ASSIGNMENT-7.1

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Batch:36

Task Description #1 (Syntax Errors – Missing Parentheses in Print Statement)

Task: Provide a Python snippet with a missing parenthesis in a print statement (e.g., print "Hello"). Use AI to detect and fix the syntax error.

```
# Bug: Missing parentheses in print statement
def greet():
print "Hello, AI Debugging Lab!" greet()
```

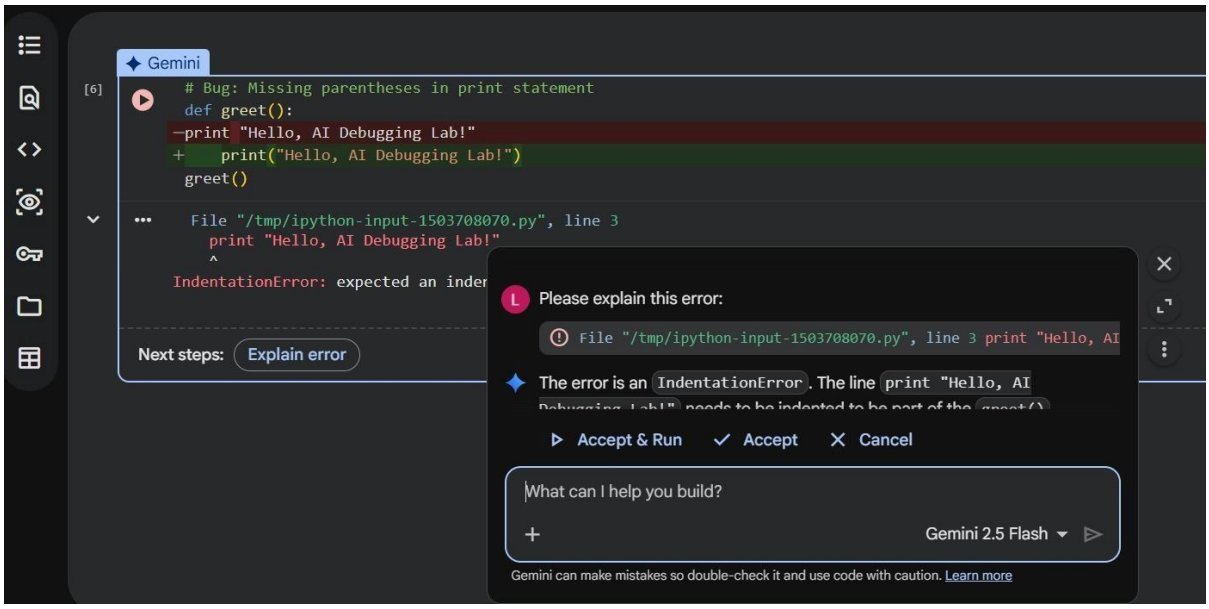
Requirements:

- Run the given code to observe the error.
- Apply AI suggestions to correct the syntax.
- Use at least 3 assert test cases to confirm the corrected code works.

Expected Output #1:

- Corrected code with proper syntax and AI explanation.

Output:



Task Description #2 (Incorrect condition in an If Statement)

Task: Supply a function where an if-condition mistakenly uses = instead of ==. Let AI identify and fix the issue. # Bug: Using assignment (=) instead of comparison (==) def check_number(n): if n = 10: return "Ten" else:

return "Not Ten"

Requirements:

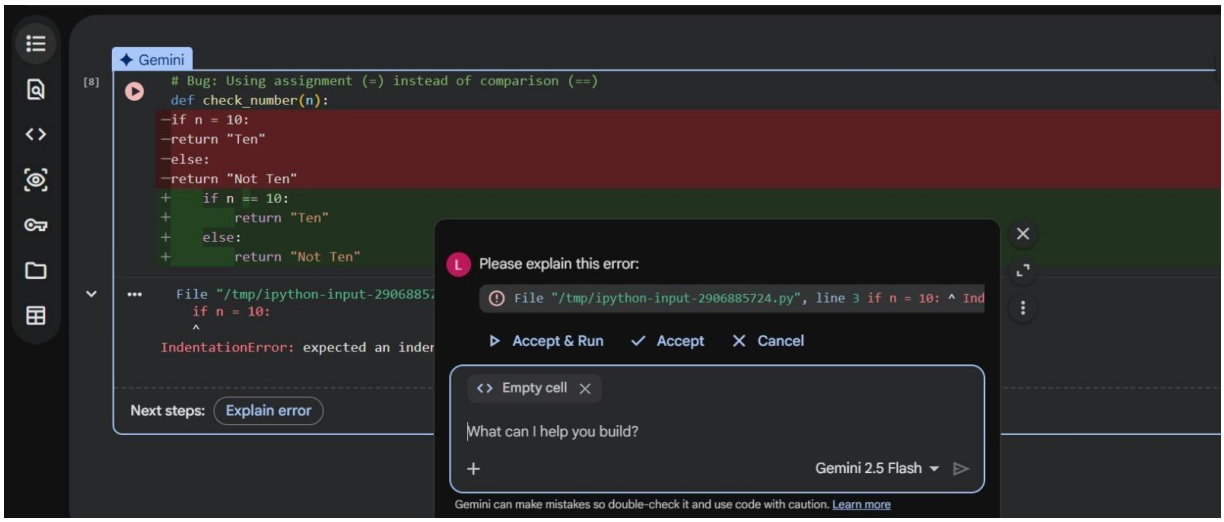
• Ask AI to explain why this causes a bug.

