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ASSIGNMENT : 4.3

Task Description#1

- Zero-shot: Prompt AI to write a function that checks whether a given year is a leap year.

PROMPT USED : WRITE A FUNCTION TO CHECK IF THE GIVEN YEAR IS LEAP YEAR OR NOT

The screenshot shows a VS Code editor with a Python file named 'def is_leap_year(year):.Untitled-7'. The code defines a function 'is_leap_year' that takes a year as input and returns True if it is a leap year (divisible by 4 but not by 100, or divisible by 400) and False otherwise. Example outputs are shown: 'is_leap_year(2020)' returns True, 'is_leap_year(1900)' returns False, and 'is_leap_year(2000)' returns True. The left sidebar shows the 'RUN AND DEBUG' panel with a 'Run and Debug' button. The right sidebar shows a chat window with a prompt: 'help AI generate two linked functions (e.g., login_user() and register_user()). Expected Output#4 • Consistent functions with shared logic'. A notification at the bottom asks to install the recommended 'Python' extension from Microsoft.

```
1 def is_leap_year(year):
2     if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
3         return True
4     else:
5         return False
6
7 # Example outputs
8 print(is_leap_year(2020)) # True
9 print(is_leap_year(1900)) # False
10 print(is_leap_year(2000)) # True
11
```

OUTPUT :

True
False
True

Task Description#2

- One-shot: Give one input-output example to guide AI in writing a function that converts centimeters to inches.

