

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect. The shapes are layered, with some appearing more prominent than others, and they extend towards the corners of the frame.

GitHub

What is GitHub?

- ▶ GitHub is a web-based Git repository hosting service.
- ▶ It offers distributed revision control and Source Code Management (SCM).
- ▶ It is an open-source version control system.
- ▶ Version control helps multiple users work on a single project and on the same file and simultaneously keeps track of all changes.
- ▶ GitHub also helps in rolling back to a stable version if for some reason the newer version encounters some issue.
- ▶ It also helps identify which user has committed a faulty code.

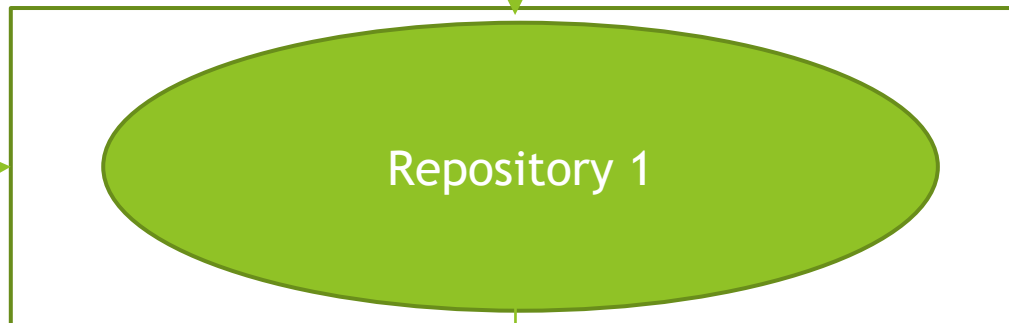
Owner - Alice
Alice's GitHub
Account



Forking Alice's Repository 1

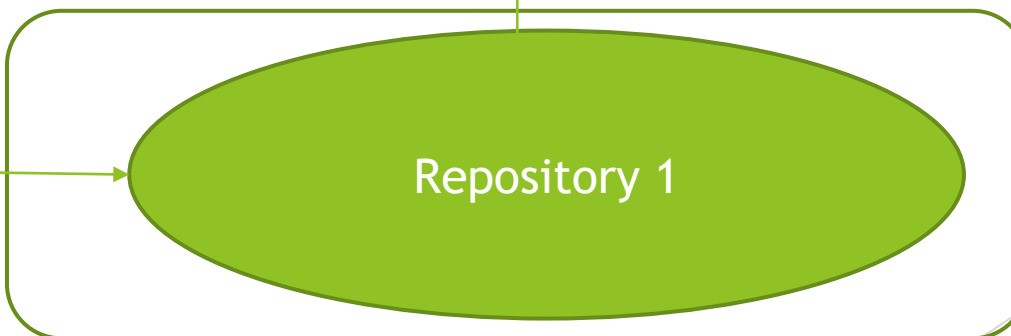
Makes a copy of Alice's Repository 1 in
Bob's GitHub account

Owner - Bob
Bob's GitHub
Account



Cloning the repository to his local machine

Owner - Bob
Bob's Local Machine
Laptop/PC



Steps to Use GitHub

1. Open the repository you want to use.
2. Fork the repository to your own GitHub account.
3. Clone the repository from your GitHub account to your local machine.
4. Push the changes to the repository in your GitHub account after you modify the files.
5. Create a pull request to the owner of the original repository to incorporate your changes.

Step 1

- ▶ The first step is to identify the repository that you want to modify.
- ▶ So, the first thing that you will have to do is find the repository on GitHub.
- ▶ The repository will show you all the files that are present in the repository.
- ▶ You can view all the changes that have been made in the repository.
- ▶ It will also show you the list of users who have modified the files on the repository.

Step 2

- ▶ Forking the repository.
- ▶ Once you have identified the repository you will be forking the repository.
- ▶ This means that you will be making a copy of the original repository or a mirror image of the original repository on your GitHub account.
- ▶ This is done so that you can freely modify this repository without it affecting the original repository.
- ▶ Once the repository is forked you will find a copy of the repository on your personal GitHub account.

