NAME : B.SRISHANTH ROLL NO : 2403A510G3

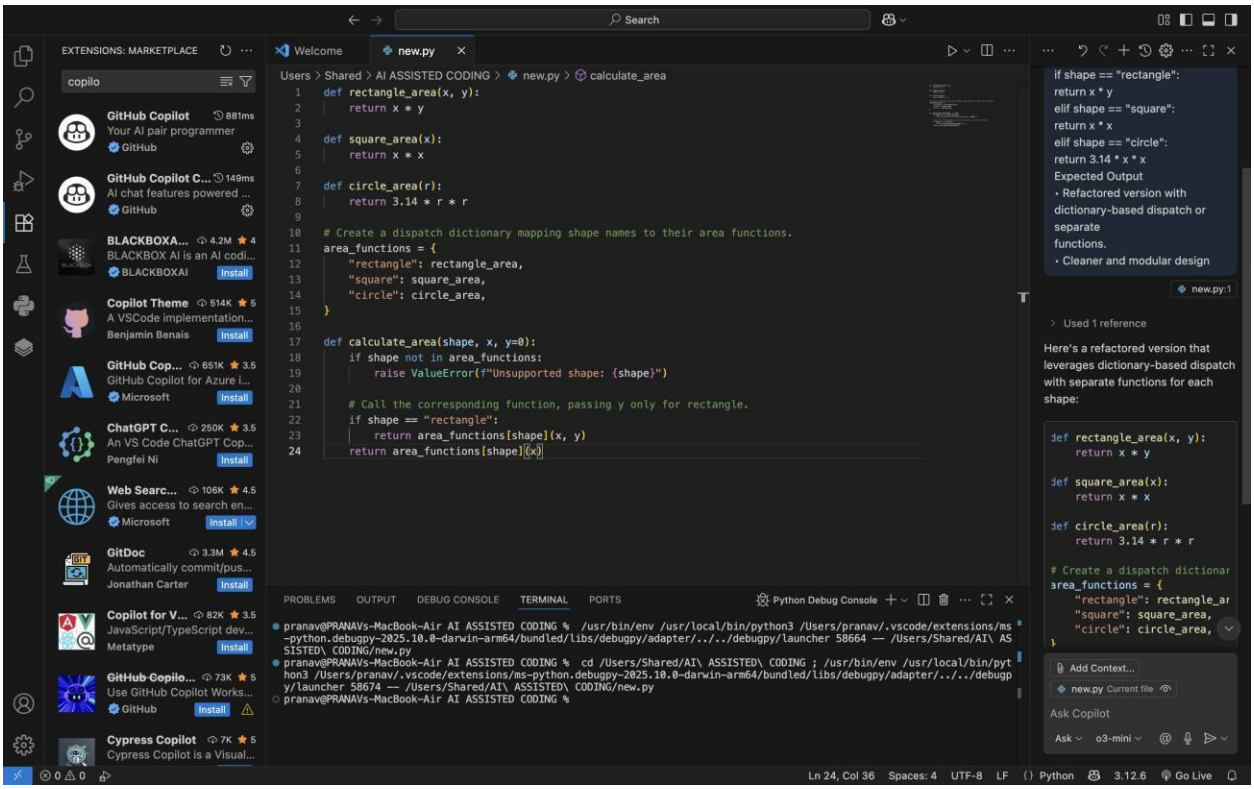
SUBJECT : AI ASSISTED CODING. ASSIGNMENT : 13.3

Task Description #1 – Remove Repetition
Task: Provide AI with the following redundant code and ask it to refactor
Python Code

```
def calculate_area(shape, x, y=0):
if shape == "rectangle":
return x * y
elif shape == "square":
return x * x
elif shape == "circle":
return 3.14 * x * x
```

Expected Output
• Refactored version with dictionary-based dispatch or separate functions.
• Cleaner and modular design.

CODE GENERATED :



PROMPT :

Write the following redundant code and to refactor the following code

OUTPUT :

