GitHub Docs

Fork a repo

A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.

Mac **Windows** Linux

GitHub CLI Desktop **Web browser**

In this article

About forks

Most commonly, forks are used to either propose changes to someone else's project to which you do not have write access, or to use someone else's project as a starting point for your own idea. You can fork a repository to create a copy of the repository and make changes without affecting the upstream repository. For more information, see "Working with forks."

Propose changes to someone else's project

For example, you can use forks to propose changes related to fixing a bug. Rather than logging an issue for a bug you have found, you can:

- Fork the repository.
- Make the fix.
- Submit a pull request to the project owner.

Use someone else's project as a starting point for your own idea.

Open source software is based on the idea that by sharing code, we can make better, more reliable software. For more information, see the "About the Open Source Initiative" on the Open Source Initiative.

For more information about applying open source principles to your organization's development work on GitHub.com, see GitHub's white paper "An introduction to innersource."

When creating your public repository from a fork of someone's project, make sure to include a license file that determines how you want your project to be shared with others. For more information, see "Choose an open source license" at choosealicense.com.

For more information on open source, specifically how to create and grow an open source project, we've created Open Source Guides that will help you foster a healthy open source community by recommending best practices for creating and maintaining repositories for your open source project. You can also take a free GitHub Skills course on maintaining open source communities.

Prerequisites

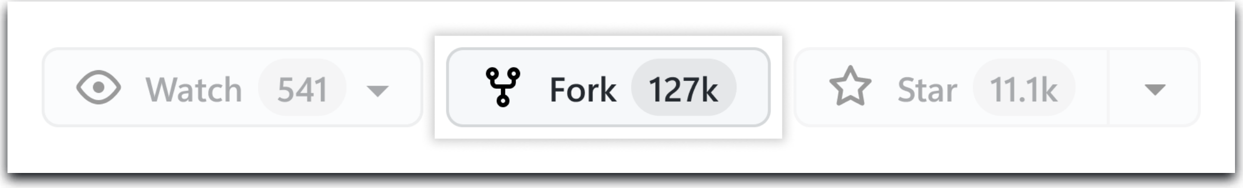
If you have not yet, you should first set up Git. Don't forget to set up authentication to GitHub.com from Git as well.

Forking a repository

You might fork a project to propose changes to the upstream, or original, repository. In this case, it's good practice to regularly sync your fork with the upstream repository. To do this, you'll need to use Git on the command line. You can practice setting the upstream repository using the same octocat/Spoon-Knife repository you just forked.

