

NAME : P SAI VENKAT

ROLL NO : 2403A510G0

## ASSIGNMENT : 3.3

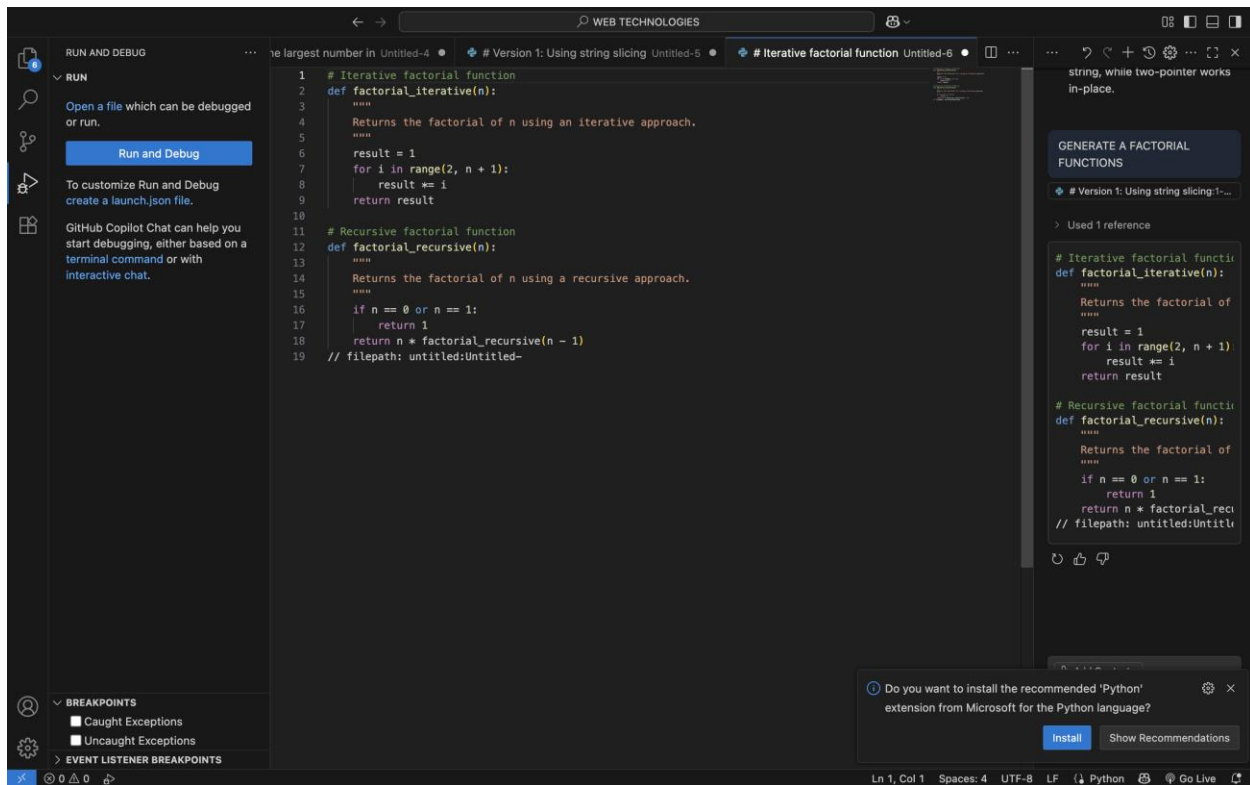
### Task Description#1

- Try 3 different prompts to generate a factorial function.