Task Description #2 – Error Handling in Legacy Code

Task: Legacy function without proper error handling

Python Code

def read_file(filename):

f = open(filename, "r")

data = f.read()

f.close()

return data

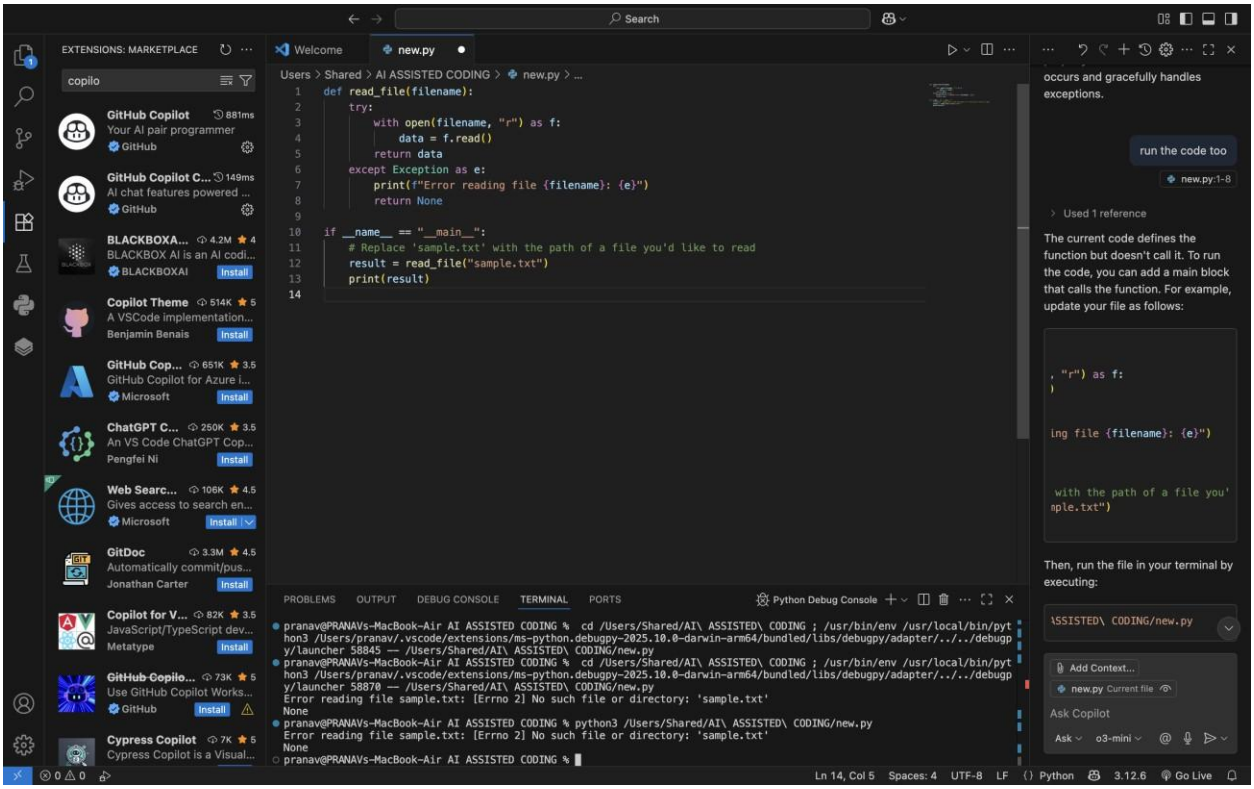
Expected Output:

