

Building a Spring Boot 3 REST API with GitHub Copilot

Getting Started

This guide will help you set up a Spring Boot 3 REST API project using GitHub Copilot for code generation. Follow the steps below to get started.

Prerequisites

- [Install VS Code](#)
- [Install Java 17](#)
- [Install GitHub Copilot extension](#)

Install VS Code

- Go to <https://code.visualstudio.com>
- Download and install for your OS (Windows/Mac/Linux)
- Open VS Code

Install Java 17

- Download from <https://adoptium.net/>
- Install Java 17 (choose the **JDK** not JRE)
- Open a terminal and type:

```
java -version
```

It should show Java 17.

Install GitHub Copilot Extension

- Open the VS Code editor.
- Go to the **Extensions** view by clicking on the Extensions icon in the Activity Bar on the side of the window or by pressing **Ctrl + Shift + X**.
- Search for **GitHub Copilot** in the Extensions Marketplace.
- Click on the **Install** button next to the GitHub Copilot extension.
- After installation, you may need to reload VS Code to activate the extension.
- Once reloaded, you should see the GitHub Copilot icon in the Activity Bar.

Sign in to GitHub Copilot

- After installation, a popup will say **"Sign in to GitHub"** – click it.

- Follow the browser prompts to log in.
 - You'll be redirected and confirmed in VS Code.
-

Step 1: Create a New Project Folder

- Create a new folder for your project, e.g., `todo-backend`.
- Open a folder (e.g., `todo-backend`) in VS Code by going to **File > Open Folder...** and selecting your folder.
- Inside Terminal in VS Code:


```
mkdir todoapp  
cd todoapp
```

Step 2: Open GitHub Copilot Chat

1. Press **Ctrl + Alt + I** to open **Copilot Chat**.
-

Step 3: Use "Add Context..." in GitHub Copilot Chat

To give GitHub Copilot custom instructions from files:

- Open the **Copilot Chat** panel in VS Code.
- Click the **"Add Context..."**  button in the Text Editor.
- In the Text Editor change ask to Agent to **"Copilot Chat"**.
- Select files like:
 - `prompt.txt` (for project requirements)
- Now ask GitHub Copilot (In the text editor):
 - **Add text to Editor (prompt)**

```
This workspace is a Java 17 Spring Boot 3 ToDo REST API project. Use clean  
architecture (controller, service, repository, model, dto, mapper). Use  
Lombok, MapStruct, Jakarta Bean Validation, and springdoc-openapi. Include  
unit and integration tests.
```

- Copilot will read the files and generate code accordingly.
-