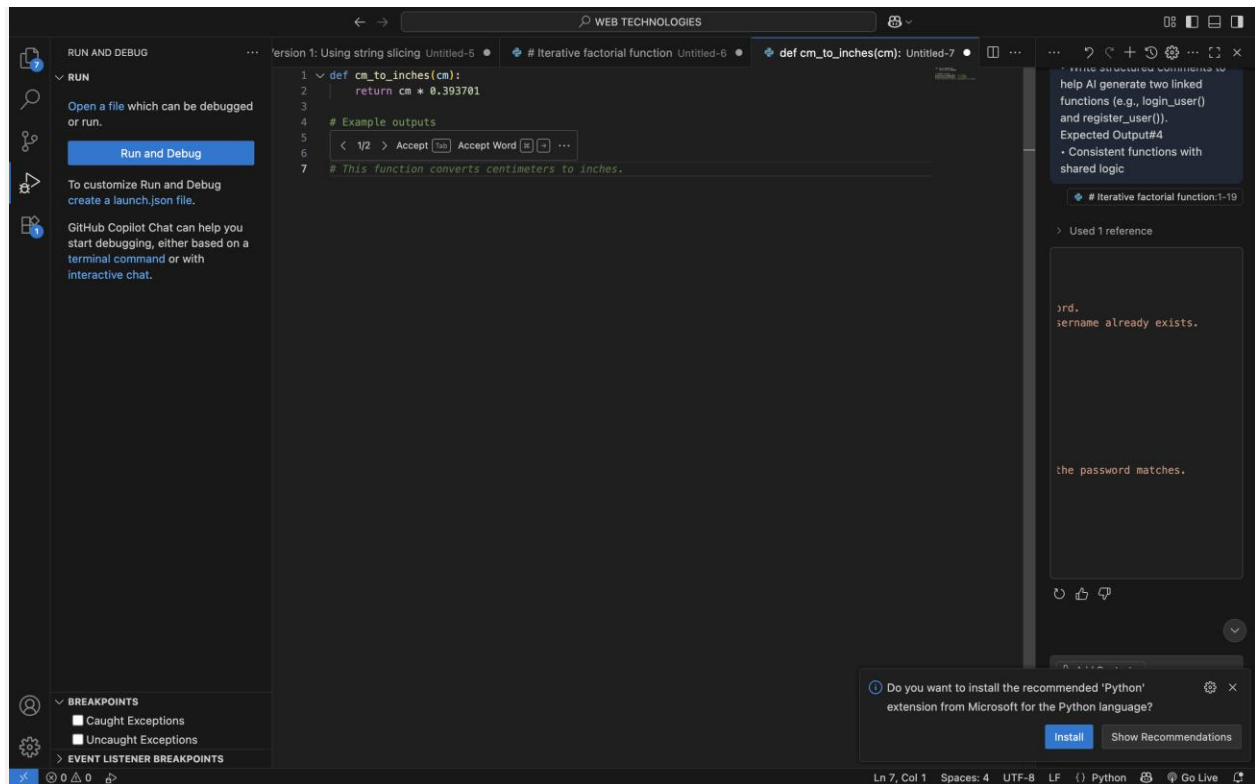
Expected Output#2

- Function with correct conversion logic

PROMPT USED : ONE SHOT

WRITE A PYTHON FUNCTION TO CONVERT CM TO INCHES

EXAMPLE : 100 TO 10



Task Description#3

- Few-shot: Provide 2-3 examples to generate a function that formats full names as “Last, First”.

Expected Output#3

- Well-structured function respecting the examples

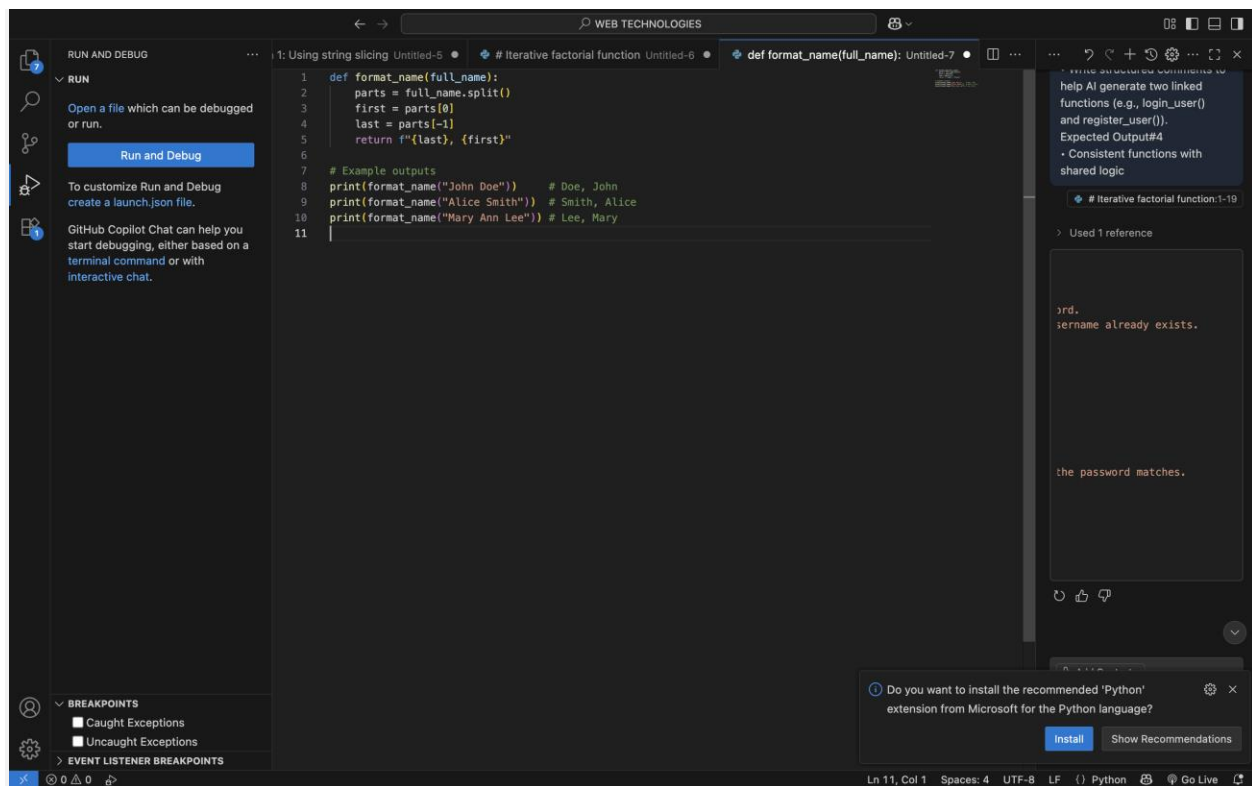
PROMPT USED : Generate the function that formats full names as last and first