1. On GitHub.com, navigate to the octocat/Spoon-Knife repository.

2. In the top-right corner of the page, click **Fork**.

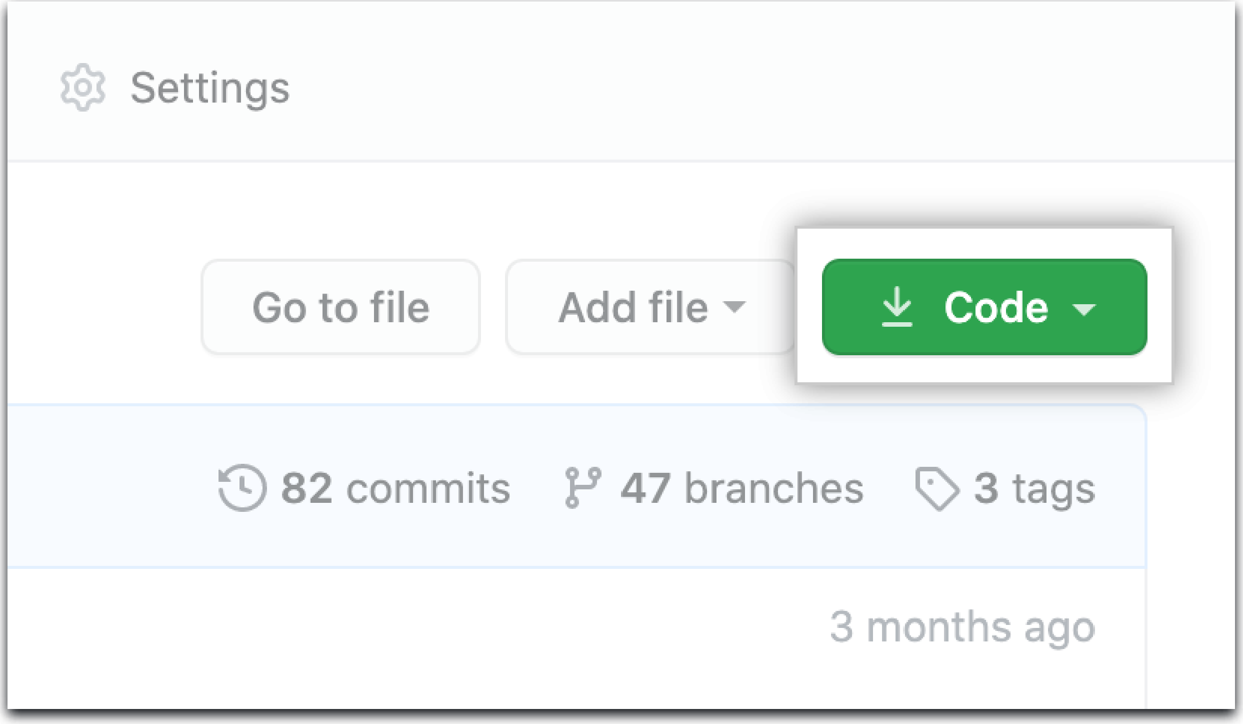


Cloning your forked repository

Right now, you have a fork of the Spoon-Knife repository, but you do not have the files in that repository locally on your computer.

1 On GitHub.com, navigate to **your fork** of the Spoon-Knife repository.

2 Above the list of files, click ⤓ **Code**.



3 Copy the URL for the repository.

- To clone the repository using HTTPS, under "HTTPS", click 📋.
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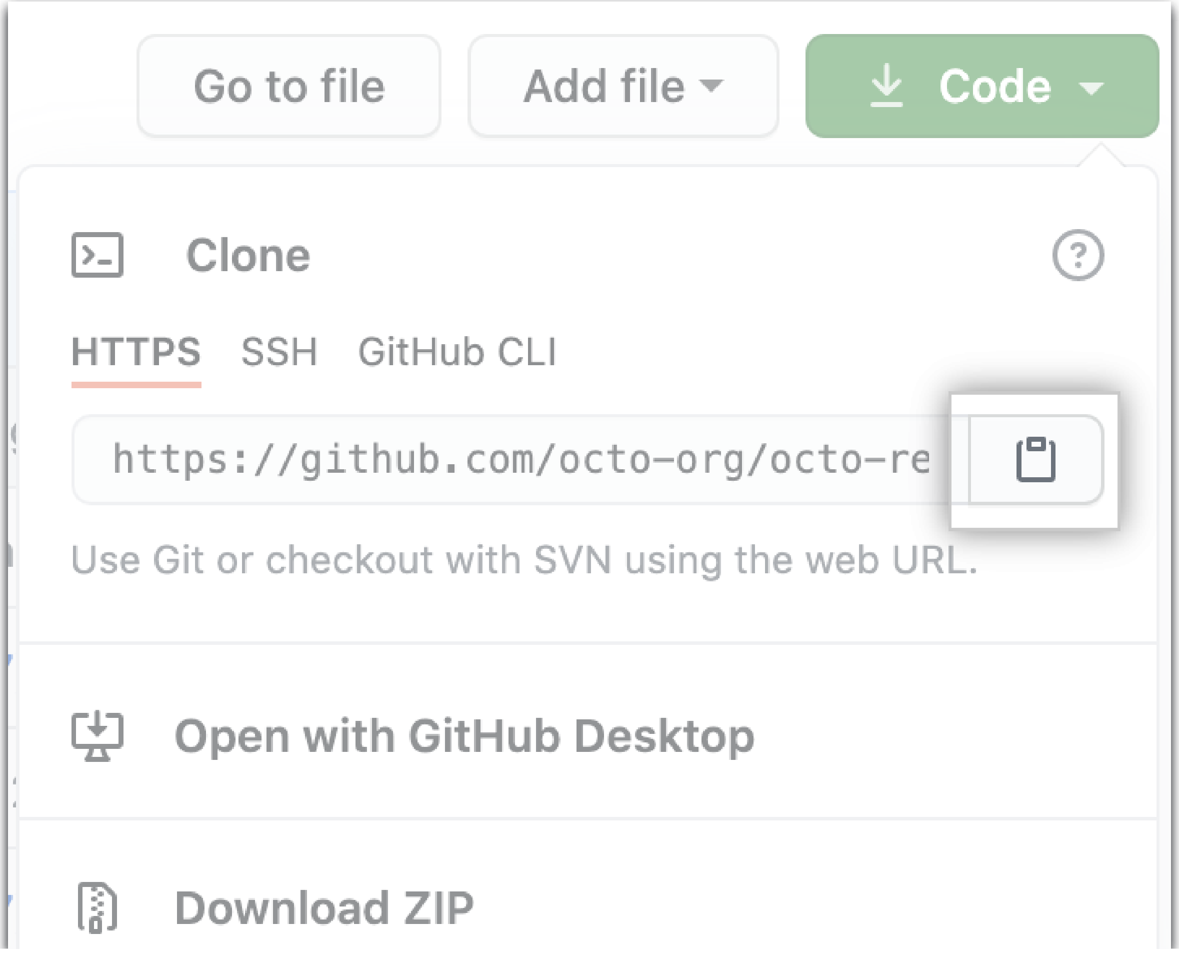


