1-Tools Installation and Setup

Chapter 1: Setting Up Your Coding Environment: Node.js and Visual Studio Code

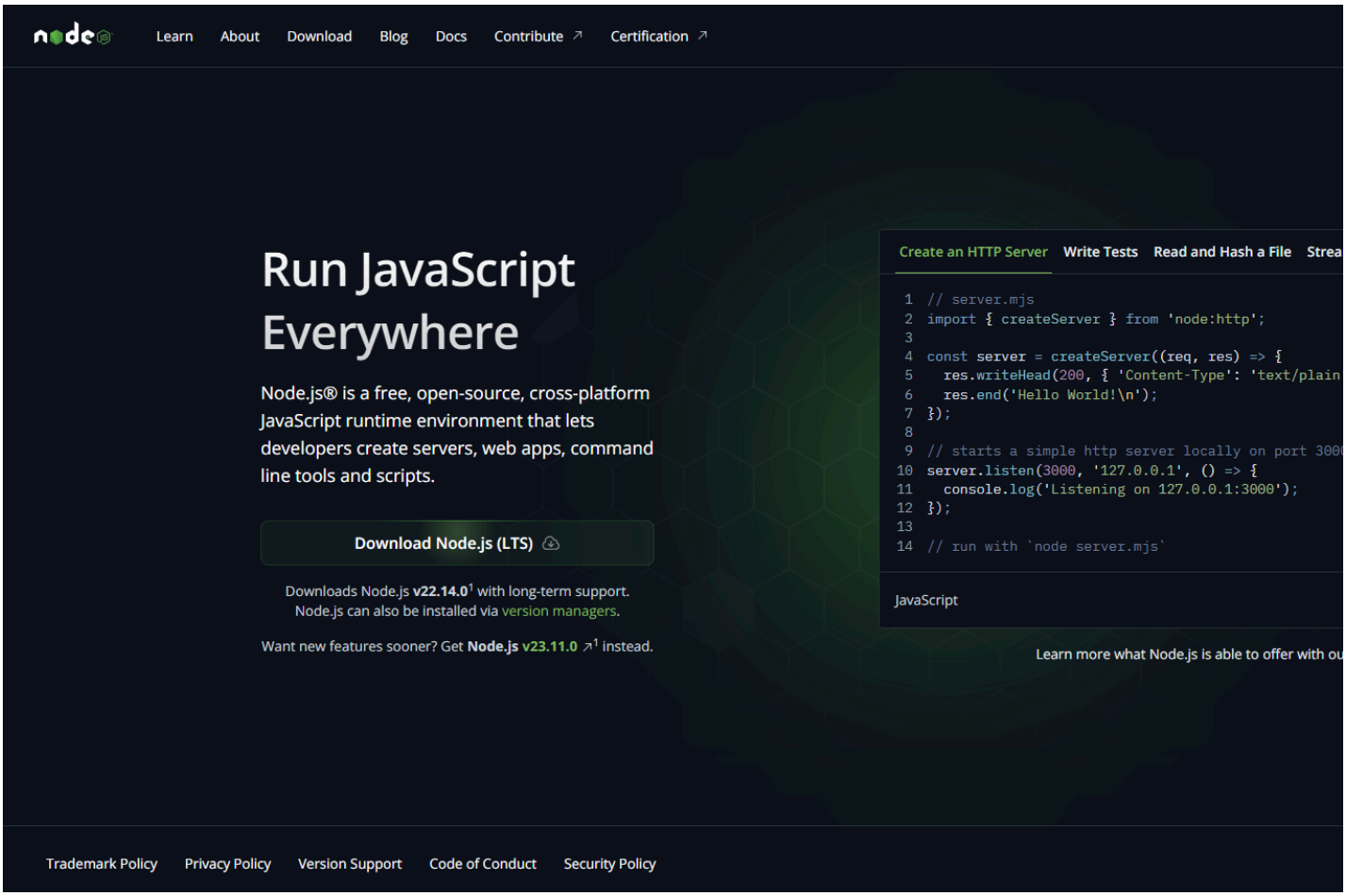
Before diving deeper into JavaScript, it’s important to set up a proper development environment. This chapter will guide you through installing Node.js and Visual Studio Code, tools that make JavaScript programming efficient and enjoyable.

