6.1.1 Introduction

Congratulations on making it this far on your web development journey! You might still feel like a beginner, but you probably know more than you think at this point. In fact, there are many open source projects out there right now that could use the help of someone like you. But what's "open source"?

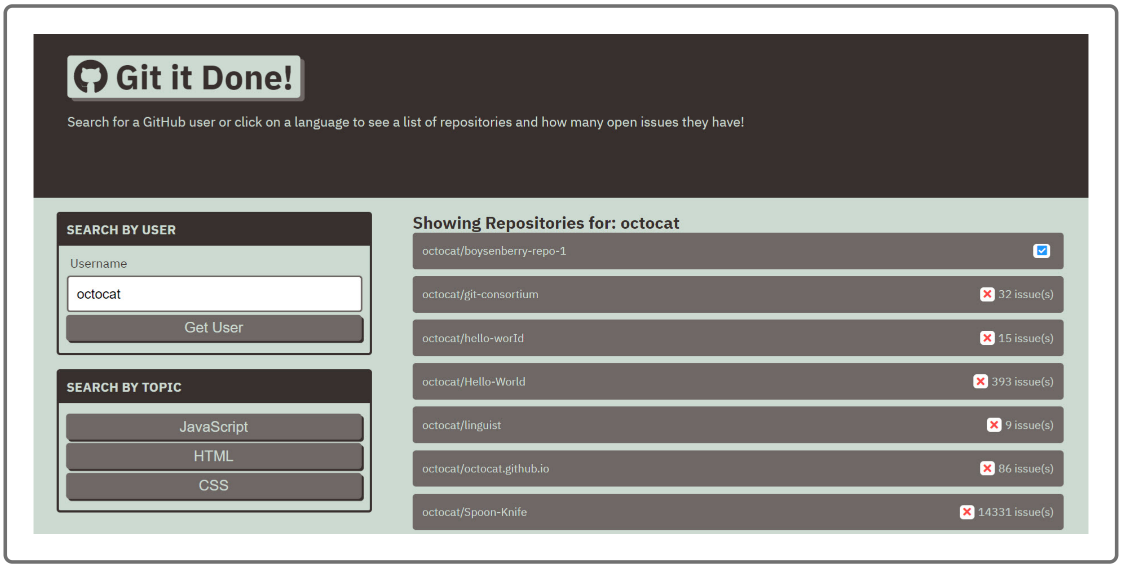
Open source software is software that's free to use, with source code that's public and editable by the community. Many of the tools you've used in this course—like Git and VS Code—are open source. Contributing to an open source project is a great way to give back to the web development community, network with other developers, and add to your resume. This week, you'll learn how to do just that.

In this module, you'll work with Amiko, a fellow web developer whom you met at a local tech meetup. Amiko is eager to contribute to open source projects, but she's found the process of looking for them on GitHub to be time-consuming and tedious. So she's started working on a web app that will search GitHub for open source projects with open issues and pull requests. However, there's one big blocker: Amiko hasn't learned JavaScript yet.

And that's where you come in! Most of the HTML and CSS for this project is already done. You'll add the necessary JavaScript logic to display

GitHub repositories and their open issue counts based on a user's search.

The following image shows what Amiko wants to see:



Git it Done!

Search for a GitHub user or click on a language to see a list of repositories and how many open issues they have!

SEARCH BY USER

Username: octocat

SEARCH BY TOPIC

Showing Repositories for: octocat

- octocat/boysenberry-repo-1 ☑
- octocat/git-consortium ☒ 32 issue(s)
- octocat/hello-world ☒ 15 issue(s)
- octocat/Hello-World ☒ 393 issue(s)
- octocat/linguist ☒ 9 issue(s)
- octocat/octocat.github.io ☒ 86 issue(s)
- octocat/Spoon-Knife ☒ 14331 issue(s)

You might be tempted to simply copy and paste the data from GitHub into the app. But if you use that approach, you’ll end up with a lot of inaccurate data, because repositories change constantly. Instead, you'll use some new tools to request the data directly from GitHub's API on an as-needed basis, in real time.

NERD NOTE

Manually inserting data instead of pulling it from other sources is called **hardcoding**. This practice can help you test your code, but eventually you'll replace the data with something dynamic, like a database or third-party API response.

In this first lesson, we'll accomplish the following:

- Learn what a server-side API is.

- Read server-side API documentation.
- Use the browser's Fetch API to communicate with a server.
- Inspect browser requests and server responses with the Chrome DevTools Network tab.

Most front-end developers spend a lot of time manipulating and displaying data in the browser, just as you’ll do in this lesson. Even though you’ll work on apps of varying data and complexity throughout your development career, this process of getting data from a server will stay fairly consistent.