https://github.com/octo-org/octo-re

Use Git or checkout with SVN using the web URL.

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.

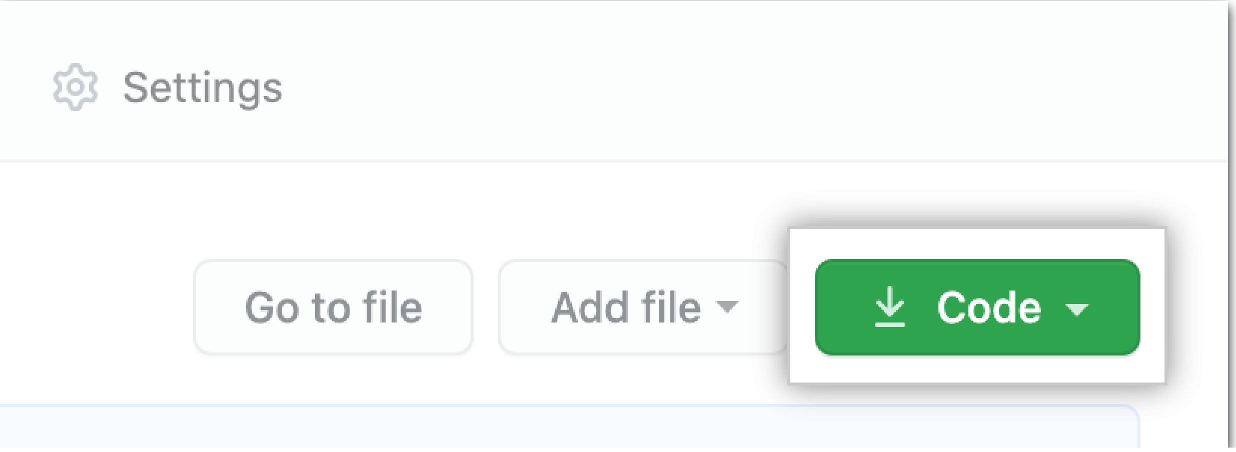
```
$ git clone https://github.com/YOUR-USERNAME/Spoon-Knife
> Cloning into `Spoon-Knife`...
> remote: Counting objects: 10, done.
> remote: Compressing objects: 100% (8/8), done.
> remove: Total 10 (delta 1), reused 10 (delta 1)
> Unpacking objects: 100% (10/10), done.
```