Step 3

- ▶ Cloning a repository.
- ▶ At this point you have the copy of the repository on your GitHub account.
- ▶ Now we need to create a copy or clone of this repository on your local machine.
- ▶ The cloning option is going to create a copy of the repository on your local machine.
- ▶ Once that is done you can freely modify the files, test your changes and so on.
- ▶ These changes will be visible only to you and no one else.

Step 4

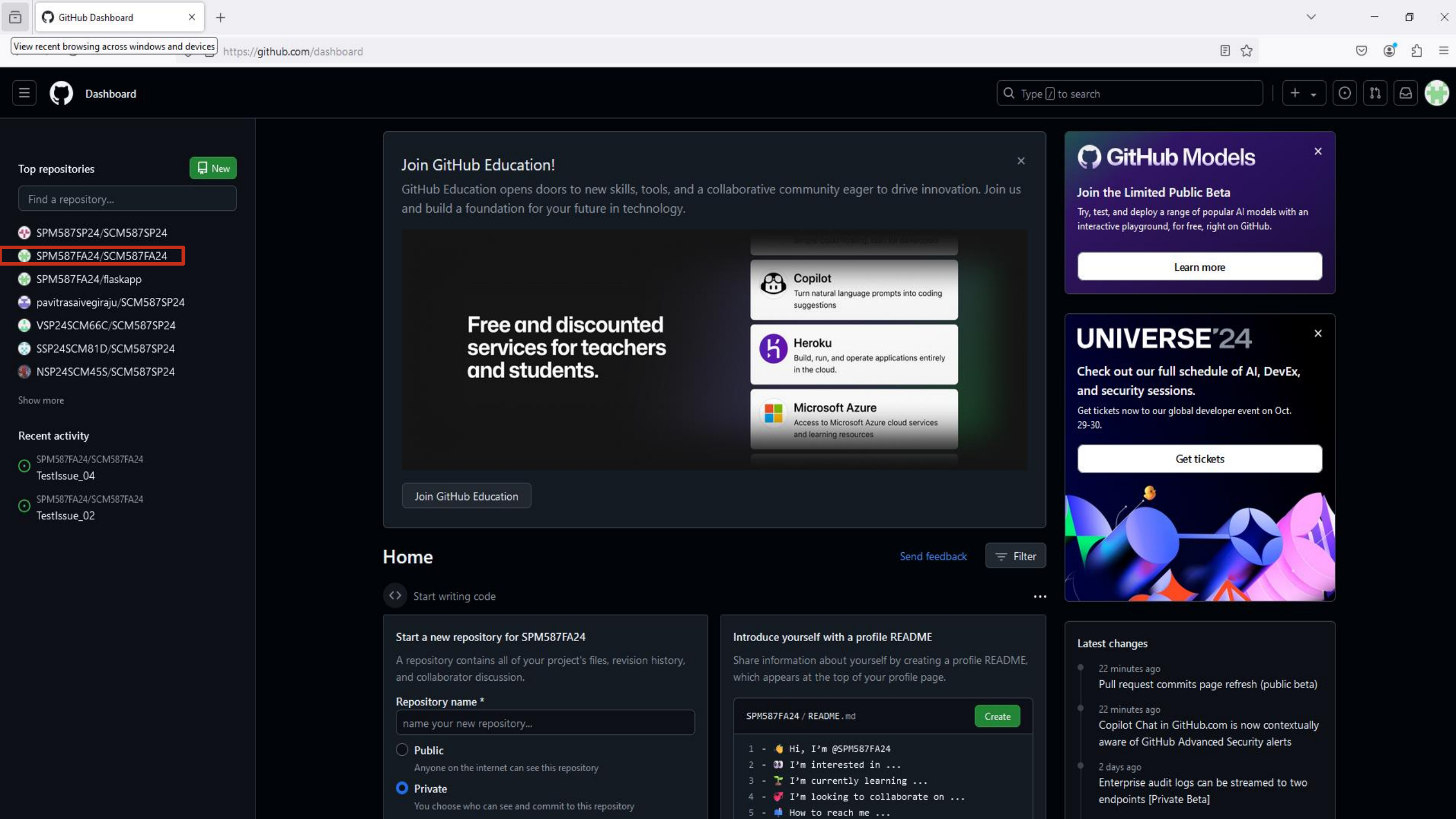
- ▶ Push the changes to your GitHub repository.
- ▶ Now that you have modified the files and made the changes that you need, you need to make these changes be reflected in your GitHub account to make these changes persistent.
- ▶ You will be using the Push option to do so.
- ▶ Push option is going to take all the changes that you have made in your local clone and make those changes on your GitHub account.
- ▶ Once the push is done all the changes that you have made in your local clone will be present in your GitHub account
- ▶ NOTE : At this point the changes are still at the repository in YOUR GitHub account and not in the original repository of the owner.

