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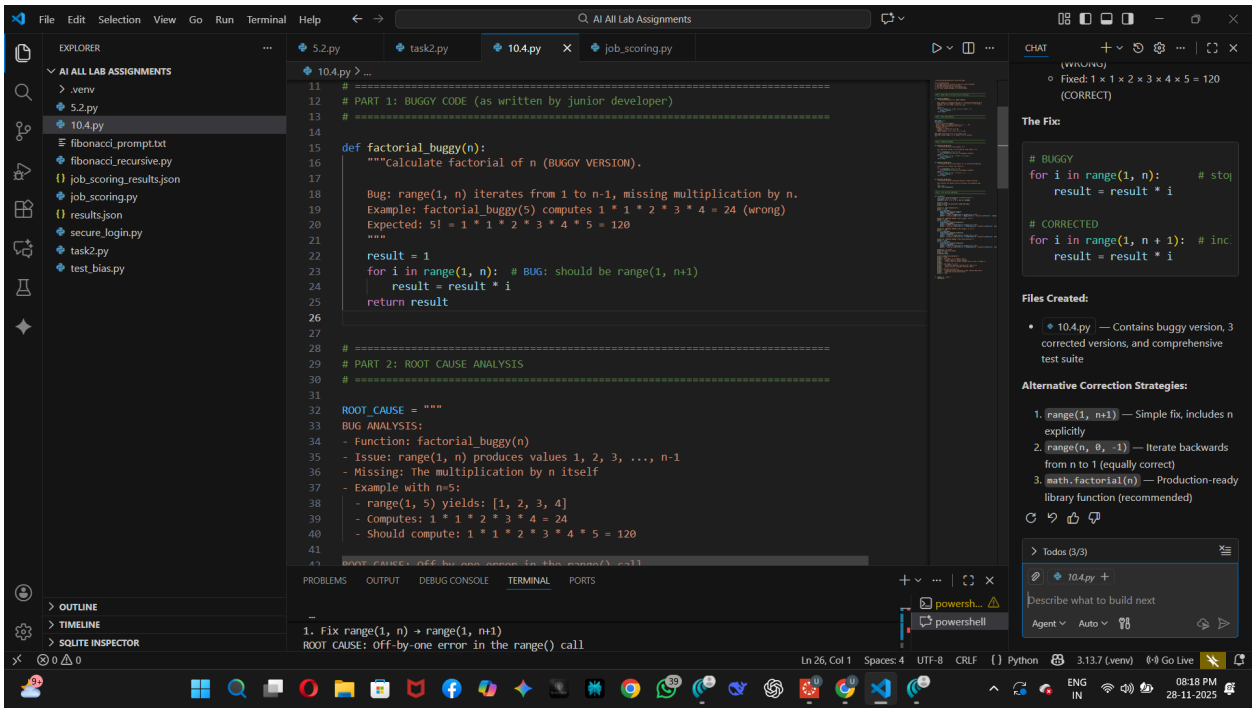
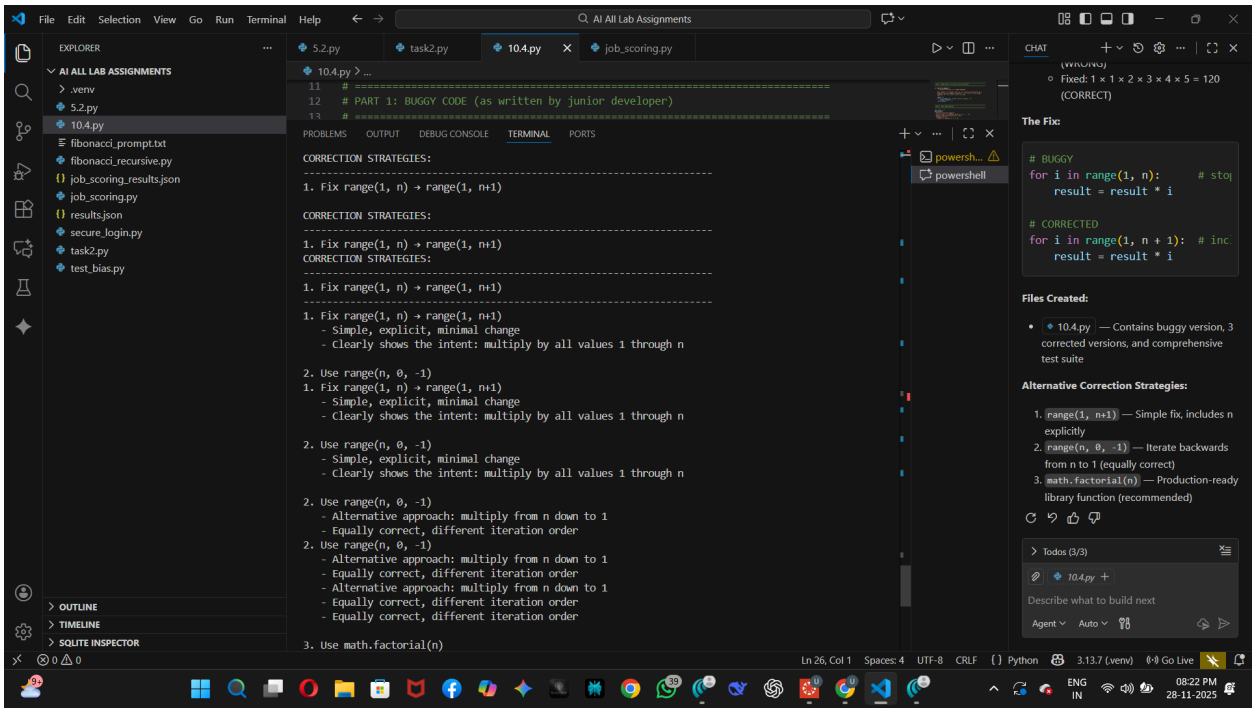
Task Description #1
(AI-Assisted Bug Detection)
Scenario:
A junior developer wrote the following Python function tocalculate factorials:
def factorial(n):result = 1
for i in range(1, n):
result = result * ireturn result
•Run the code and test it with factorial(5)(expected output = 120).
•Use AI (prompting) to review this code and identify the bug.
•Ask AI to suggest corrections and rewrite the code.
•Compare AI's corrected code with your own fix.

