

# GIT COPILOT

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## What is GitHub Copilot?

GitHub Copilot is an AI tool that helps you write code faster and smarter.

It's like having a super-intelligent coding partner sitting next to you.

### 💡 What Can Copilot Do?

- 🛠️ Writes code for you – Just type a comment or a few lines, and it will suggest the rest.
- 💡 Suggests better solutions – It helps you improve your code.
- 🧪 Helps with testing – It can generate test cases.
- 🛠️ Refactors code – Makes your code cleaner and better organized.
- 🧠 Explains code – It can explain what complex code is doing in simple language.

### 🏠 What is Agent Mode?


This is a new powerful feature in Copilot:

- It can understand your goal and do multi-step tasks.
- It acts more like a smart teammate than just a code helper.
- For example, you can say:
  - 👉 *“Create a login page and connect it to a database”*
  - Copilot will generate and even improve that whole setup.

### 💬 How Does It Work?

- You give it natural language prompts (like English instructions).
- Copilot turns those into working code.
- This saves time and reduces the stress of figuring everything out yourself.

## ○ Using GitHub Copilot with JavaScript

- What is Prompt Engineering?
- **Prompt Engineering** means **writing good instructions** for AI so it gives you the **right answer**.
- Example-Instead of saying:"Write code"
- You can say:
- "Write a Python function that adds two numbers and returns the result."
-  **4 Ss of Prompt Engineering**
- These are **4 tips** to help you write better prompts, especially when using tools like **GitHub Copilot**:
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- 1. 🗨️ **Specific**
- **Be clear and detailed.**  
Tell the AI *exactly* what you want.
- ♦ Instead of:
- "Write a function"
- ♦ Do this:
- "Write a JavaScript function that takes two numbers and returns their sum."
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- 2. 🎯 **Structured**
- **Organize your prompt** in a logical way—like explaining what you want, what the input is, and what the output should be.
- ♦ Example:
- "Create a Python function that checks if a number is even. Input: integer. Output: True or False."

- This helps the AI **understand the task better**.
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- 3. 📖 **Stepped**
- **Break down complex tasks** into smaller steps.
- ♦ Instead of asking:
  - "Build a shopping cart"
- ♦ Ask step-by-step:
  - "1. Create a class for Product.
  - Add a method to calculate total price.
  - Create a Cart class that holds multiple products."
- This way, Copilot can build code piece by piece — **more accurately**.
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- 4. 🌱 **Simple**
- Keep your prompt **simple and easy to understand**.  
Avoid vague or overly technical language unless needed.
- ♦ Use clear terms like:
  - "Generate a function to sort a list of numbers in descending order."
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