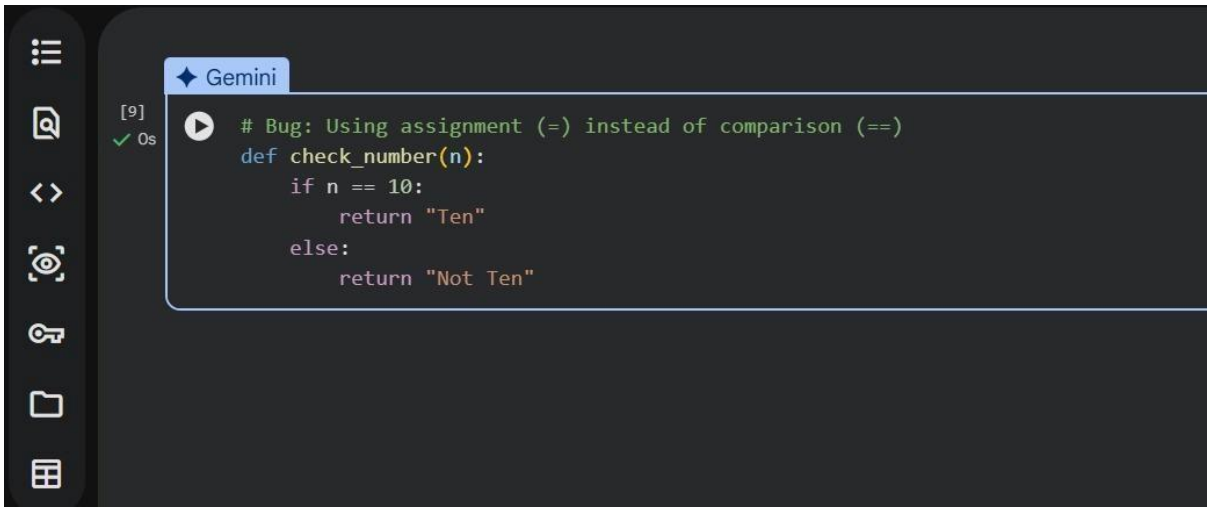
• Correct the code and verify with 3 assert test cases.

Expected Output #2:

• Corrected code using == with explanation and successful test execution.

Output:





Task Description #3 (Runtime Error – File Not Found)

Task: Provide code that attempts to open a non-existent file and crashes. Use AI to apply safe error handling. # Bug: Program crashes if file is missing def read_file(filename): with open(filename, 'r') as f:

return f.read()

print(read_file("nonexistent.txt"))