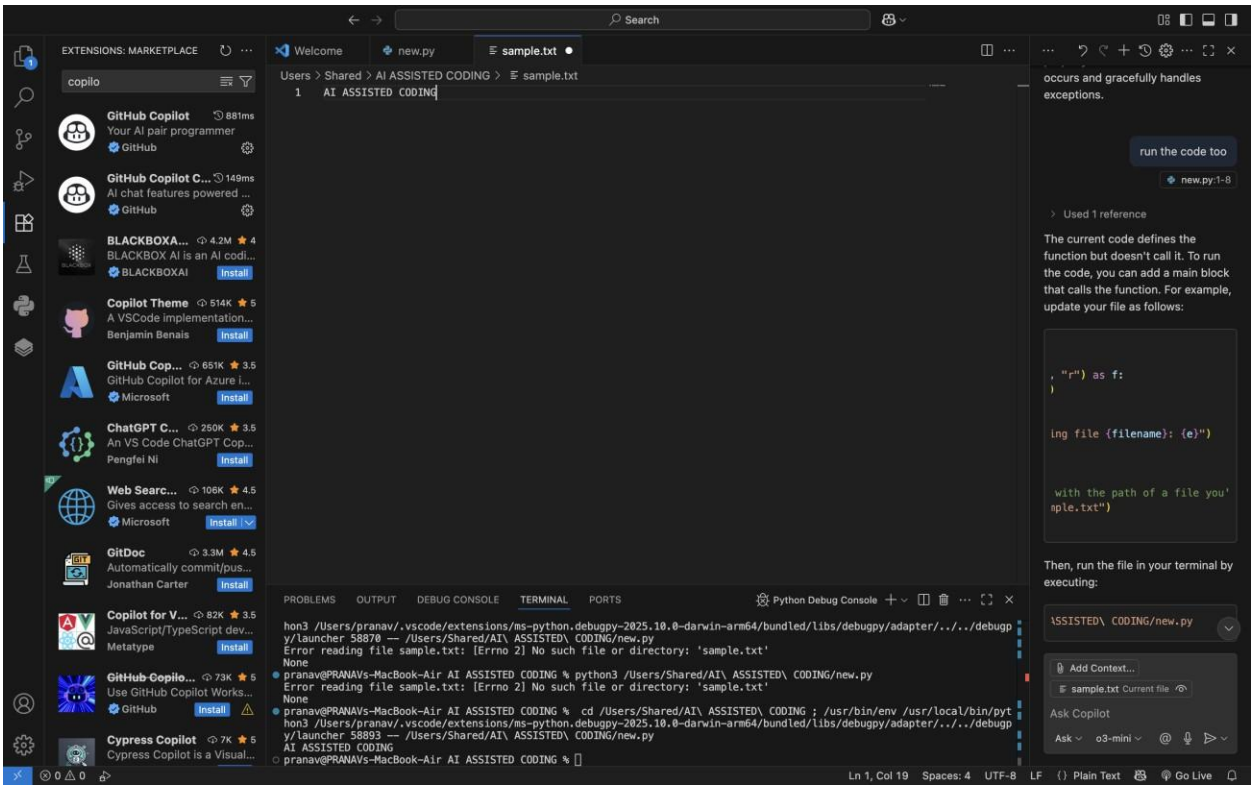
AI refactors with with open() and try-except

PROMPT GIVEN :

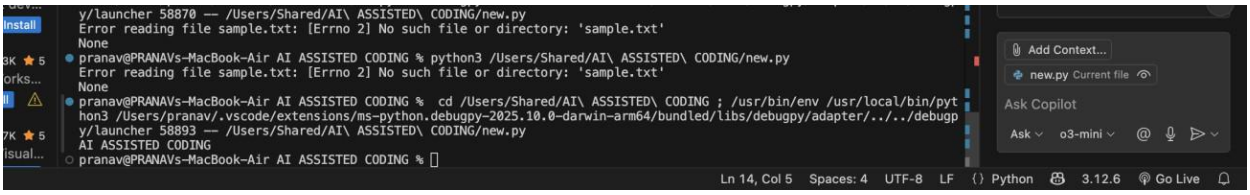
To rewrite the legacy function with proper error handling

CODE GENERATED :





OUTPUT GENERATED :



Task Description #3 – Complex Refactoring

Task: Provide this legacy class to AI for readability and modularity improvements:

Python Code

class Student:

def _init_(self, n, a, m1, m2, m3):