Input:-



Output:-



Task Description #2
(Improving Readability & Documentation)

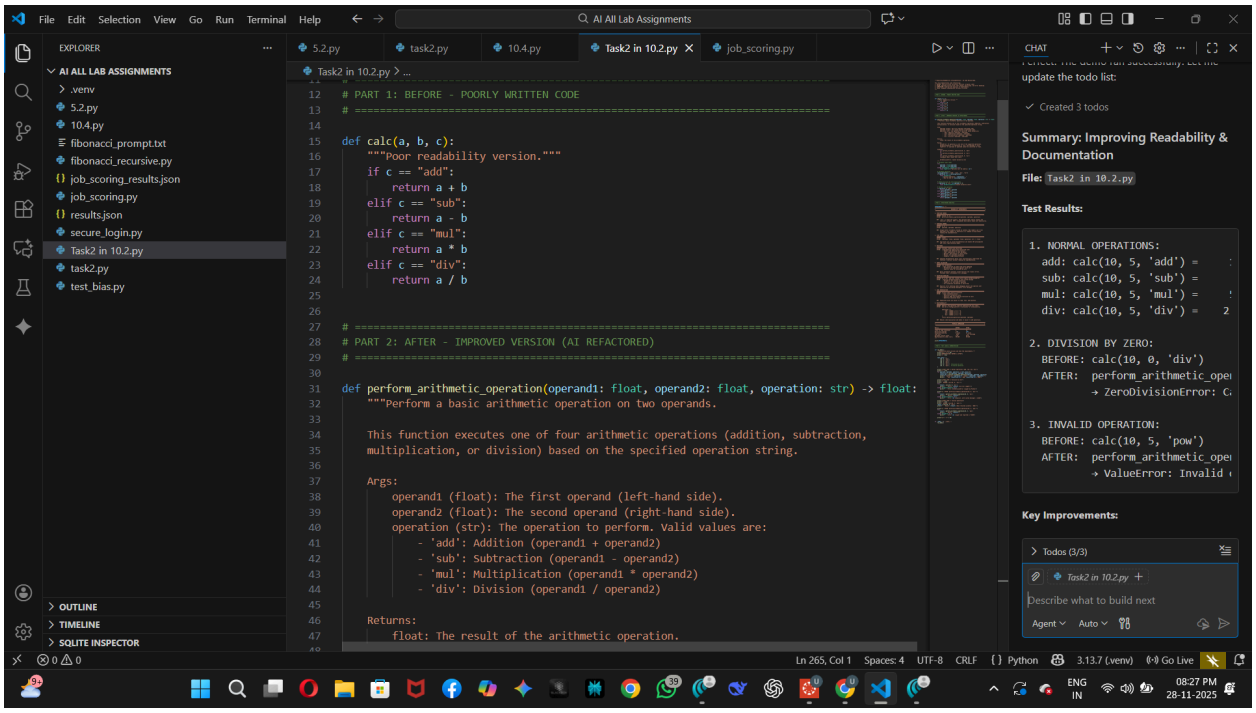
Scenario:
The following code works but is poorly written:

```
def calc(a,b,c):

if c=="add":

return a+b

elif c=="sub":

return a-b

elif c=="mul":

return a*b
elif c=="div":
return a/b
```