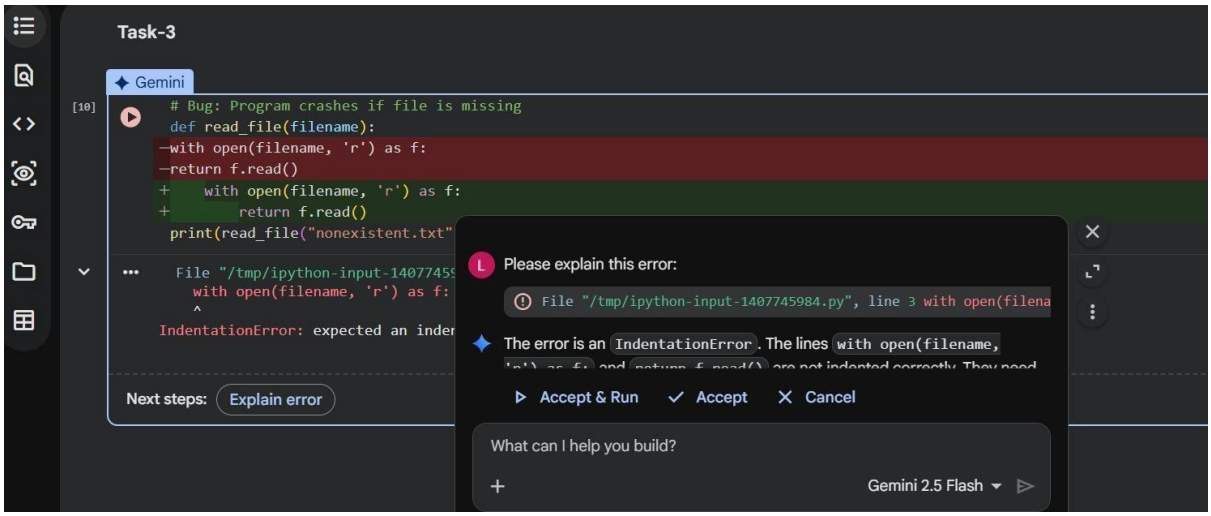
Requirements:

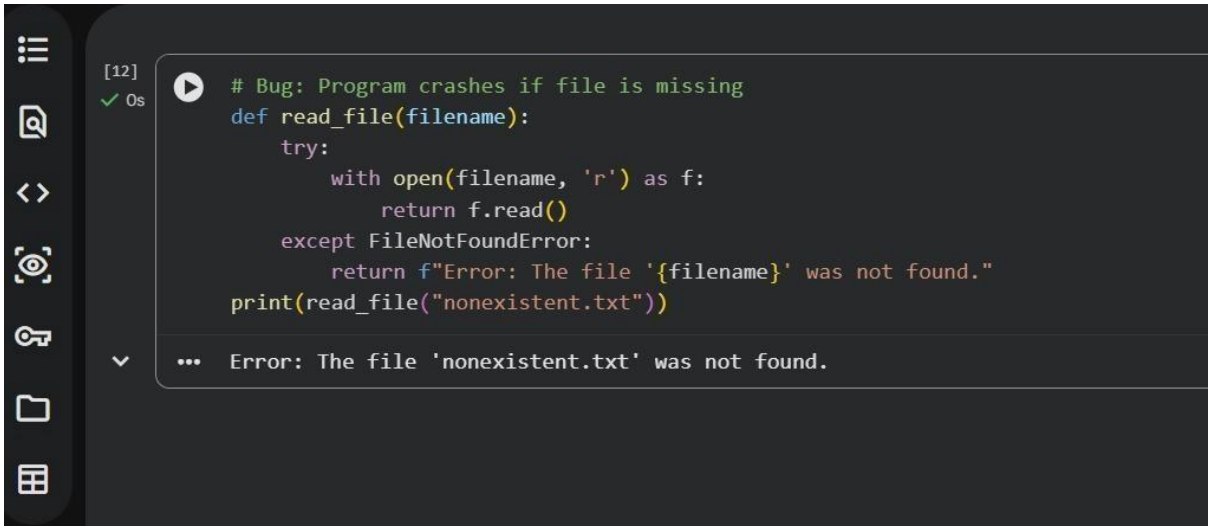
- Implement a try-except block suggested by AI.
- Add a user-friendly error message.
- Test with at least 3 scenarios: file exists, file missing, invalid path.

Expected Output #3:

- Safe file handling with exception management.

Output:





Task Description #4 (Calling a Non-Existent Method) Task:

Give a class where a non-existent method is called (e.g., obj.undefined_method()). Use AI to debug and fix.

Bug: Calling an undefined method

class Car: def start(self): return

"Car started" my_car = Car()