Why Do You Need Node.js and VSCode?

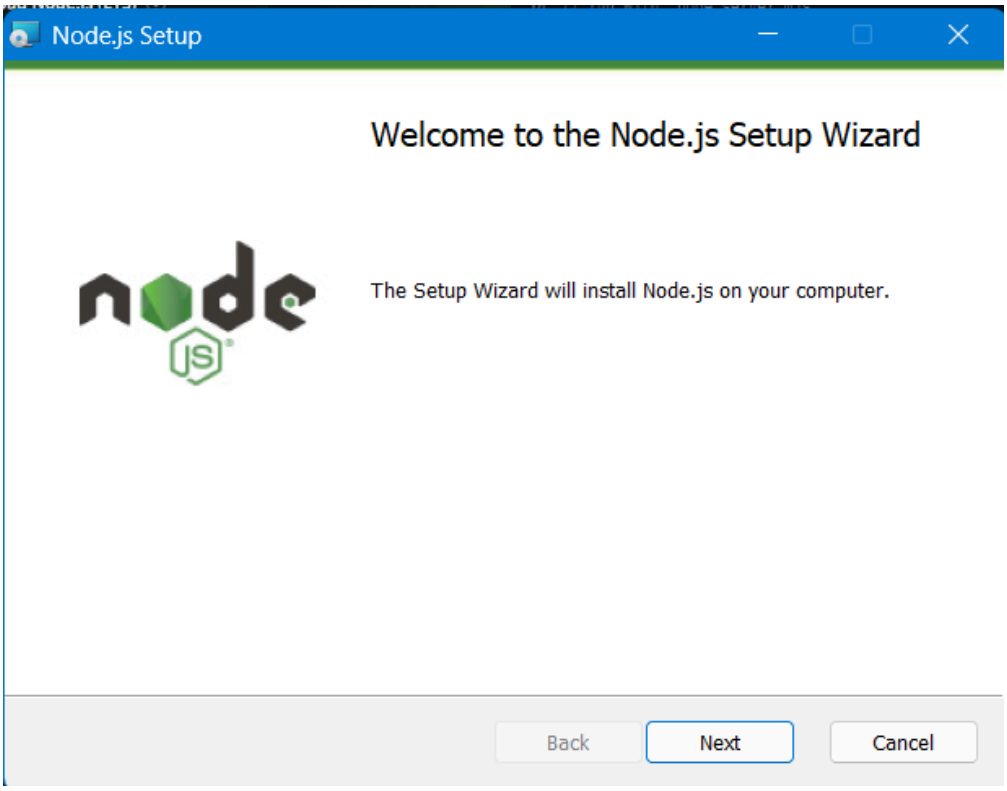
- **Node.js:** Allows you to run JavaScript outside the browser, making it great for testing and server-side programming.
- **Visual Studio Code (VSCode):** A lightweight yet powerful code editor with features like syntax highlighting, debugging, and extensions to boost your productivity.