Step 5

- ▶ Pull Requests.
- ▶ At this point you have all your changes on your GitHub account. Now we need to have your changes integrated onto the original repository.
- ▶ This repository is owned by a different owner. So, we create a PULL REQUEST to the original repository.
- ▶ This means that you are requesting the original owner to pull your changes into his original repository.
- ▶ At this point the owner will be able to view all your proposed changes to his repository. He can review these changes and give comments/feedback on the changes asking for modification.
- ▶ It is up to the owner whether he wants to incorporate your changes to his repository or whether to reject your changes.
- ▶ Once the owner accepts the pull request your changes will be integrated on to his original repository

Repository

- ▶ A repository is a location where all files in a particular project are stored.
- ▶ It is usually called a REPO.
- ▶ Each project will have its own repo and can be accessed by a unique URL.



Creating a Repository

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 ().*

Owner *

SPM587FA24

 /

Repository name *

Great repository names are short and memorable. Need inspiration? How about [fictional-fishstick](#) ?

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:

☐ Add a README file

This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: None

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

You are creating a public repository in your personal account.

Create repository

Repository Name

Privacy Option

Create Button

Viewing the repository to fork

The screenshot displays the GitHub repository settings page for the repository `SPM587FA24 / SCM587FA24`. The browser address bar shows the URL `https://github.com/SPM587FA24/SCM587FA24/settings`. The page is divided into a left sidebar, a main content area, and a right sidebar.

Left Sidebar: Contains navigation links for Code, Issues (3), Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings (highlighted).

Main Content Area: The **General** tab is selected. It includes sections for:

- Access:** Collaborators, Moderation options.
- Code and automation:** Branches, Tags, Rules, Rulesets, Actions, Runners, Webhooks, Environments, Codespaces, Pages.
- Security:** Code security and analysis, Deploy keys, Secrets and variables, Actions, Codespaces, Dependabot.
- Integrations:** (partially visible at the bottom).

General Settings:

- Repository name:** `SCM587FA24` with a **Rename** button.
- Template repository:** ☐ (disabled).
- Require contributors to sign off on web-based commits:** ☐ (disabled). Description: "Enabling this setting will require contributors to sign off on commits made through GitHub's web interface. Signing off is a way for contributors to affirm that their commit complies with the repository's terms, commonly the [Developer Certificate of Origin \(DCO\)](#). [Learn more about signing off on commits.](#)"
- Default branch:** `main` with an **Edit** button. Description: "The default branch is considered the 'base' branch in your repository, against which all pull requests and code commits are automatically made, unless you specify a different branch."
- Social preview:** "Upload an image to customize your repository's social media preview. Images should be at least 640×320px (1280×640px for best display). [Download template](#)" with an **Edit** button.
- Features:** ☒ **Wikis**. Description: "Wikis host documentation for your repository."

