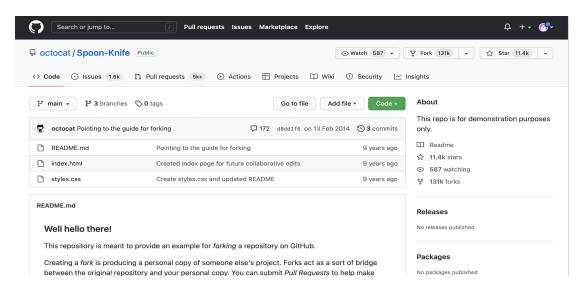
GIT HUB contributing to Open Source Library

We can contribute to the open source library or projects in GITHUB.

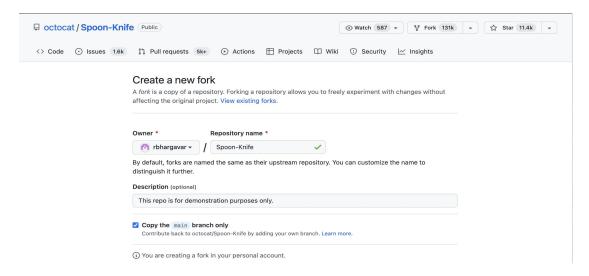
Find the open source project in the git hub and fork it to your github account. Creating a "fork" is producing a personal copy of someone else's project. Forks act as a sort of bridge between the original repository and your personal copy. You can submit pull requests to help make other people's projects better by offering your changes up to the original project. Forking is at the core of social coding at GitHub.

Here in this discussion we are using spoon-knife project a test repository that's hosted on GitHub.com that lets you test the fork and pull request workflow.

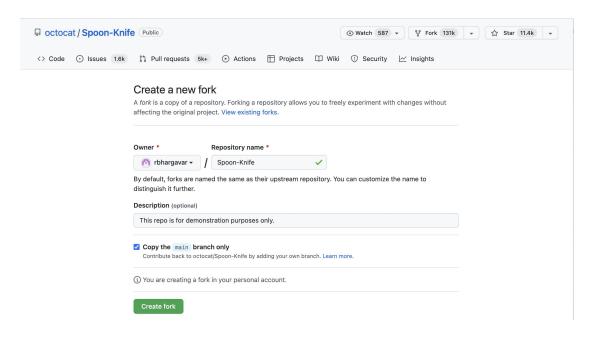
1. Navigate to the Spoon-Knife project at https://github.com/octocat/Spoon-Knife.



2. Click Fork and Select an owner for the forked repository. By default repository name is same as parent repository that can be changed later.



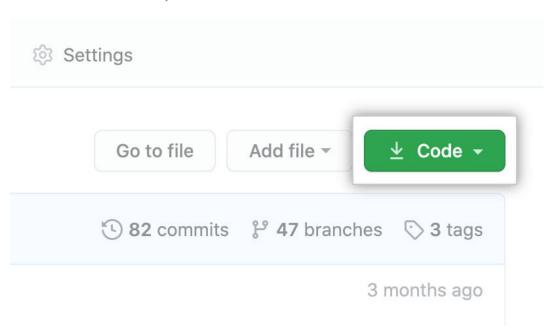
- 3. Optionally, add a description of your fork. Choose whether to copy only the default branch or all branches to the new fork. For many forking scenarios, such as contributing to open-source projects, you only need to copy the default branch. By default, only the default branch is copied.
- 4. Click Create.



Cloning a fork

We've successfully forked the Spoon-Knife repository, but so far, it only exists on GitHub. To be able to work on the project, we will need to clone it to our computer. We can clone your fork with the command line, GitHub CLI, or GitHub Desktop.

- 1. On GitHub, navigate to your fork of the Spoon-Knife repository.
- 2. Above the list of files, click Code.



- 3. Copy the URL for the repository.
- 4. Open Terminal.
- 5. Change the current working directory to the location where you want the cloned directory.
- 6. Type git clone, and then paste the URL you copied earlier. It will look like this, with your GitHub username instead of YOUR-USERNAME:

\$ git clone https://github.com/YOUR-USERNAME/Spoon-Knife

7. Press Enter. Your local clone will be created.

```
$ git clone https://github.com/YOUR-USERNAME/Spoon-Knife
> Cloning into `Spoon-Knife`...
> remote: Counting objects: 10, done.
> remote: Compressing objects: 100% (8/8), done.
> remove: Total 10 (delta 1), reused 10 (delta 1)
> Unpacking objects: 100% (10/10), done.
```

Creating a branch to work on

Before making changes to the project, we should create a new branch and check it out. By keeping changes in their own branch, we follow GitHub Flow and ensure that it will be easier to contribute to the same project again in the future.

```
git branch BRANCH-NAME git checkout BRANCH-NAME
```

Making and pushing changes

We can make a few changes to the project using your favorite text editor, like Visual Studio Code.

When we're ready to submit your changes, stage and commit your changes. git add . tells Git that you want to include all of your changes in the next commit. git commit takes a snapshot of those changes.

```
git add.
git commit -m "a short description of the change"
```

When we stage and commit files, we essentially tell Git, "Okay, take a snapshot of our changes!" We can continue to make more changes, and take more commit snapshots.