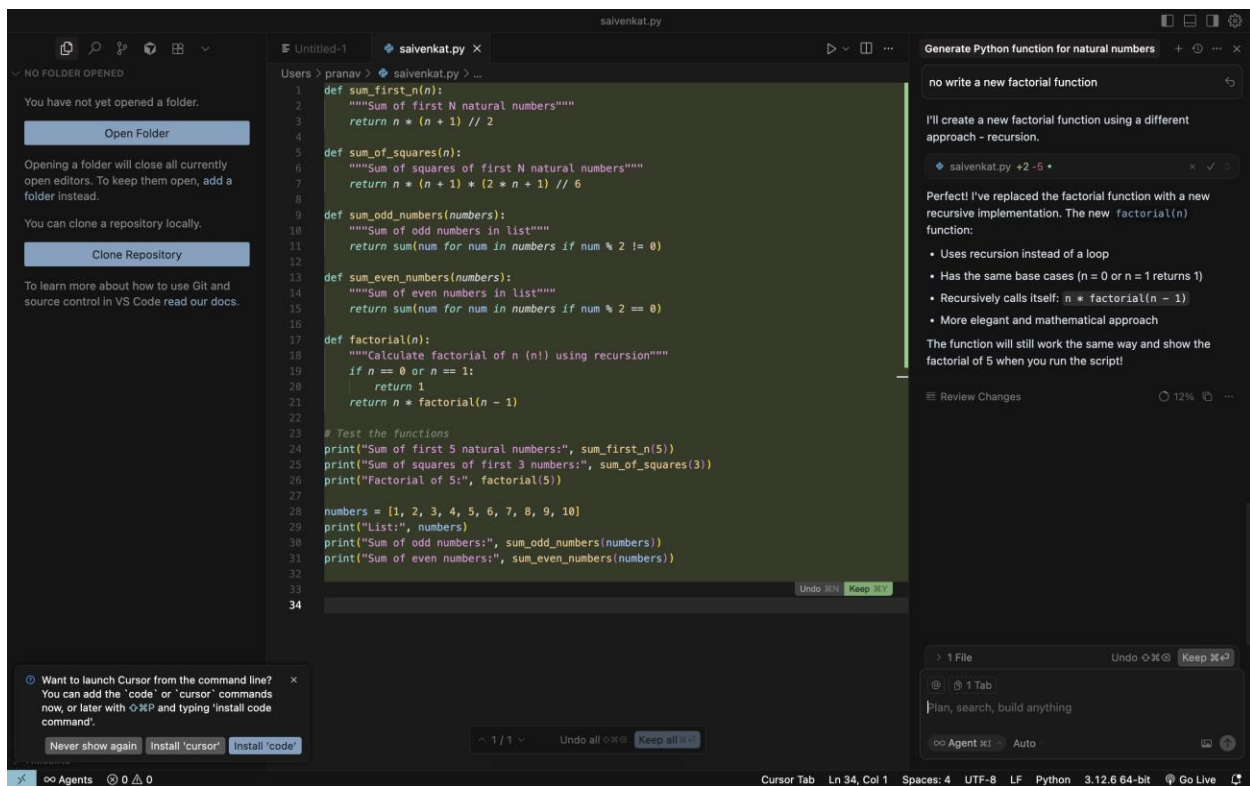
### Expected Output#1

- Comparison of AI-generated code styles

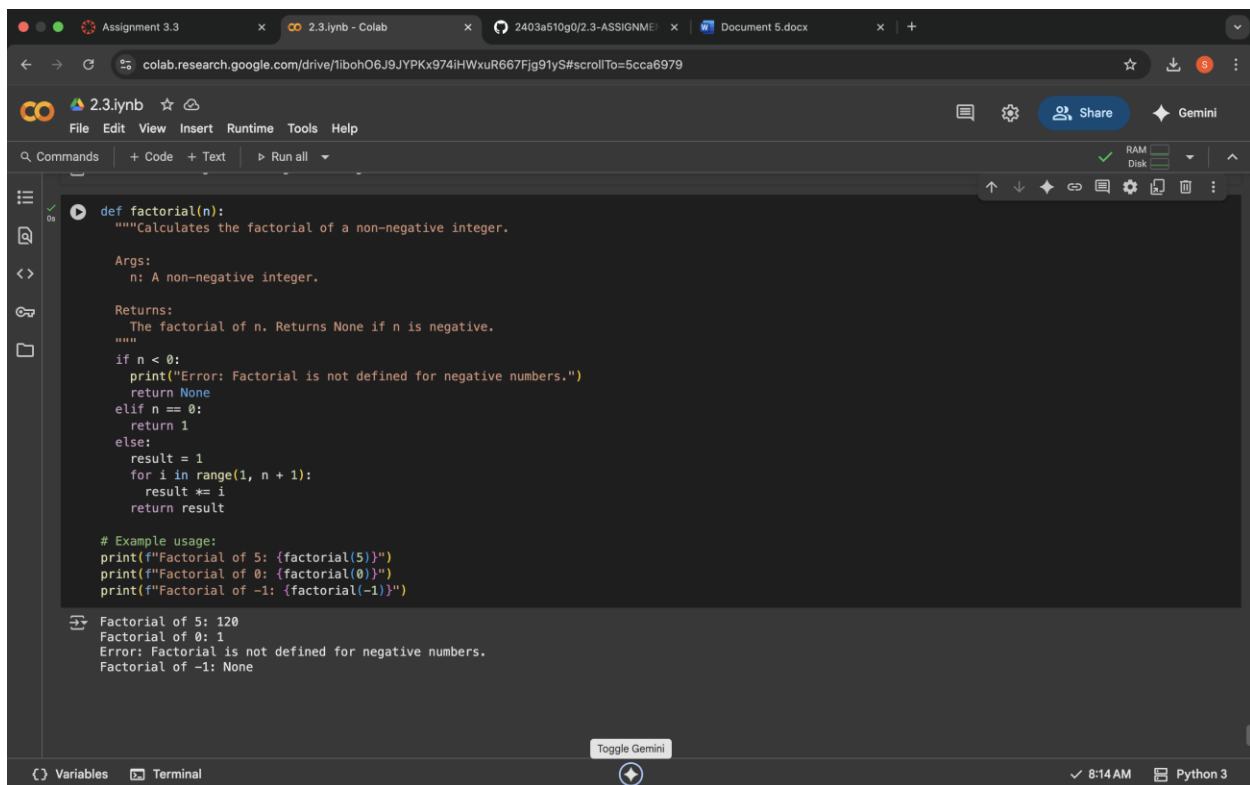
### COPILOT :



### CURSOR AI :



GEMINI :



DIFFERENCE BETWEEN AI STYLES :

## GEMINI :

Usually more **educational** and **verbose**.

Provides step-by-step explanation along with the code.

May give **both iterative and recursive** versions.

Adds docstrings or comments explaining the function

## COPILLOT :

- More **code-centric**, less explanation.
- Often defaults to a **recursive solution** unless context hints otherwise.
- May suggest **one-liner implementations** if it detects you prefer concise code.
- Comments are minimal or absent unless you type a descriptive prompt.

## CURSOR AI :

- Since it's a **developer-focused AI IDE**, it tries to be **clean and practical**.
- May suggest **iterative implementation** to avoid recursion depth issues.
- Includes **type hints** or best practices depending on settings.
- Can adapt to your coding style (PEP8, functional, etc.) since it learns from your repo.