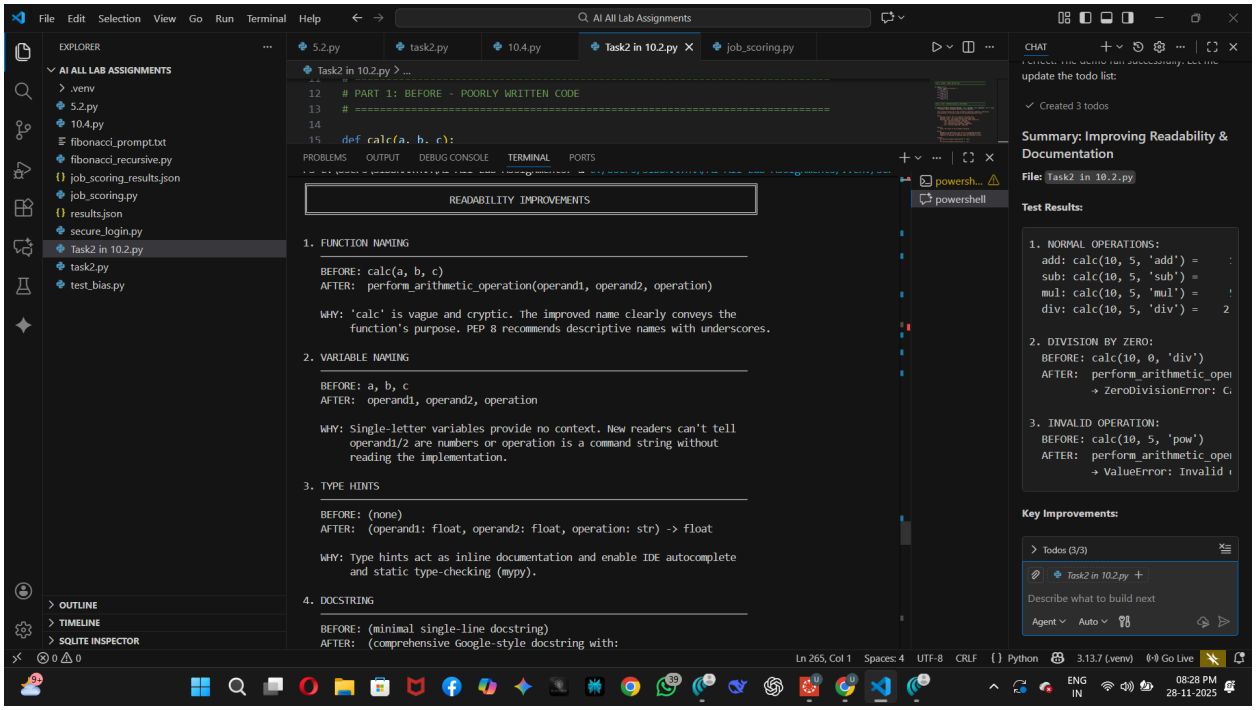
•Use AI to review this code

For readability,naming,anddocumentation issues.
•Prompt AI to rewrite the code with:
○Clear function & variable names.
○Proper docstrings.
○Exception handling for division by zero.
•Compare the before-and-after versions to evaluate AI's contribution.

