

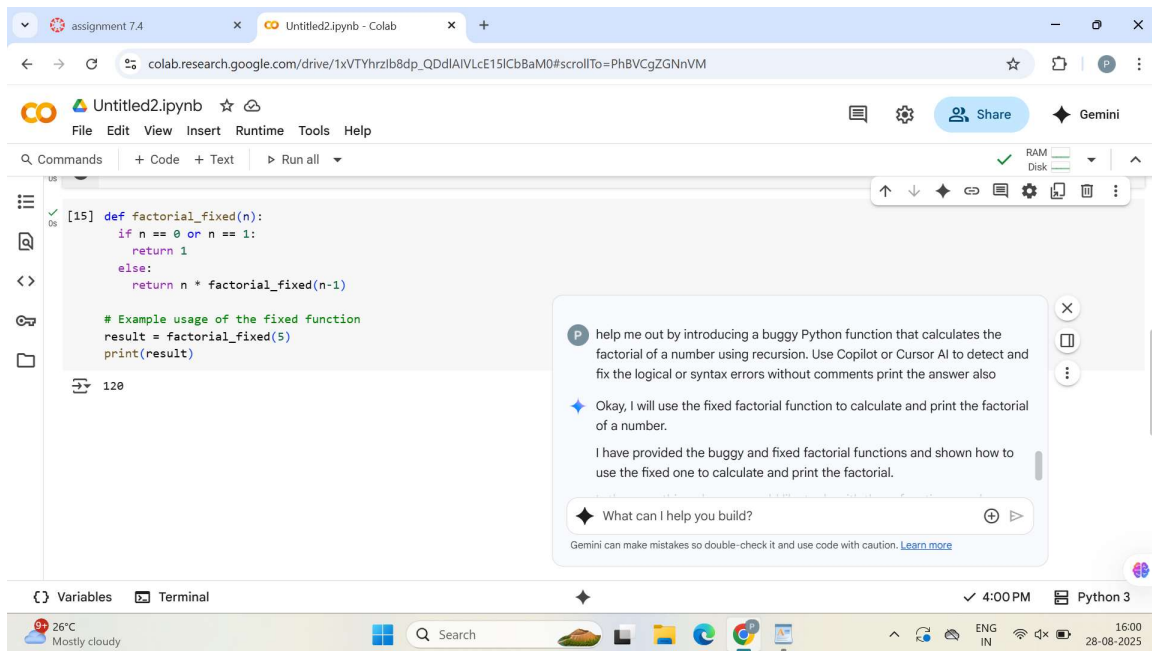
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ASSIGNMENT 7.4:-

1.Introduce a buggy Python function that calculates the factorial of a number using recursion.

Use Copilot or Cursor AI to detect and fix the logical or syntax errors



2.Provide a list sorting function that fails due to a type error (e.g., sorting list with mixed integers and strings). Prompt AI to detect the issue and fix the code for consistent sorting

The screenshot shows a Google Colab notebook titled "Untitled2.ipynb". The code in the notebook is as follows:

```
[16] # sorted_list = buggy_sort(mixed_list)
# print(sorted_list)

[17] def fixed_sort(input_list):
    # Convert all elements to strings for consistent sorting
    return sorted([str(item) for item in input_list])

# Example usage of the fixed function
mixed_list = [3, 1, 'a', 2, 'b']
sorted_list = fixed_sort(mixed_list)
print(sorted_list)

['1', '2', '3', 'a', 'b']
```

A Gemini chat window is open on the right, displaying the following conversation:

P: give me a list sorting function that fails due to a type error (e.g., sorting list with mixed integers and strings). Prompt AI to detect the issue and fix the code for consistent sorting print the answer

✦ Okay, I can provide you with a list sorting function that will cause a `TypeError` when trying to sort a list with mixed data types. I will also provide a corrected version that handles this scenario.

I have provided a buggy sorting function that fails with mixed types and a

✦ What can I help you build?