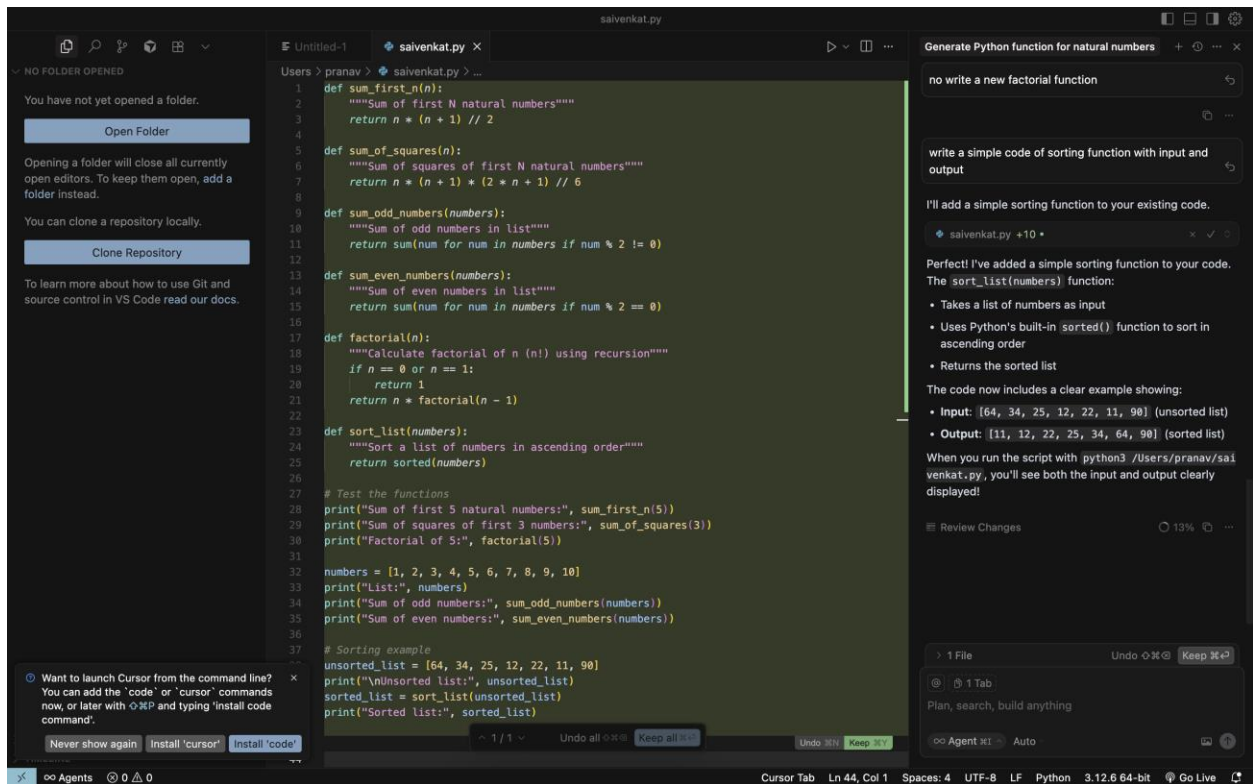
### Task Description#2

- Provide a clear example input-output prompt to generate a sorting function.