EXAMPLES :

JOHN DOE

ALICE SMITH

MARY ANN LEE



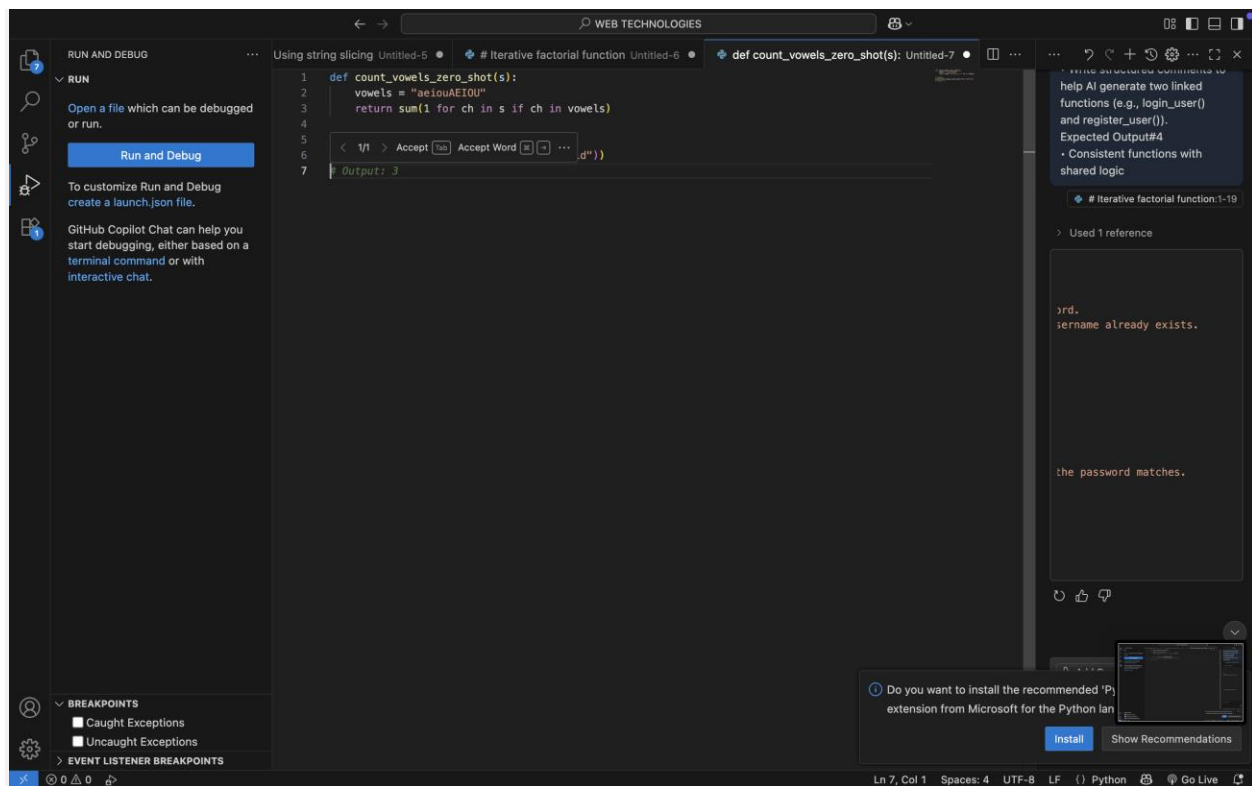
ask Description#4

- Compare zero-shot and few-shot prompts for writing a function that counts the number of vowels in a string.

Expected Output#4

- Functional output and comparative reflection

PROMPT USED : Write a python function to count the no of vowels in a string



Task Description#5

- Use few-shot prompting to generate a function that reads a .txt file and returns the number of lines.

Expected Output#5

- Working file-processing function with AI-guided logic

PROMPT USED : Write a function to generate a txt file and return the no of lines given