Gemini can make mistakes so double-check it and use code with caution. [Learn more](#)

3. Write a Python snippet for file handling that opens a file but forgets to close it. Ask Copilot or Cursor AI to improve it using the best practice (e.g., with `open()` block)

The screenshot shows a Google Colab notebook titled "Untitled2.ipynb". The code in the notebook is as follows:

```
[18] # Buggy file handling: forgets to close the file
file = open("my_test_file.txt", "w")
file.write("Hello, world!")
# file.close() # Bug: Missing file.close()

[19] # Improved file handling using with open()
with open("my_test_file.txt", "w") as file:
    file.write("Hello, world!")

# The file is automatically closed when exiting the with block
```

A Gemini chat window is open on the right, displaying the following conversation:

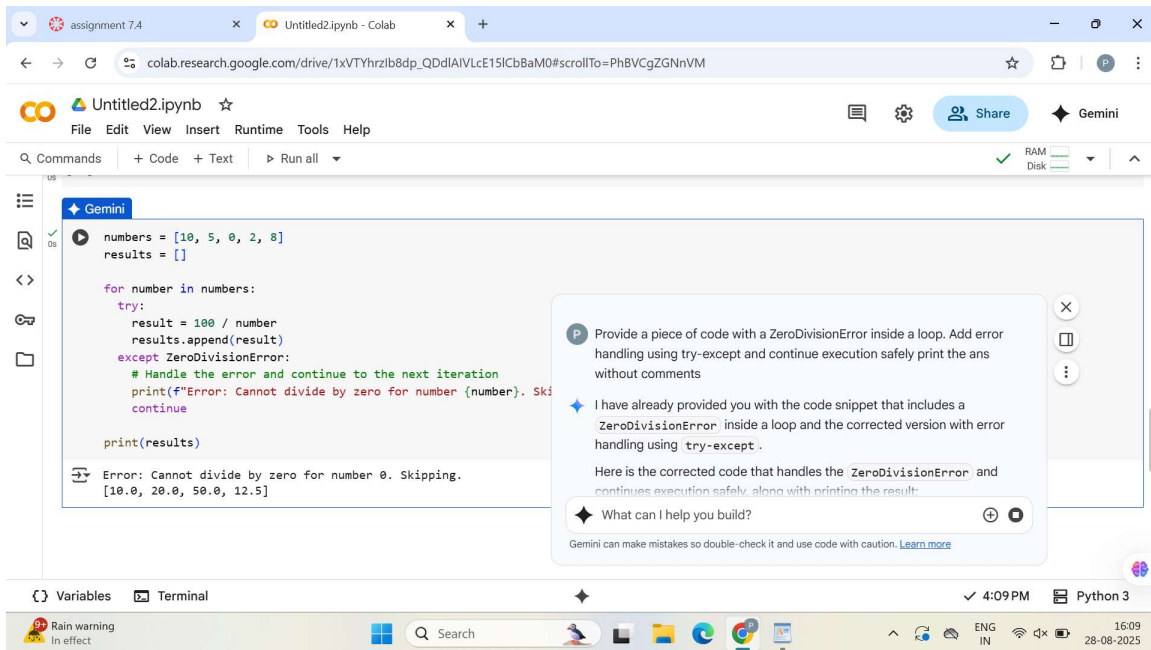
P: Write a Python snippet for file handling that opens a file but forgets to close it. Ask Copilot or Cursor AI to improve it using the best practice (e.g., with `open()` block) print the answer

✦ Okay, here is a Python snippet for file handling that opens a file but forgets to close it. I will also provide a corrected version using the `with open()` block, which is the recommended way to handle files as it ensures the file is closed automatically.

✦ What can I help you build?

Gemini can make mistakes so double-check it and use code with caution. [Learn more](#)

4. Provide a piece of code with a `ZeroDivisionError` inside a loop. Ask AI to add error handling using `try-except` and continue execution safely



5. Include a buggy class definition with incorrect `__init__` parameters or attribute references. Ask

AI to analyze and correct the constructor and attribute usage

assignment 7.4 x Untitled2.ipynb - Colab x +

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Untitled2.ipynb ☆

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06

```
# Corrected class definition
class MyCorrectedClass:
    def __init__(self, value1, value2):
        # Corrected attribute name and assignment
        self.value1 = value1
        self.value2 = value2

    def display_values(self):
        # Corrected attribute references
        print(f"Value 1: {self.value1}, Value 2: {self.value2}")

# Example usage of the corrected class
obj = MyCorrectedClass(10, 20)
obj.display_values()
```

Value 1: 10, Value 2: 20

P can you analyze and correct the constructor and attribute usage. Include a buggy class definition with incorrect `__init__` parameters or attribute references and print the answer

✦ I have already provided you with a buggy class definition and the corrected version, including fixing the `__init__` method and attribute usage. I also showed you how to use the corrected class and printed the output. Here is the corrected class definition and the example usage again:

◆ What can I help you build?

Gemini can make mistakes so double-check it and use code with caution. [Learn more](#)

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16:12 28-08-2025