print(my_car.drive()) # drive() is not defined

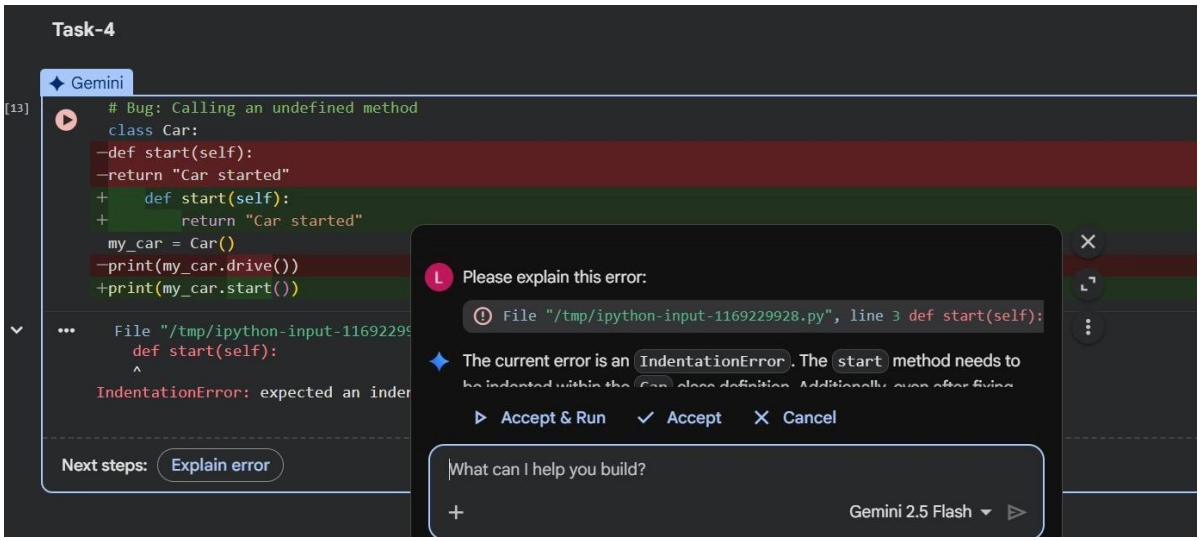
Requirements:

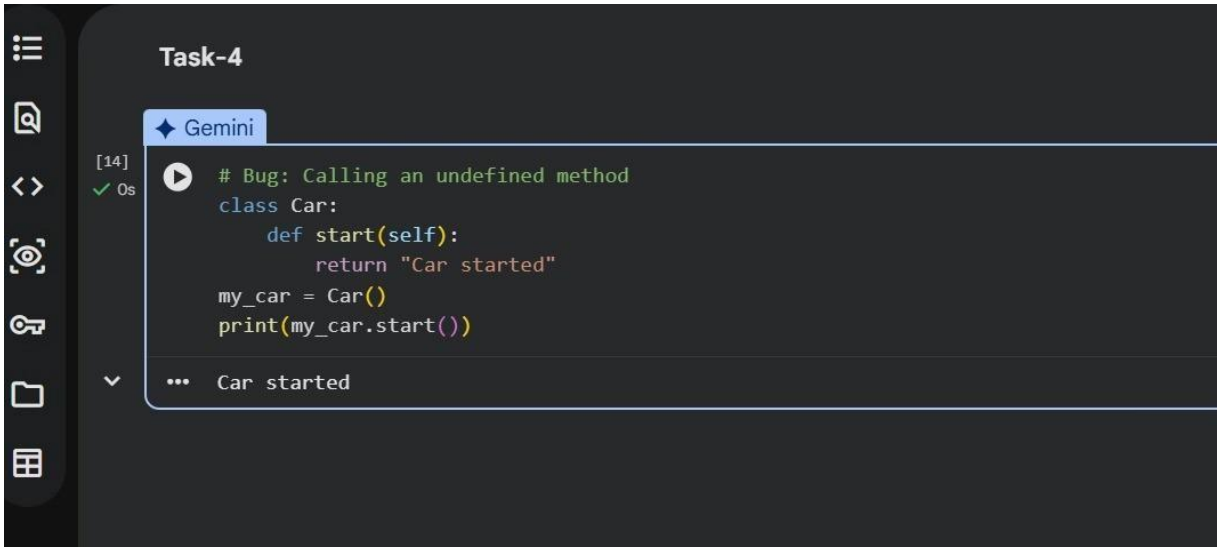
- Students must analyze whether to define the missing method or correct the method call.
- Use 3 assert tests to confirm the corrected class works.

Expected Output #4:

- Corrected class with clear AI explanation.

Output:





Task Description #5 (TypeError – Mixing Strings and Integers in Addition)

Task: Provide code that adds an integer and string ("5" + 2) causing a TypeError. Use AI to resolve the bug.

Bug: TypeError due to mixing string and integer def add_five(value): return value + 5 print(add_five("10")) Requirements:

- Ask AI for two solutions: type casting and string concatenation.
- Validate with 3 assert test cases.

Expected Output #5:

- Corrected code that runs successfully for multiple inputs.

Output: