Contributing to projects

Learn how to contribute to a project through forking.

Mac **Windows** Linux

GitHub CLI Desktop **Web browser**

In this article

About forking

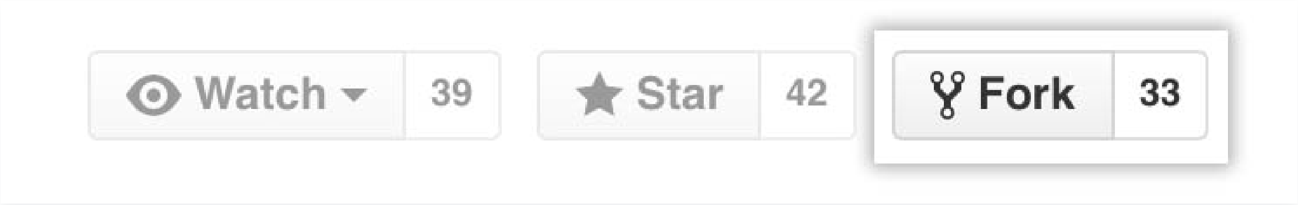
After using GitHub by yourself for a while, you may find yourself wanting to contribute to someone else's project. Or maybe you'd like to use someone's project as the starting point for your own. This process is known as forking.

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. For more information, see "Fork a repo."

Forking a repository

This tutorial uses the 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**.



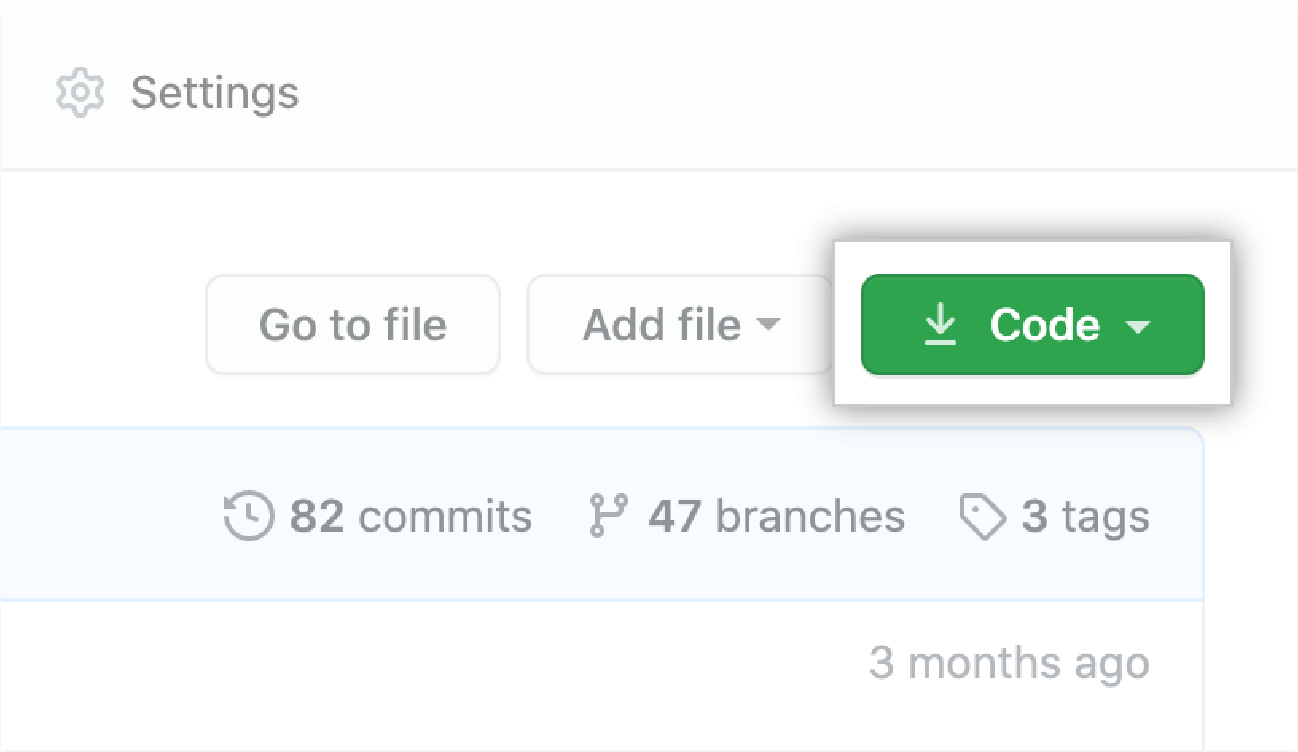
3. GitHub will take you to your copy (your fork) of the Spoon-Knife repository.