self.n = n

self.a = a

self.m1 = m1

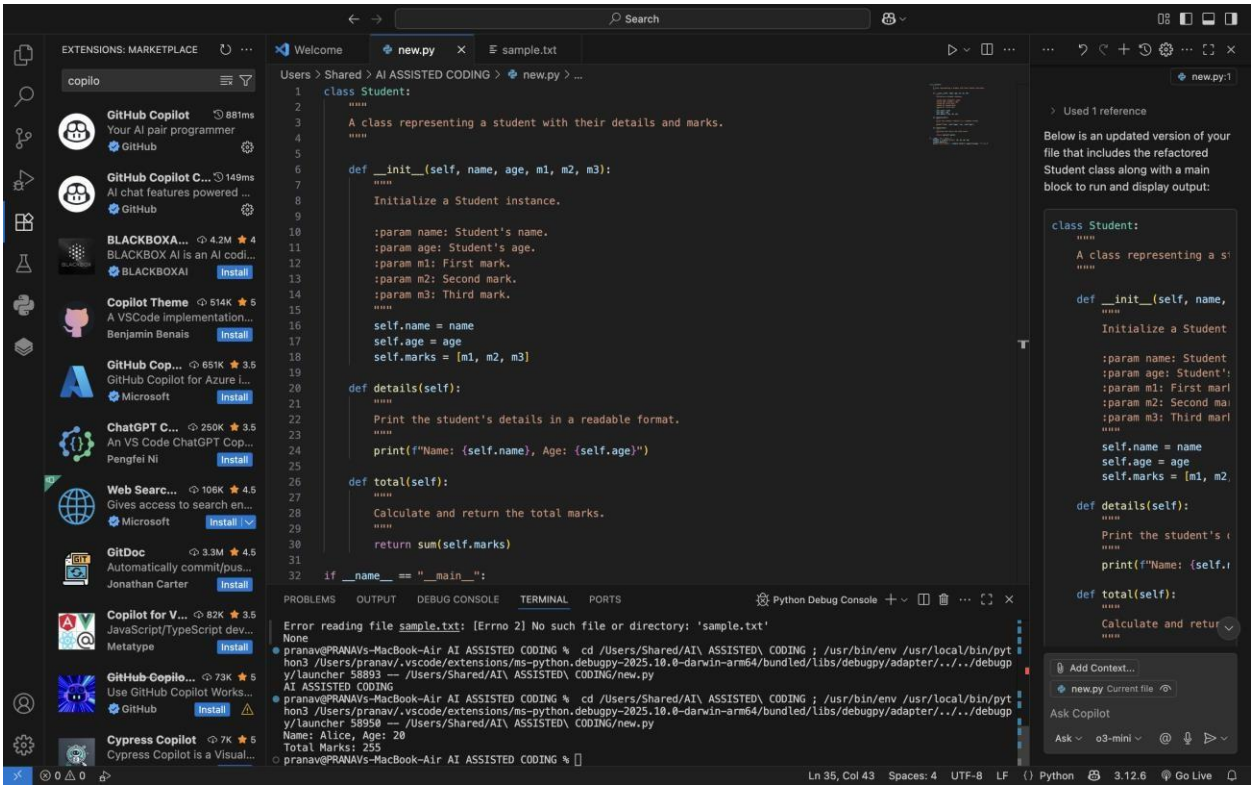
self.m2 = m2

self.m3 = m3
def details(self):
print("Name:", self.n, "Age:", self.a)
def total(self):
return self.m1+self.m2+self.m3
Expected Output:
• AI improves naming (name, age, marks).
• Adds docstrings.
• Improves print readability.
• Possibly uses sum(self.marks) if marks stored in a list

PROMPT USED :

To improve the given code and add docstrings for better readability and possible usage of sum (self.marks) in a list

CODE GENERATED :



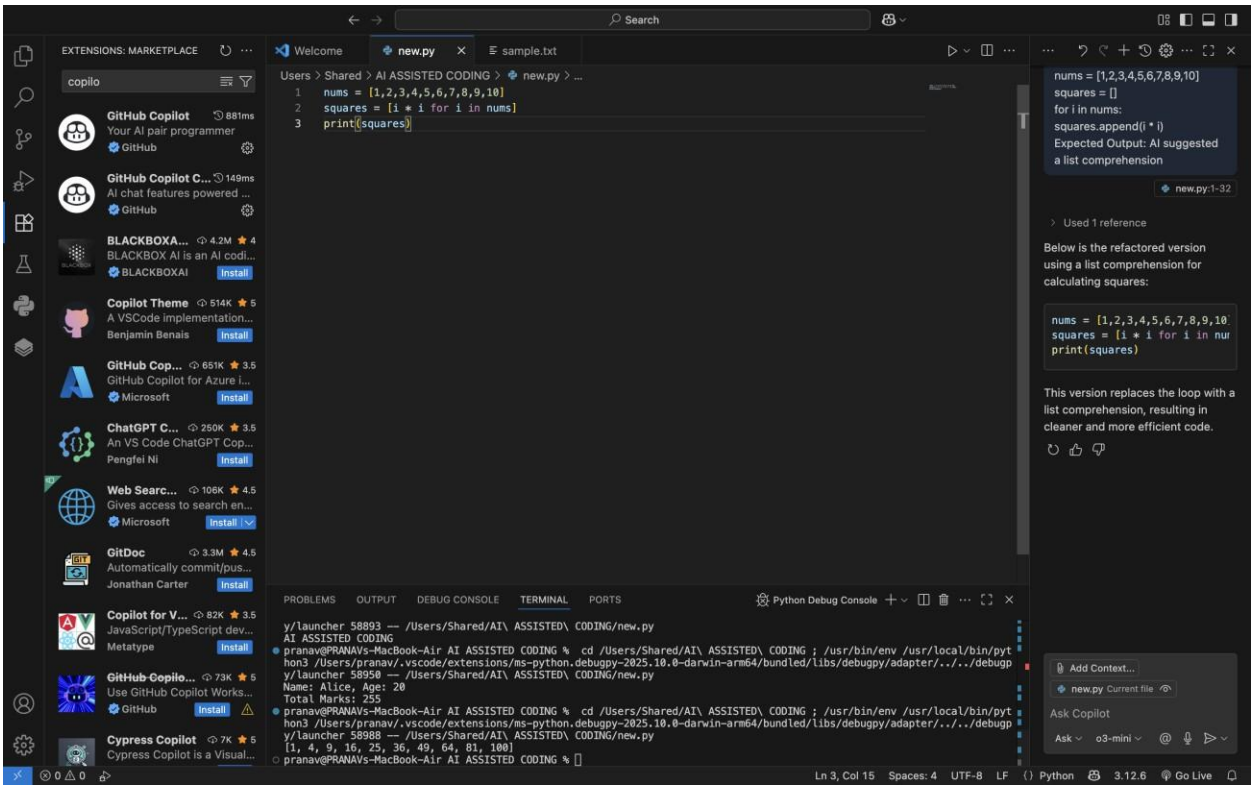
OUTPUT GENERATED :