Input:-



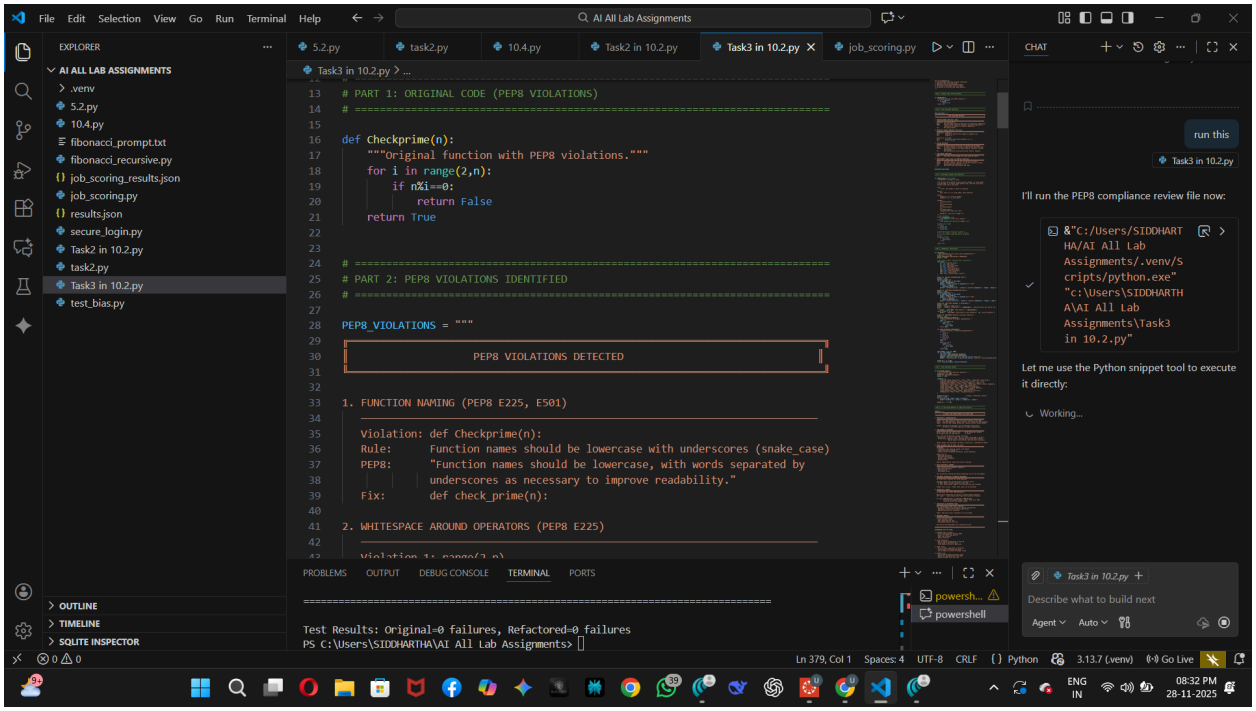
Output:-



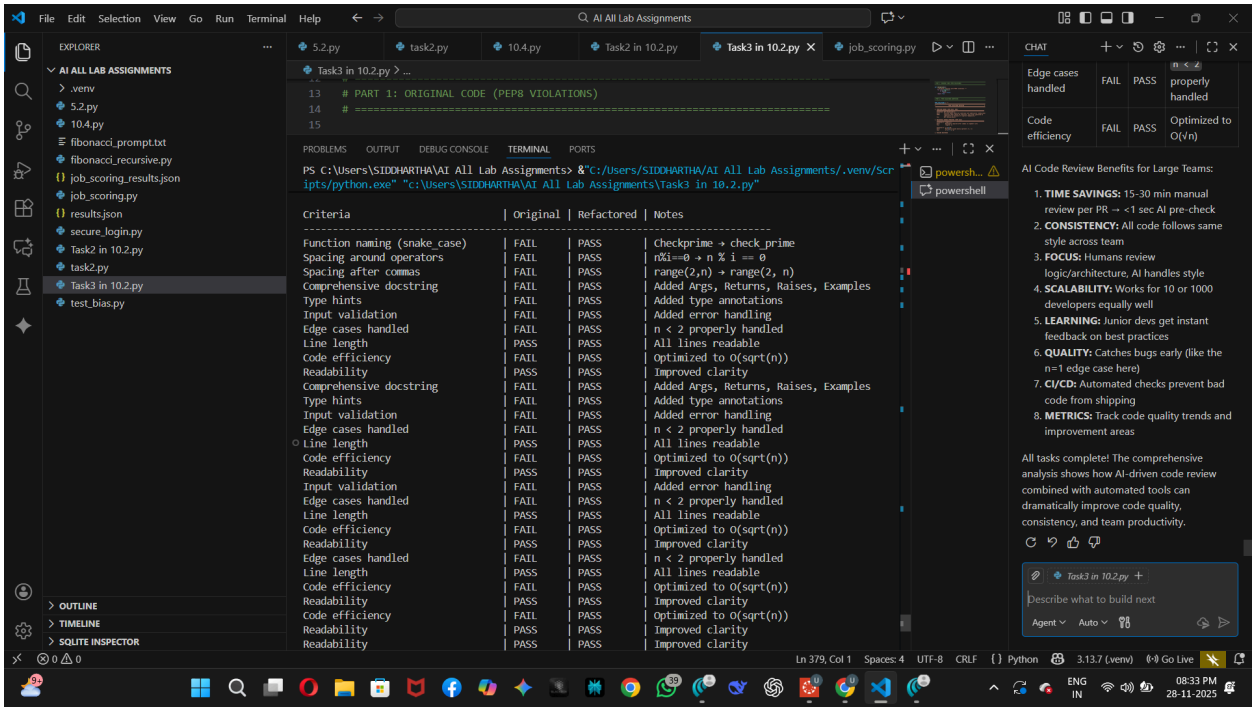
Task Description #3
(Enforcing Coding Standards)