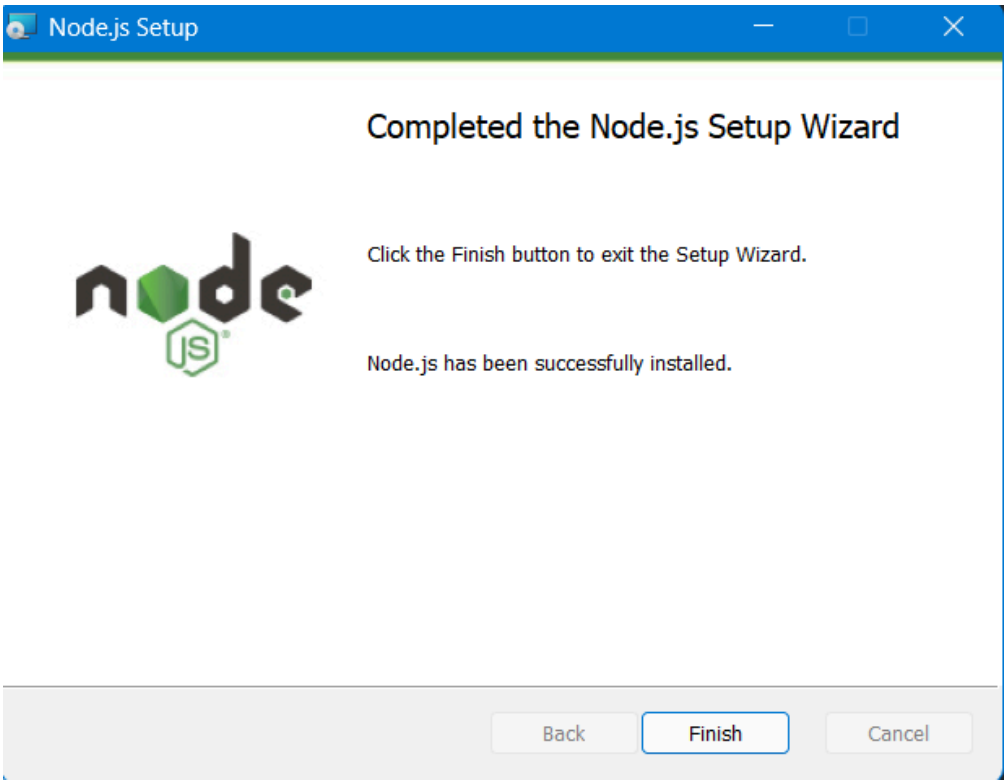
Installing Node.js

1. **Download Node.js:**
   - Visit the official Node.js website.
   - Click on the recommended version for your system (LTS is preferable for beginners).



2. **Run the Installer:**
   - Open the downloaded file and follow the installation prompts.
   - Select default options unless you have specific preferences.





3. **Verify the Installation:**
   - Open a terminal or command prompt.
   - Type the following command and press Enter:

```
node -v
```

- You should see the installed version of Node.js. Similarly, verify `npm` (Node Package Manager) by typing:

```
npm -v
```

4. **Test Node.js:**
   - Create a new JavaScript file called `hello-world.js`.
   - Add this code:

```
console.log("Hello World!");
```

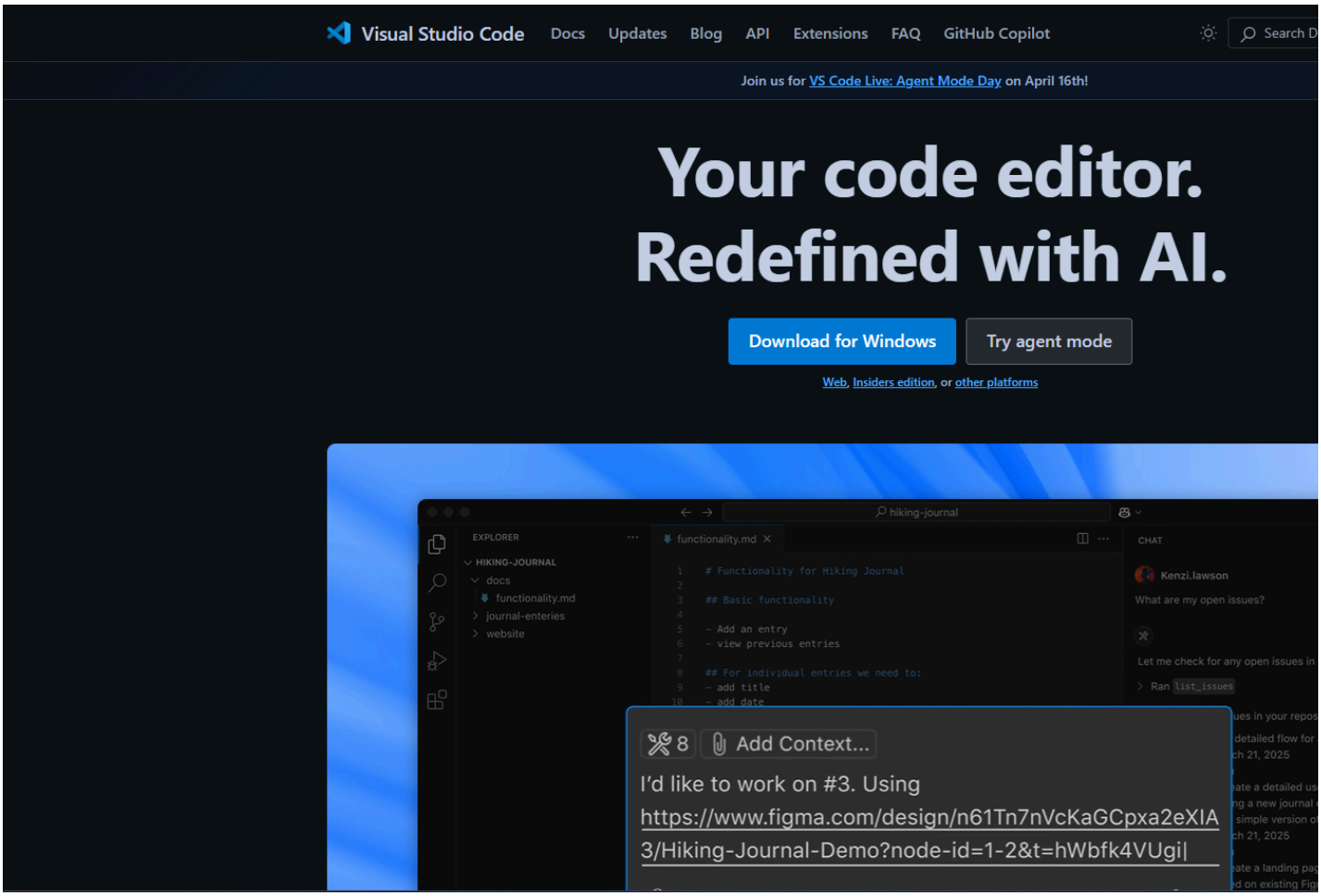
   - Run the file with:

```
node hello-world.js
```