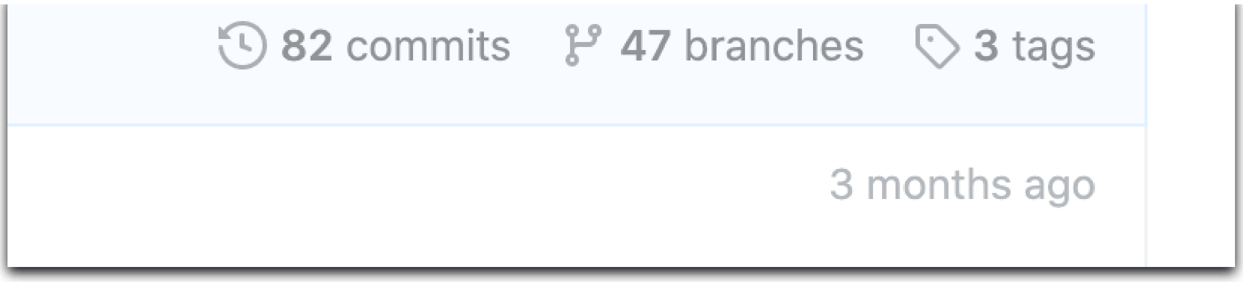
Configuring Git to sync your fork with the original repository

When you fork a project in order to propose changes to the original repository, you can configure Git to pull changes from the original, or upstream, repository into the local clone of your fork.

1 On GitHub.com, navigate to the octocat/Spoon-Knife repository.

2 Above the list of files, click **Code**.





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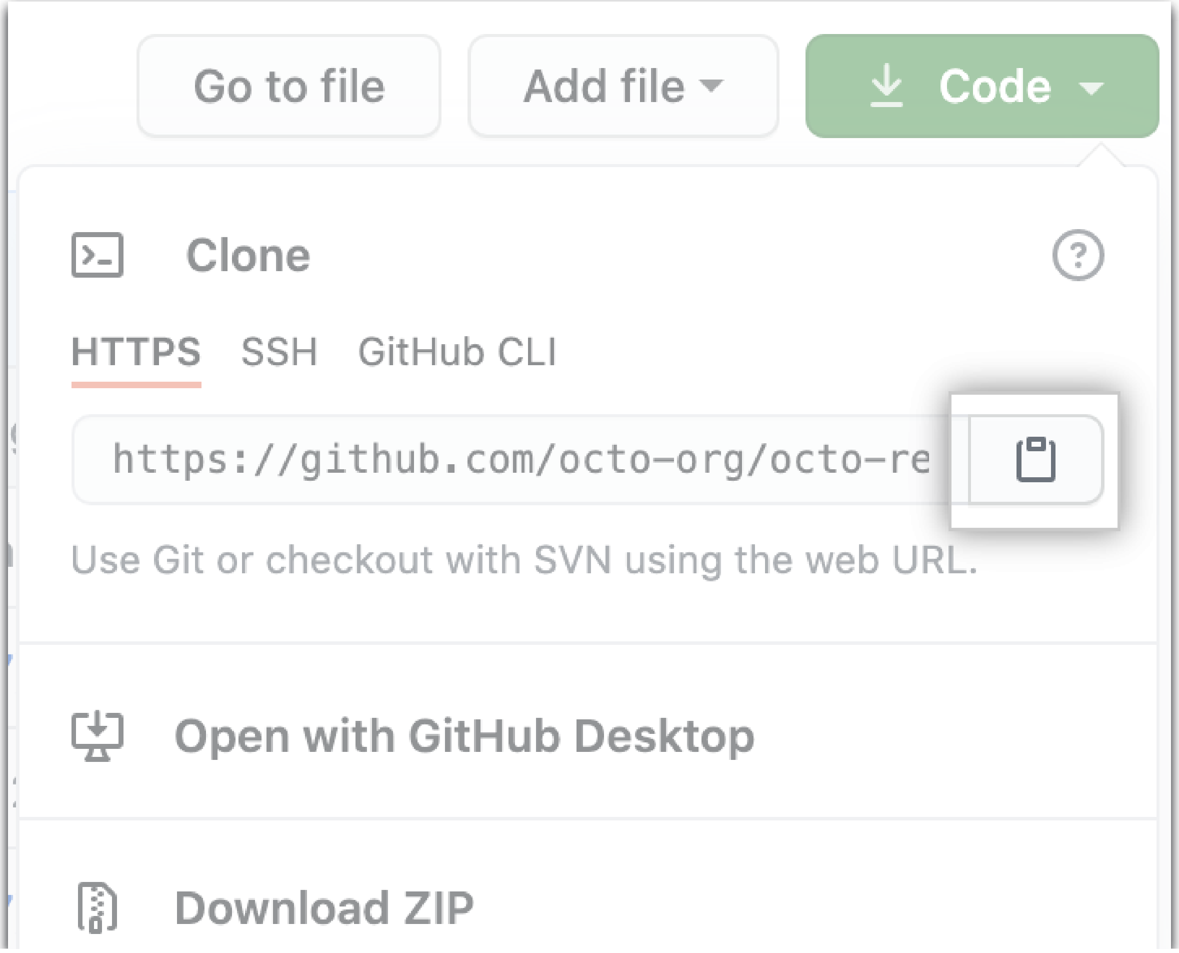