Right Sidebar: Contains user profile links (Set status, Your profile, Your repositories, Your Copilot, Your projects, Your stars, Your gists, Your organizations, Your enterprises, Your sponsors) and repository management links (Try Enterprise (Free), Feature preview, Settings, GitHub Docs, GitHub Support, GitHub Community, Sign out).

Forking a Repo

- ▶ Forking is when you create a new project based on another project.
- ▶ If you like to contribute to a project, you can fork that repository.
- ▶ This creates a copy of that repository in your account.
- ▶ You can make changes to this repository without affecting the original repo.
- ▶ At some point if the original repository has new changes in it which you want you can always update your repo with those changes.
- ▶ You can request the author of the original repo to take in your changes coming in from your forked repo.

Fork a repository

SPM587FA24 / SCM587FA24

Code Issues 3 Pull requests Actions Projects Security Insights

SPM587FA24 Public

Watch 1 Fork 0 Star 1

Fork your own copy of SPM587FA24/SCM587FA24

main 1 Branch 0 Tags

Go to file Add file Code

About
No description, website, or topics provided.
Readme
Activity
1 star
Report repository

Releases
No releases published

Packages
No packages published

SPM587FA24 Update README.md f521eaf · last week 4 Commits	
Phase_1_Report	first commit last week
Phase_2_Report	first commit last week
.gitignore	first commit last week
README.md	Update README.md last week
a.java	first commit last week
b.java	first commit last week
c.java	first commit last week
d.java	first commit last week
e.java	first commit last week
f.java	first commit last week
g.java	first commit last week
h.java	first commit last week
i.java	first commit last week
j.java	first commit last week
k.java	first commit last week

SCMS87FA24

Public

forked from [SPMS87FA24/SCMS87FA24](#)

Repository in your account

main

1 Branch

0 Tags

Go to file

Add file

<> Code

This branch is up to date with [SPMS87FA24/SCMS87FA24:main](#).

Contribute

Sync fork

SPM587FA24 Update README.md	f521eaf · last week	4 Commits
Phase_1_Report	first commit	last week
Phase_2_Report	first commit	last week
.gitignore	first commit	last week
README.md	Update README.md	last week
a.java	first commit	last week
b.java	first commit	last week
c.java	first commit	last week
d.java	first commit	last week
e.java	first commit	last week
f.java	first commit	last week
g.java	first commit	last week
h.java	first commit	last week
i.java	first commit	last week

About

No description, website, or topics provided.

Readme

Activity

0 stars

0 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Pull Requests

- ▶ Once you fork a repo and makes changes to that forked repo, you have the changes only in your repo.
- ▶ Say you want to add your changes to the original repo.
- ▶ You can do so by creating a pull request for your changes to be pulled into the original repo.
- ▶ The original repos owner can review your changes and accept your changes and pull in your changes to the original repo.
- ▶ He can also reject it if he wants to.

Pull Requests

Screenshot of the GitHub Pull Requests interface for repository **SuhasPalani / SCM587FA24**.

The interface shows the repository name and a green box indicating **From forked repository**.

The navigation bar includes links for **Code**, **Pull requests** (active), **Actions**, **Projects**, **Wiki**, **Security**, **Insights**, and **Settings**.

Filters are set to **is:pr is:open**. There are **9 Labels** and **0 Milestones**.

A green button labeled **New pull request** is visible, with an annotation pointing to it labeled **Pull Request Button**.

The main content area displays a welcome message:

Welcome to pull requests!

Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should [create a pull request](#).

A ProTip! at the bottom states: Exclude everything labeled `bug` with `-label:bug`.

Creating a Pull Request

SPM587FA24 / SCM587FA24

Code Issues 3 Pull requests Actions Projects Security Insights

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#) or [learn more about diff comparisons](#).

base repository: SPM587FA24/SCM587FA24 ▼ base: main ▼ ... head repository: SuhasPalani/SCM587FA24 ▼ compare: SFA24SCM77P ▼

✓ Able to merge. These branches can be automatically merged.