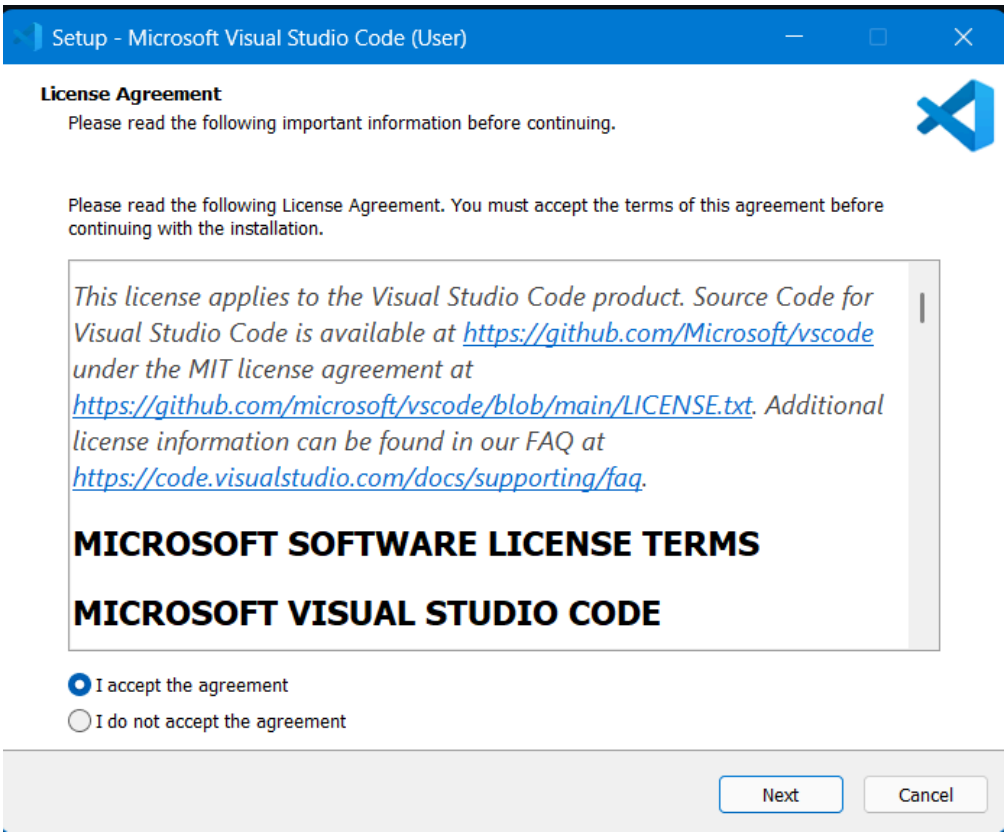
   - If it prints the message, you're all set!