https://github.com/octo-org/octo-re

Use Git or checkout with SVN using the web URL.

4 Open Git Bash.

5 Change directories to the location of the fork you cloned.

- To go to your home directory, type just `cd` with no other text.
- To list the files and folders in your current directory, type `ls` .
- To go into one of your listed directories, type `cd your_listed_directory` .
- To go up one directory, type `cd ..` .

6 Type `git remote -v` and press **Enter**. You will see the current configured remote repository for your fork.

```
$ git remote -v
> origin  https://github.com/YOUR_USERNAME/YOUR_FORK.git (fetch)
> origin  https://github.com/YOUR_USERNAME/YOUR_FORK.git (push)
```

7 Type `git remote add upstream` , and then paste the URL you copied in Step 3 and press **Enter**. It will look like this:

```
$ git remote add upstream https://github.com/ORIGINAL_OWNER/Spoon-Knife.git
```

8 To verify the new upstream repository you have specified for your fork, type `git remote -v` again. You should see the URL for your fork as `origin` , and the URL for the original repository as `upstream` .

```
$ git remote -v
> origin    https://github.com/YOUR_USERNAME/YOUR_FORK.git (fetch)
> origin    https://github.com/YOUR_USERNAME/YOUR_FORK.git (push)
> upstream  https://github.com/ORIGINAL_OWNER/ORIGINAL_REPOSITORY.git (fetch)
> upstream  https://github.com/ORIGINAL_OWNER/ORIGINAL_REPOSITORY.git (push)
```

Now, you can keep your fork synced with the upstream repository with a few Git commands. For more information, see "Syncing a fork."

Editing a fork

You can make any changes to a fork, including:

- **Creating branches:** *Branches* allow you to build new features or test out ideas without putting your main project at risk.
- **Opening pull requests:** If you are hoping to contribute back to the original repository, you can send a request to the original author to pull your fork into their repository by submitting a pull request.

Find another repository to fork

Fork a repository to start contributing to a project. You can fork a repository to your personal account or any organization where you have repository creation permissions. For more information, see "Roles in an organization."

If you have access to a private repository and the owner permits forking, you can fork the repository to your personal account or any organization on GitHub Team where you have repository creation permissions. You cannot fork a private repository to an organization using GitHub Free. For more information, see "GitHub's products."

You can browse Explore to find projects and start contributing to open source repositories. For more information, see "Finding ways to contribute to open source on GitHub."

Next Steps

You have now forked a repository, practiced cloning your fork, and configured an upstream repository.

- For more information about cloning the fork and syncing the changes in a forked repository from your computer, see "Set up Git."

- You can also create a new repository where you can put all your projects and share the code on GitHub. Creating a repository for your project allows you to store code in GitHub. This provides a backup of your work that you can choose to share with other developers. For more information, see “Create a repository.""

- Each repository on GitHub is owned by a person or an organization. You can interact with the people, repositories, and organizations by connecting and following them on GitHub. For more information, see "Be social."

- GitHub has a great support community where you can ask for help and talk to people from around the world. Join the conversation on GitHub Support Community.