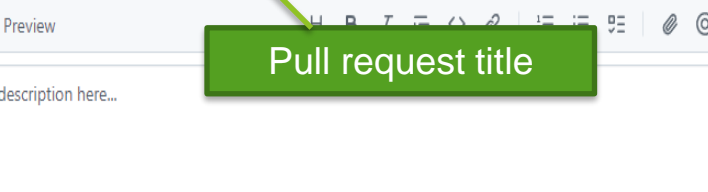


Add a title

try

Helpful resources

[GitHub Community Guidelines](#)



The screenshot shows the GitHub interface for creating a pull request. At the top, there's a header 'Add a description'. Below it, a green callout box with the text 'Pull request title' points to the title input field. The form has a 'Write' tab selected, with a 'Preview' tab next to it. The main area is a large text input field with the placeholder text 'Add your description here...'. At the bottom, there are two footnotes: 'Markdown is supported' and 'Paste, drop, or click to add files'.

☒ Allow edits by maintainers (?)

Create pull request

 Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

Create pull request

Issues

- ▶ Issues option in GitHub is a bug tracking tool for GitHub.
- ▶ Let's say you find some bugs in your code.
- ▶ You can raise an issue for each bug that you find.
- ▶ Once you fix that code and the bug is cleared you will be making a commit to your repo.
- ▶ At this time, you can close that bug.
- ▶ This will help a user looking into the repo to understand the bugs that have been identified and what code fixed it.
- ▶ He can look at that fix and understand how it was fixed.

Labeling the issues

The screenshot shows the GitHub 'New Issue' page for repository SPM587FA24 / SCM587FA24. The page has a dark theme. At the top, there's a navigation bar with links to Code, Issues (3), Pull requests (1), Actions, Projects, Wiki, Security, Insights, and Settings. A search bar is on the right. The main content area has a green plus icon and the text 'Add a title' above a text input field containing 'Feature not working'. Below this is 'Add a description' with a rich text editor showing 'Write' and 'Preview' tabs, and a large text area with the placeholder 'your description here...'. To the right, there are sections for Assignees (No one—assign yourself), Labels (duplicate, invalid), Projects (None yet), and Milestone (No milestone). At the bottom right is a 'Submit new issue' button. Annotations with green boxes and arrows point to the title input field (labeled 'Issue title'), the 'invalid' label button (labeled 'Labels'), and the 'Submit new issue' button (labeled 'Submitting the issue').

SPM587FA24 / SCM587FA24

Type to search

<> Code Issues 3 Pull requests 1 Actions Projects Wiki Security Insights Settings

Add a title

Feature not working

Add a description

Write Preview

your description here...

Markdown is supported Paste, drop, or click to add files

Assignees

No one—assign yourself

Labels

duplicate invalid

Projects

None yet

Milestone

No milestone

Development

Shows branches and pull requests linked to this issue.