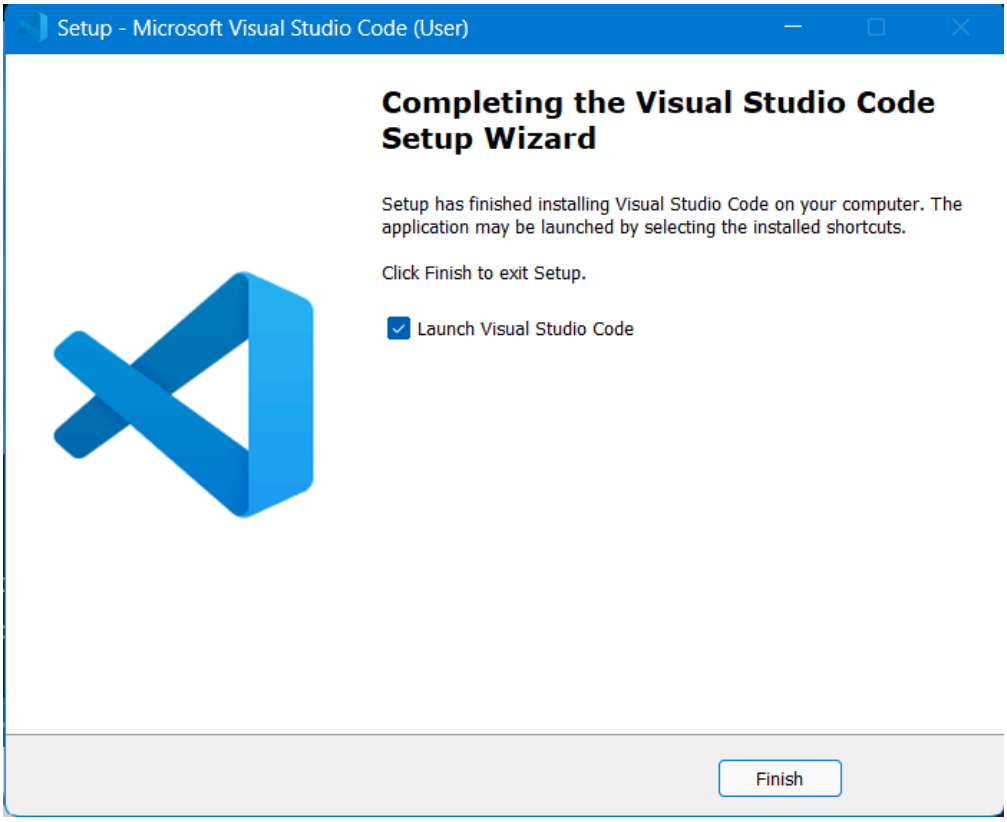
Installing Visual Studio Code

1. **Download VSCode:**
   - Go to the official Visual Studio Code website.
   - Download the appropriate version for your operating system.