Cloning a fork

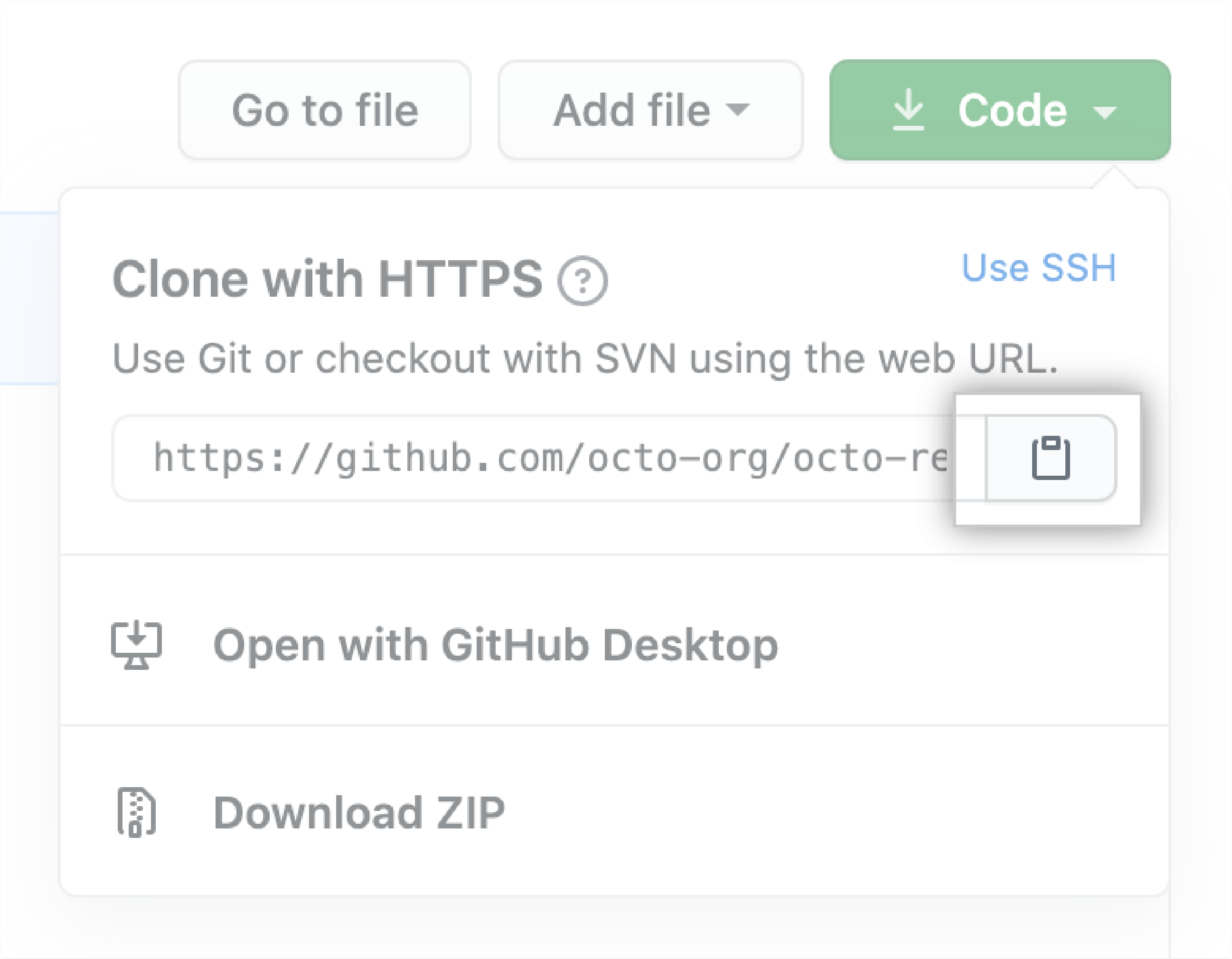
You've successfully forked the Spoon-Knife repository, but so far, it only exists on GitHub. To be able to work on the project, you will need to clone it to your computer.

You 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**.