### Expected Output#2

- Functional sorting code from AI

PROMPT USED : Write a sorting function with simple input and output



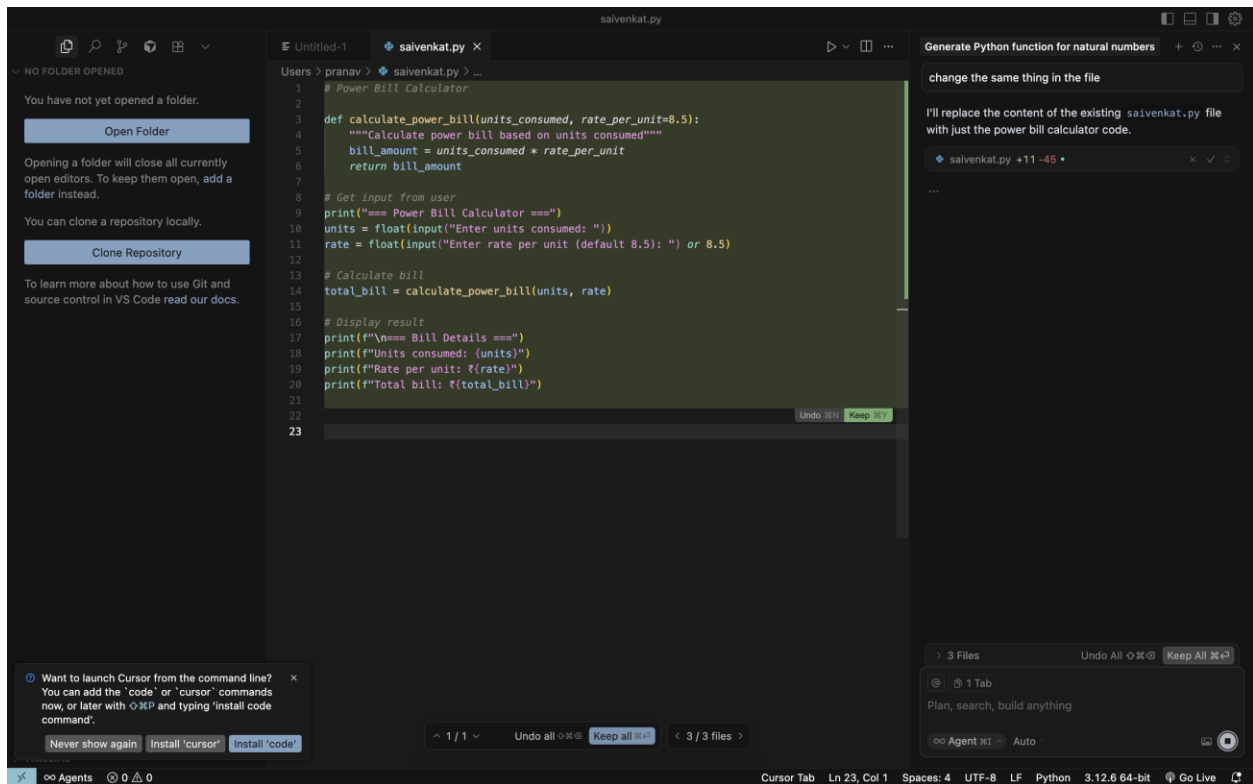
### Task Description#3

- Start with the vague prompt “Generate python code to calculate power bill” and improve it step-by-step

### Expected Output#3

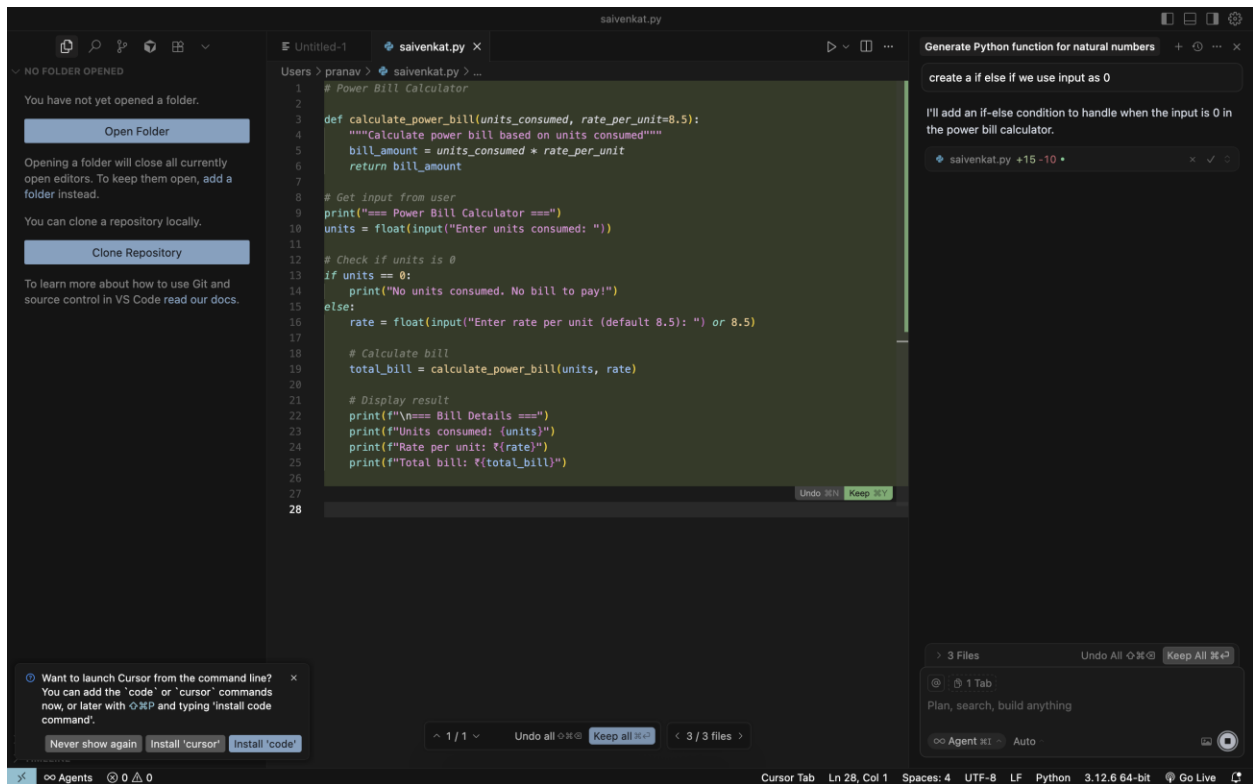
- Enhanced AI output with clearer prompts