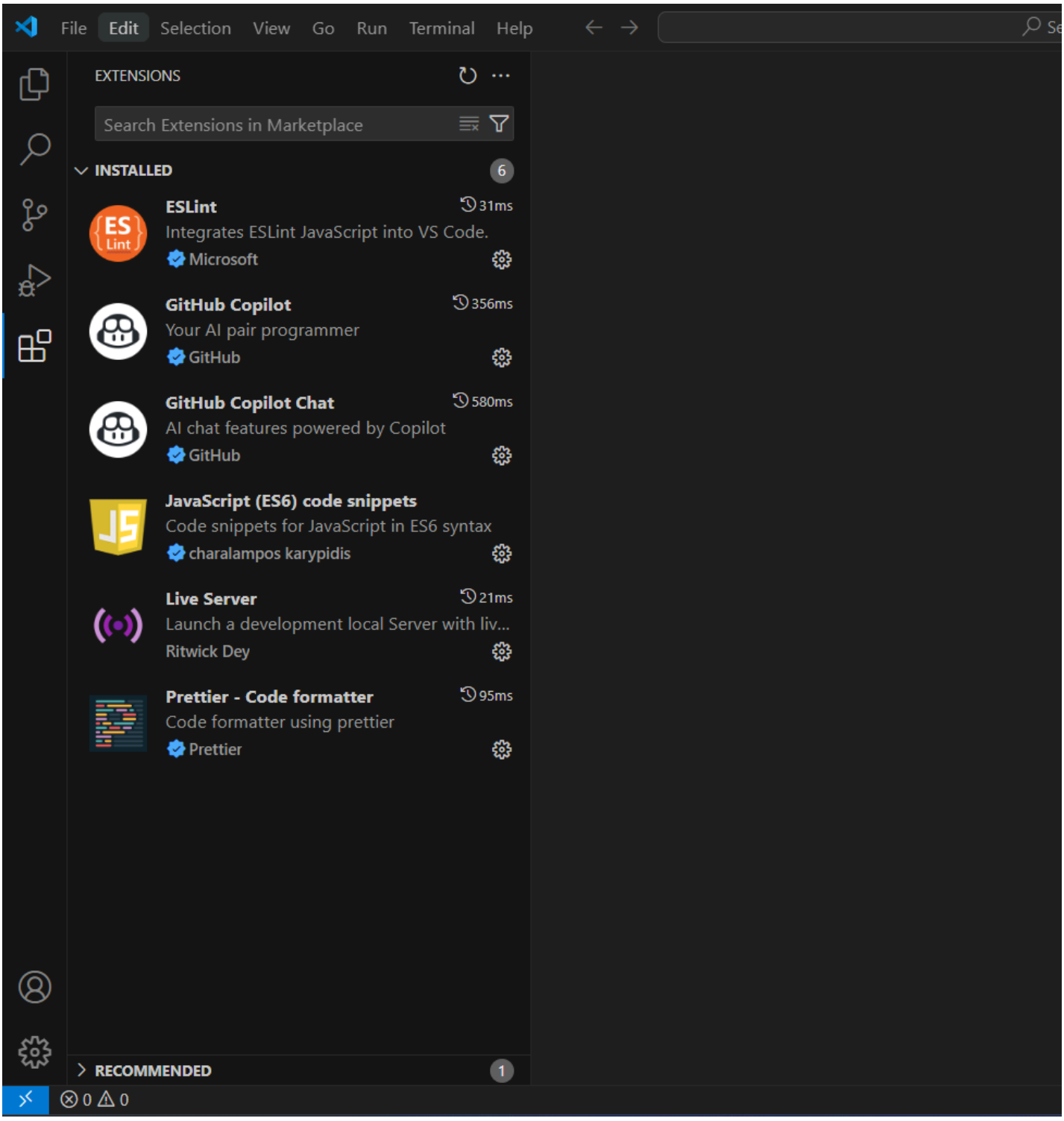
2. **Run the Installer:**
   - Launch the downloaded file and complete the installation process.
   - Select options like adding VSCode to the path (useful for quick access).