Right now, our changes only exist locally. When we're ready to push your changes up to GitHub, push our changes to the remote.

git push

Making a pull request

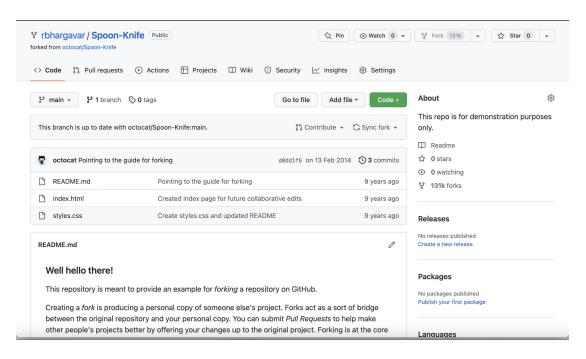
At last, we're ready to propose changes into the main project! This is the final step in producing a fork of someone else's project, and arguably the most important. If we've made a change that you feel would benefit the community as a whole, we should definitely consider contributing back.

- To do so, head on over to the repository on GitHub where your project lives.
- For this example, it would be at https://www.github.com/<your username>/Spoon-Knife.
- You'll see a banner indicating that your branch is one commit ahead of rbhargavar:main.
- Click Contribute and then Open a pull request.
- GitHub will bring you to a page that shows the differences between your fork and the octocat/Spoon-Knife repository.
- Click Create pull request.

GitHub will bring you to a page where you can enter a title and a description of your changes. It's important to provide as much useful information and a rationale for why you're making this pull request in the first place. The project owner needs to be able to determine whether your change is as useful to everyone as you think it is. Finally, click Create pull request.

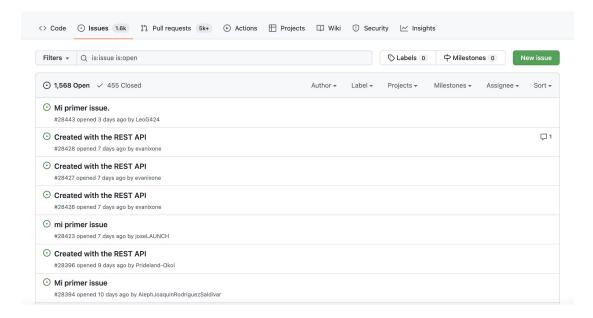
Exploring GITHUB

Code



Gives the information about the files, type of files and code inside these files. This section also gives information about the branches and their commits.

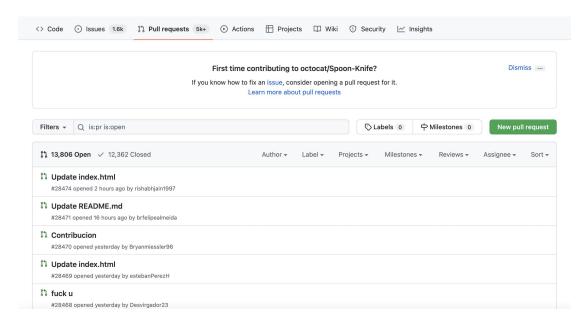
Issues



Issues that you identified through the library or project can be rised in the issue section that can help others to identify and resolve. In this section we can also suggest how to resolve the issue. We can also reslove the issues rised by other developers. Great way to involve in conversation with other contributers.

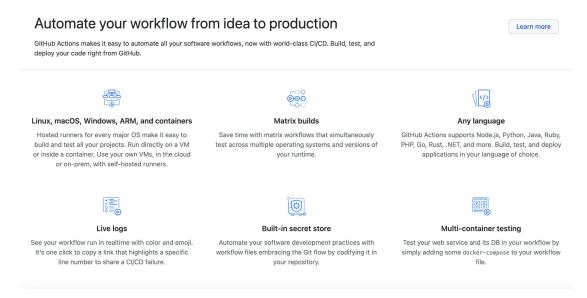
Explore creating new issue and resolving already created issue.

Pull Requests



Pull requests can be created if changes are made to the forked file in new branch. It is also possible to check the already created pull requests and check the changes made by the every one along with number of commits.

Actions:

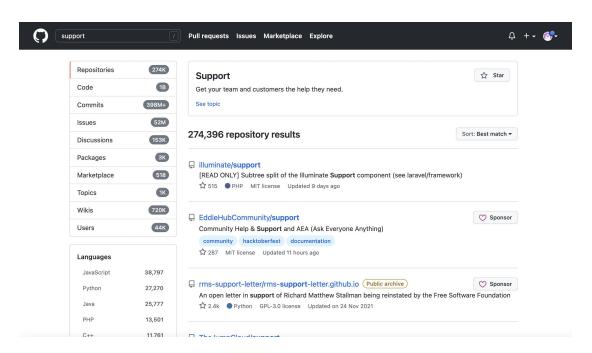


We can perform some actions based on some events, it is usually specified for continuos integration. There are many built in actions in GitHub that can be used with our projects.

Explore:

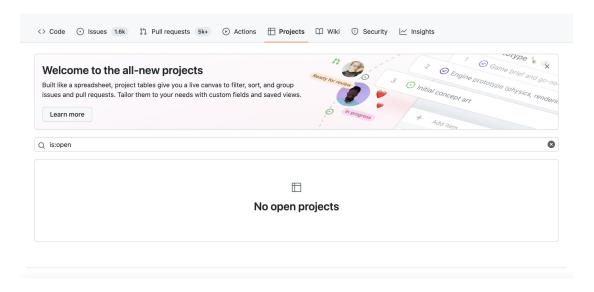
Explore tab can be used to explore different open source projects and trending open source projects. We can contribute to these open source projects and get connected with developer community.

Discussion:



Helps us to discuss with community and resolve the issues faced during the projects. It also provides communication with different developer community. it is like a forum for discussion on various issues.

Project:



Project tab helps to create different columns or sections and allow us to tract the status of various projects that we are working on.

References:

- 1. https://docs.github.com/en/get-starteds
- 2. https://www.youtube.com/watch?v=yzeVMecydCE