Helpful resources

GitHub Community Guidelines

Submit new issue

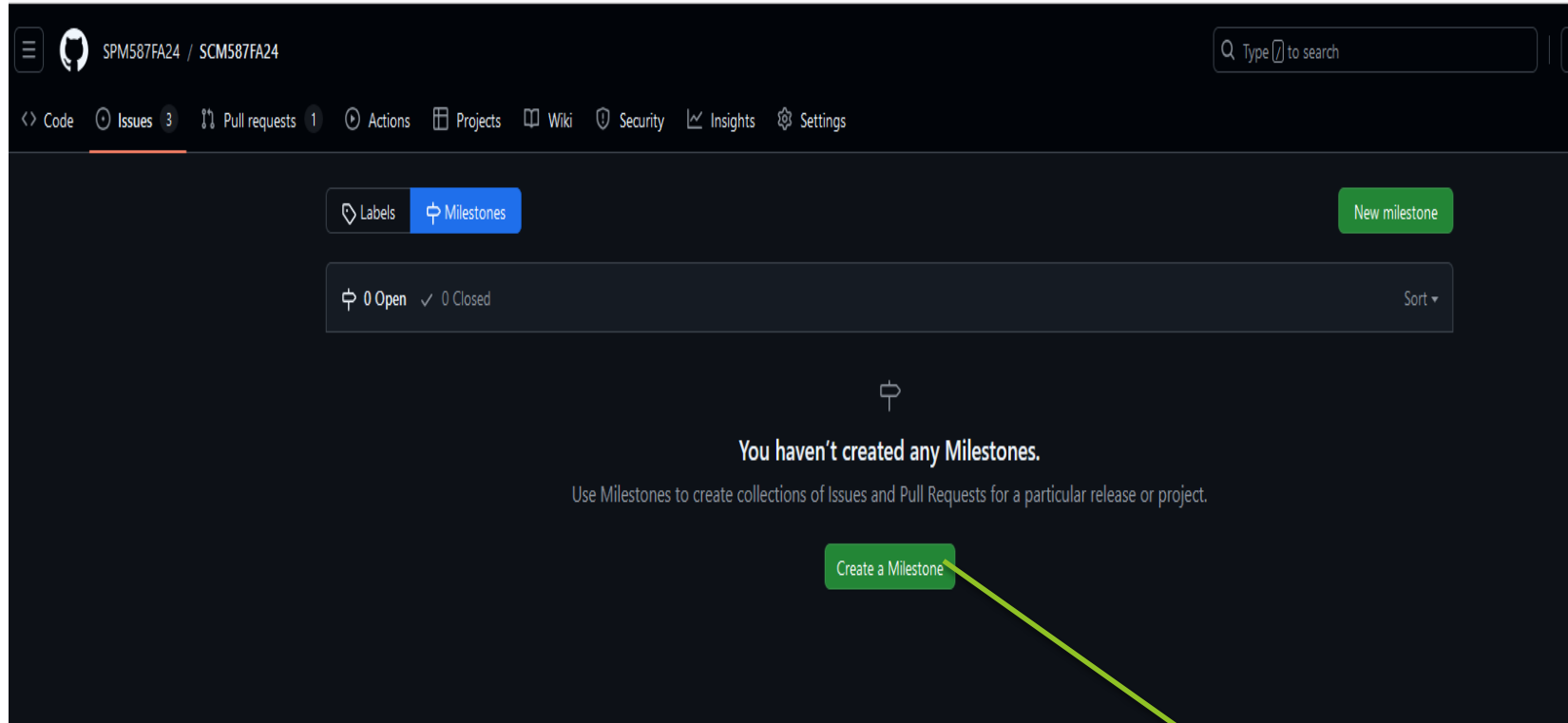
Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

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Milestones



- ▶ You can also add milestones to your repo.
- ▶ Milestones help you keep track of your progress.
- ▶ Assume you have a project which you are doing in multiple parts.
- ▶ You can create milestones for each part.
- ▶ Once each part is completed and the corresponding bugs in that code have been cleared you can mark a milestone to be completed.
- ▶ You can split up your project into multiple enhancements and as each enhancement is completed it keeps showing the progress on the milestone.

Milestones



Create a milestone

Creating Milestones

  SPM587FA24 / SCM587FA24

Type to search

[Code](#) [Issues 3](#) [Pull requests 1](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

New milestone


Create a new milestone to help organize your issues and pull requests. Learn more about [milestones and issues](#).

Title

Due date (optional)

Description

Create milestone



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Milestone Title

Selecting a due date


Create a milestone


Create milestone

SPM587FA24 / SCM587FA24


Type  to search

[Code](#) [Issues 3](#) [Pull requests 1](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

 Labels



 Milestones

New milestone

 1 Open ✓ 0 Closed

Sort ▾

test


 Due by September 10, 2024  Last updated less than a minute ago

0% complete

0 open

0 closed

[Edit](#) [Close](#) [Delete](#)

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Status of a milestone

Questions?