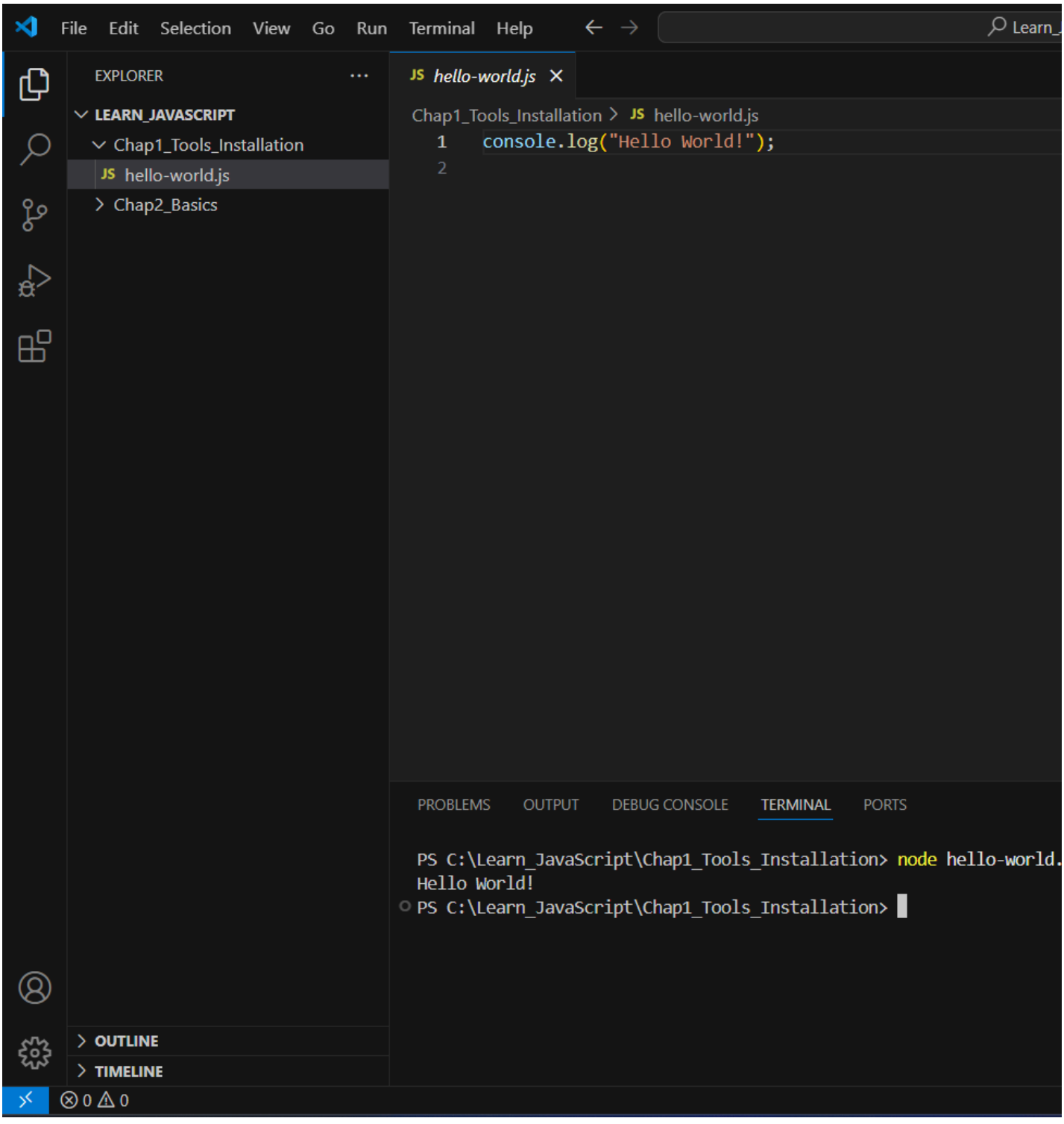
3. **Launch VSCode and Install Extensions:**
   - Open VSCode and navigate to the Extensions tab (left-hand sidebar or press `Ctrl+Shift+X`).
   - Search for and install these extensions:
     - Live Server: Launch a development local server

- GitHub Copilot: Your AI programming companion
- GitHub Copilot Chat: AI chat features powered by Copilot
- **ESLint:** To keep your code clean and free of common errors.
- **Prettier:** For consistent code formatting.
- **JavaScript (ES6) Code Snippets:** To speed up coding with shortcuts.



3. **Configure Your Workspace:**
   - Create a folder for your project and open it in VSCode.

- I am using `C:\Learn_Javascript`
- Create a project folder called Chap1_Tools_Installation
- Put `hello-world.js` in the project folder
- Open the file in the VSCode text editor
- Open a terminal in VSCode
  - Change directory to `Learn_JavaScript\Chap1_Tools_Installation`
  - Type `node hello-world.js`
- You should see the "Hello World!" message indicating that your toolchain is up and running!



Tips for a Smooth Start

- Keep your tools updated to access new features and security improvements.
- Explore VSCode's debugging tools and shortcuts to work more efficiently.
- Join online communities like Node.js forums or the Visual Studio Code GitHub to ask questions and learn from others.

GitHub Source Code

All source code divided into chapters is available at GitHub at TBD