Task Description #4 – Inefficient Loop Refactoring
Task: Refactor this inefficient loop with AI help
Python Code
nums = [1,2,3,4,5,6,7,8,9,10]
squares = []
for i in nums:
squares.append(i * i)
Expected Output: AI suggested a list comprehension

PROMPT USED :

To refactor the given loop and list comprehension

CODE GENERATED :


EXTENSIONS: MARKETPLACE
copilo
GitHub Copilot
Your AI pair programmer
GitHub Copilot C...
AI chat features powered ...
BLACKBOXA...
BLACKBOX AI is an AI codi...
Copilot Theme
A VSCode implementation...
GitHub Cop...
GitHub Copilot for Azure i...
ChatGPT C...
An VS Code ChatGPT Cop...
Web Searc...
Gives access to search en...
GitDoc
Automatically commit/pus...
Copilot for V...
JavaScript/TypeScript dev...
GitHub Copilo...
Use GitHub Copilot Works...
Cypress Copilot
Cypress Copilot is a Visual...
Welcome
new.py
sample.txt
Users > Shared > AI ASSISTED CODING > new.py > ...
nums = [1,2,3,4,5,6,7,8,9,10]
squares = [i * i for i in nums]
print(squares)
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Python Debug Console
y/launcher 58893 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
AI ASSISTED CODING
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING % cd /Users/Shared/AI\ ASSISTED\ CODING ; /usr/bin/env /usr/local/bin/python3 /Users/pranav/.vscode/extensions/ms-python.debugpy-2025.10.0-darwin-arm64/bundled/libs/debugpy/adapter/../../debugp
y/launcher 58950 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
Name: Alice, Age: 20
Total Marks: 255
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING % cd /Users/Shared/AI\ ASSISTED\ CODING ; /usr/bin/env /usr/local/bin/python3 /Users/pranav/.vscode/extensions/ms-python.debugpy-2025.10.0-darwin-arm64/bundled/libs/debugpy/adapter/../../debugp
y/launcher 58988 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING %
nums = [1,2,3,4,5,6,7,8,9,10]
squares = []
for i in nums:
squares.append(i * i)
Expected Output: AI suggested a list comprehension
new.py:1-32
Used 1 reference
Below is the refactored version using a list comprehension for calculating squares:
This version replaces the loop with a list comprehension, resulting in cleaner and more efficient code.
Add Context...
new.py Current file
Ask Copilot
Ask
o3-mini
Ln 3, Col 15
Spaces: 4
UTF-8
LF
Python
3.12.6
Go Live

OUTPUT :


y/launcher 58893 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
AI ASSISTED CODING
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING % cd /Users/Shared/AI\ ASSISTED\ CODING ; /usr/bin/env /usr/local/bin/python3 /Users/pranav/.vscode/extensions/ms-python.debugpy-2025.10.0-darwin-arm64/bundled/libs/debugpy/adapter/../../debugp
y/launcher 58950 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
Name: Alice, Age: 20
Total Marks: 255
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING % cd /Users/Shared/AI\ ASSISTED\ CODING ; /usr/bin/env /usr/local/bin/python3 /Users/pranav/.vscode/extensions/ms-python.debugpy-2025.10.0-darwin-arm64/bundled/libs/debugpy/adapter/../../debugp
y/launcher 58988 -- /Users/Shared/AI\ ASSISTED\ CODING/new.py
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
pranav@PRANAVs-MacBook-Air AI ASSISTED CODING %
Add Con
new.py
Ask Copilot
Ask
o3-mini
Ln 3, Col 15
Spaces: 4
UTF-8
LF
Python
3.12.6
Go Live