1<sup>st</sup> PROMPT : Generate python code to calculate power bill



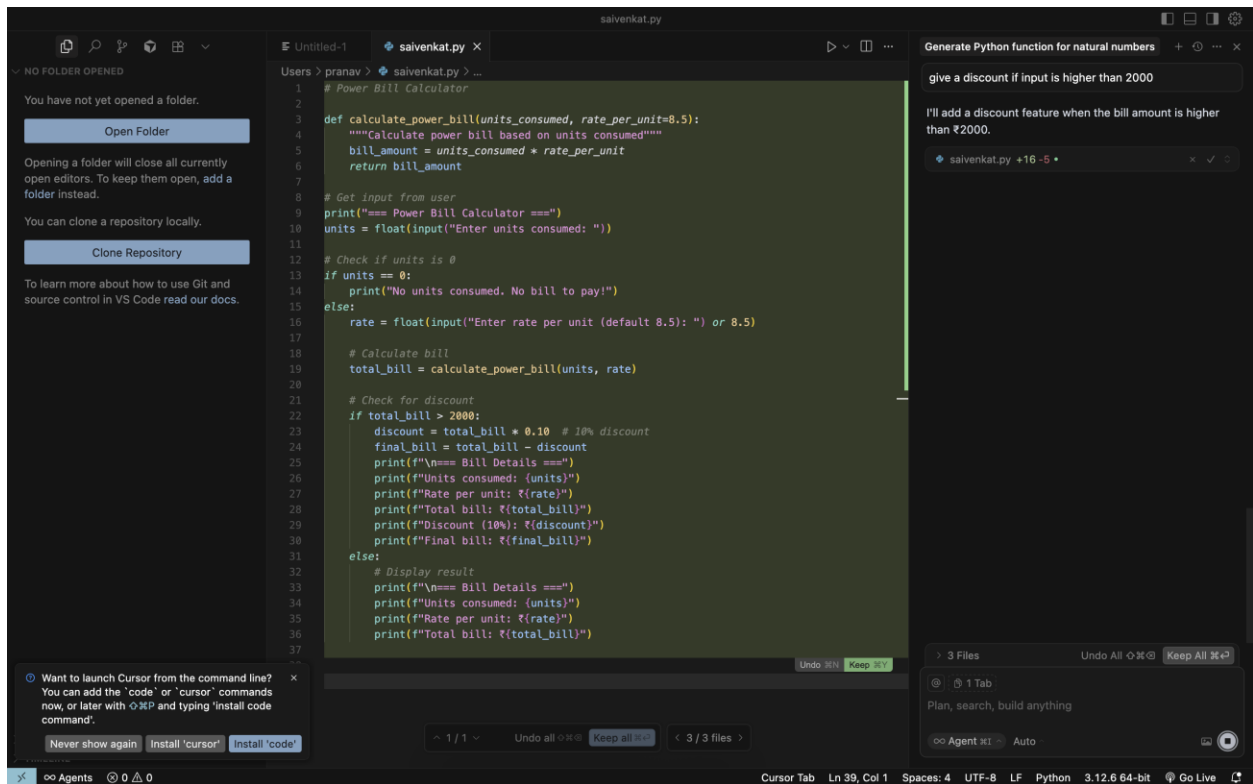
2<sup>ND</sup> PROMPT :