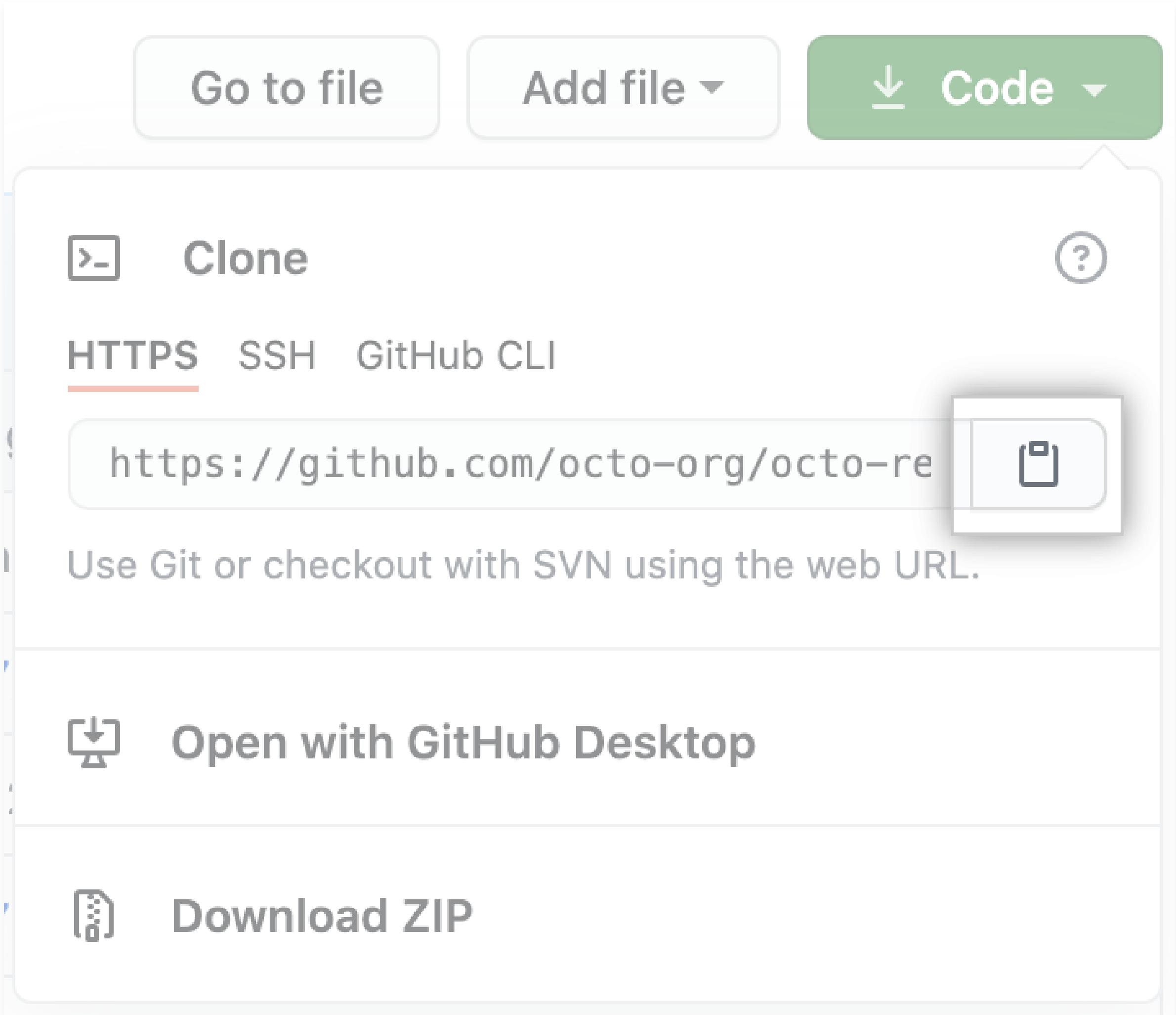


3. To clone the repository using HTTPS, under "Clone with HTTPS", click 📋. To clone the repository using an SSH key, including a certificate issued by your organization's SSH certificate authority, click **Use SSH**, then click 📋. To clone a repository using GitHub CLI, click **Use GitHub CLI**, then click 📋.



Use Git or checkout with SVN using the web URL.

```
https://github.com/octo-org/octo-re
```


Go to file
Add file
Code
Clone
HTTPS
SSH
GitHub CLI
https://github.com/octo-org/octo-re
Use Git or checkout with SVN using the web URL.
Open with GitHub Desktop
Download ZIP

4. Open Git Bash.

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.
```

Making and pushing changes

Go ahead and make a few changes to the project using your favorite text editor, like Atom. You could, for example, change the text in `index.html` to add your GitHub username.

When you'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 you stage and commit files, you essentially tell Git, "Okay, take a snapshot of my changes!" You can continue to make more changes, and take more commit snapshots.

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

```
git push
```

Making a pull request

At last, you'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 you've made a change that you feel would benefit the community as a whole, you 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 `octocat: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**.

Managing feedback

Pull Requests are an area for discussion. In this case, the Octocat is very busy, and probably won't merge your changes. For other projects, don't be offended if the project owner rejects your pull request, or asks for more information on why it's been made. It may even be that the project owner chooses not to merge your pull request, and that's totally okay. Your copy will exist in infamy on the

Internet. And who knows--maybe someone you've never met will find your changes much more valuable than the original project.

Finding projects

You've successfully forked and contributed back to a repository. Go forth, and contribute some more! For more information, see "Finding ways to contribute to open source on GitHub."

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