New feature or request
good first issue
Good for newcomers
help wanted
Extra attention is needed

2. Add the label `new` as shown below. You can use different colors.



3. Add `backlog` and `icebox` labels similarly. The resulting page should look as follows:



5. Now that you have the labels, start creating the stories. Simply create a new issue, pick the template you created earlier, and populate the details of the user story. Finally, add the `new` label to the story.

Exercise 4: Assemble your product backlog

In this exercise, you will create user stories based on the GiftLink Capstone Project. You need to develop several back-end services and a full front end in React.

Steps to complete

Create ten user stories in your GitHub repository, one for each of the following steps of your project:

1. Finish user stories
2. Initialize and populate MongoDB
3. Run skeleton application
4. Implement a landing page and navigation
5. Add authentication components and logic
6. Implement Gifts details page
7. Implement a search component
8. Design and implement the comments feature
9. Containerize the services and applications
10. Deploy backend and frontend

To create a user story, create a new issue and pick `User Story` as the template for the issue. Once you create the issue, fill in the details as the template requires.

Add the label *new* to all the user stories.

Exercise 5: Triage new issues

In this exercise, you will begin to conduct **Backlog Refinement** by inspecting the issues in the `New Issues` pipeline and moving them to the `Product Backlog` or `Icebox`, depending on when you plan to work on them. Moving the issues to a pipeline simply means applying the `new`, `backlog`, and `icebox` labels. Use your judgment to prioritize user stories based on when they need to be completed. For example, containerizing with Docker and deploying to Kubernetes is something you will do a few sprints from now, so it is not immediately important. An issue will only have one of the three labels at a time.

Steps to complete

1. Apply the `new` label to all issues initially if you did not apply the label when creating the stories.

2. Determine which user stories you will work on immediately and apply the `backlog` label. Remove the `new` label from these issues.

3. Move the remaining stories from `New Issues` into the `Icebox` as you will work on them later by removing the `new` label and applying the `Icebox` label.

▼ Click here for a hint.
TBD: Five stories will be implemented now, and two will be implemented later.

Exercise 6: Refine your product backlog

In this exercise, you will follow the steps of conducting a backlog refinement meeting.You will be the product owner, preparing the product backlog for your next sprint planning meeting. The goal of this preparation is to make all your stories sprint-ready.

Steps to complete

1. Make sure that all the stories in the `Product Backlog` have sufficient details to be considered "sprint ready." Pay special attention to the **Acceptance Criteria** to ensure you have defined the definition of "done."

2. In GitHub, create a label called `technical debt` with a `yellow` color code and add it to your repository.

3. Create a story called `research authentication in React and Express` and add the label of `technical debt`.

4. Assign labels to your stories. Remember that anything that brings value to the customer is an `enhancement`, and `technical debt` can be things developers need but provide no visible customer value.

▼ Click here for a hint.
At least one story should be labeled "technical debt."

Evidence

Make a note of the URL to your GitHub repository. You will need to submit it for the final project.

Conclusion

Congratulations! You have created a sprint plan for this capstone project. You are now ready to start implementing your full-stack application.