Scenario:
A team project requires following PEP8 style guide. Onedeveloper submits:
def Checkprime(n):
for i in range(2,n):
if n%i==0:
return False
return True
•Run this code and verify correctness.
•Use AI to perform a code quality review for PEP8 compliance.
•Prompt AI to return a refactored version with proper indentation,spacing, and naming conv
•Discuss how automated AI review can save time in large-scaleprojects

Input:-



Output:-

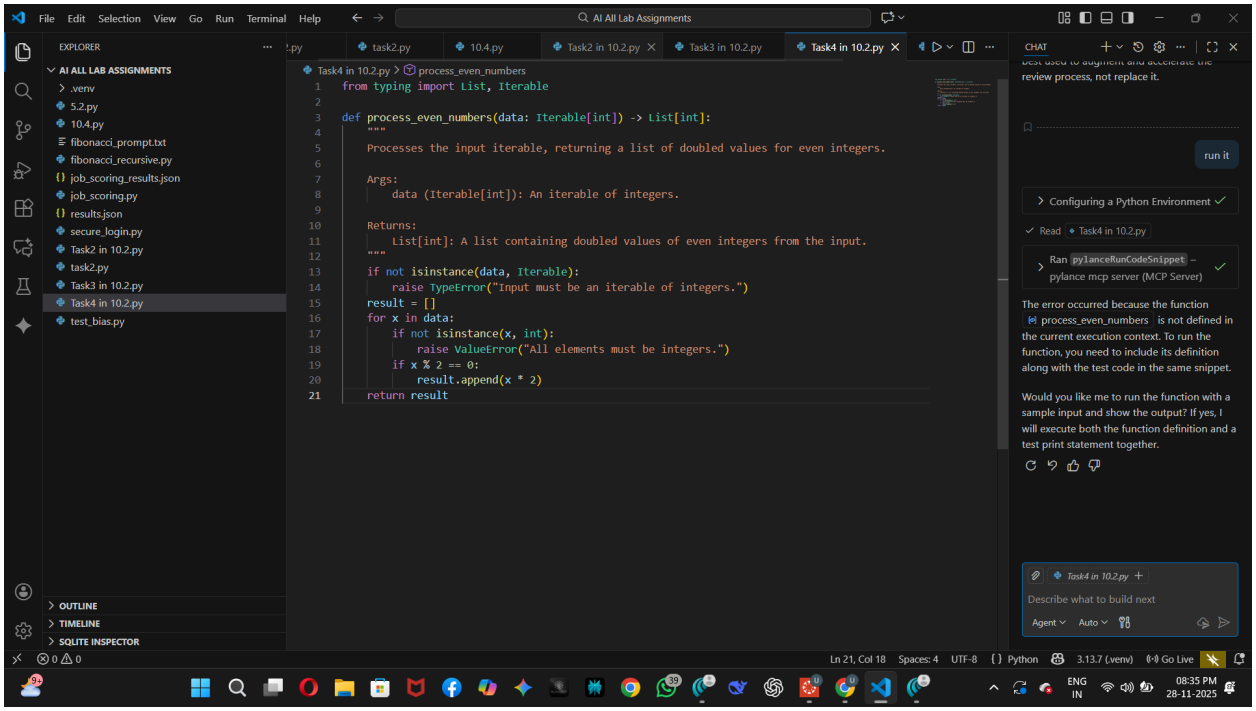


Task Description #4
(AI as a Code Reviewer in Real Projects)
Scenario:
You are part of a GitHub project. A teammate submits this pull request:

```
def processData(d):
return [x*2 for x in d if x%2==0]
```

•Review this function manually for readability, reusability, andedge cases.
•Use AI to generate a code review comment, focusing on:
○Naming conventions.
○Input validation (e.g., what if d is not a list?).
○Adding type hints.
•Modify the function based on AI's suggestions.
•Write a short reflection:Would you trust AI as a standalonereviewer, or only as a support to

Input:-



Output:-