ADD IF ELSE STATEMENT AND PRINT ERROR IF OUTPUT == 0



3<sup>RD</sup> PROMPT :

ADD DISCOUNT IF THE BILL IS ABOVE 2000

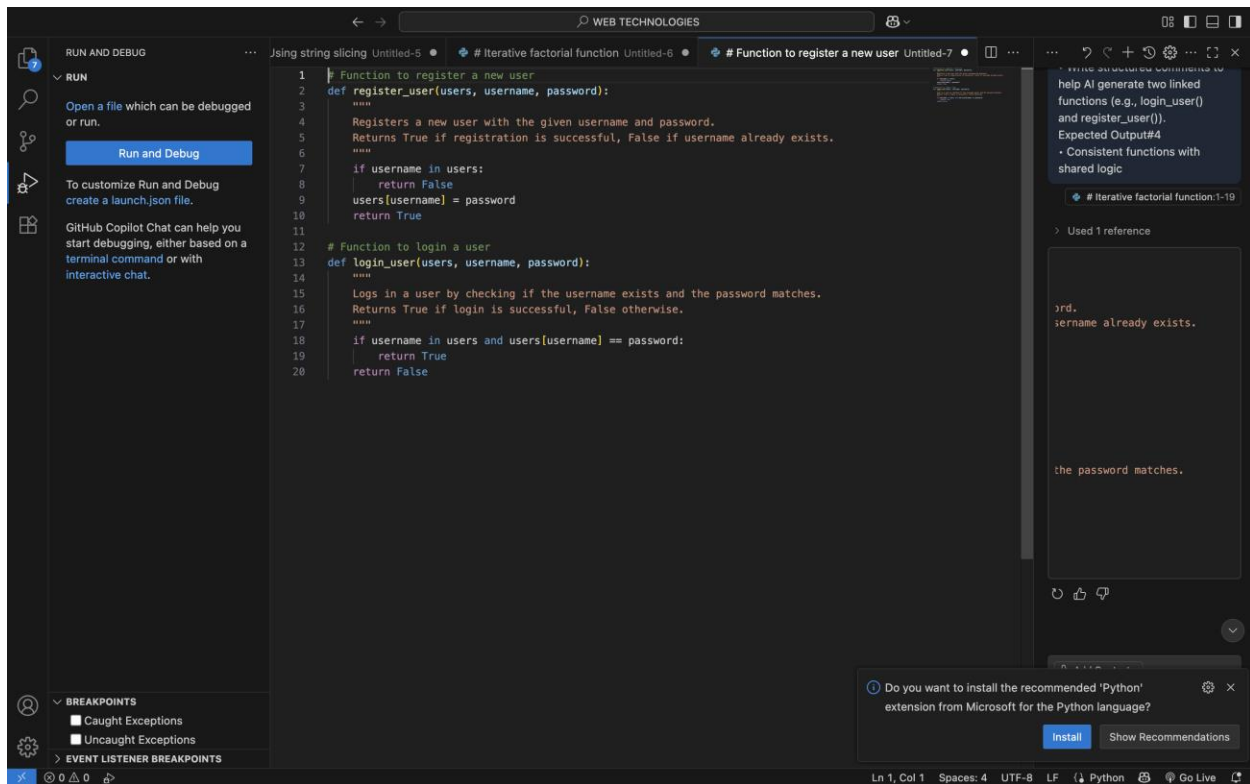


#### Task Description#4

- Write structured comments to help AI generate two linked functions (e.g., login\_user() and register\_user()).

#### Expected Output#4

- Consistent functions with shared logic



## Task Description#5

- Analyzing Prompt Specificity: Improving Temperature Conversion Function with Clear Instructions

## Expected Output#5

- Code quality difference analysis for various prompts



