AI ASSISTED CODING

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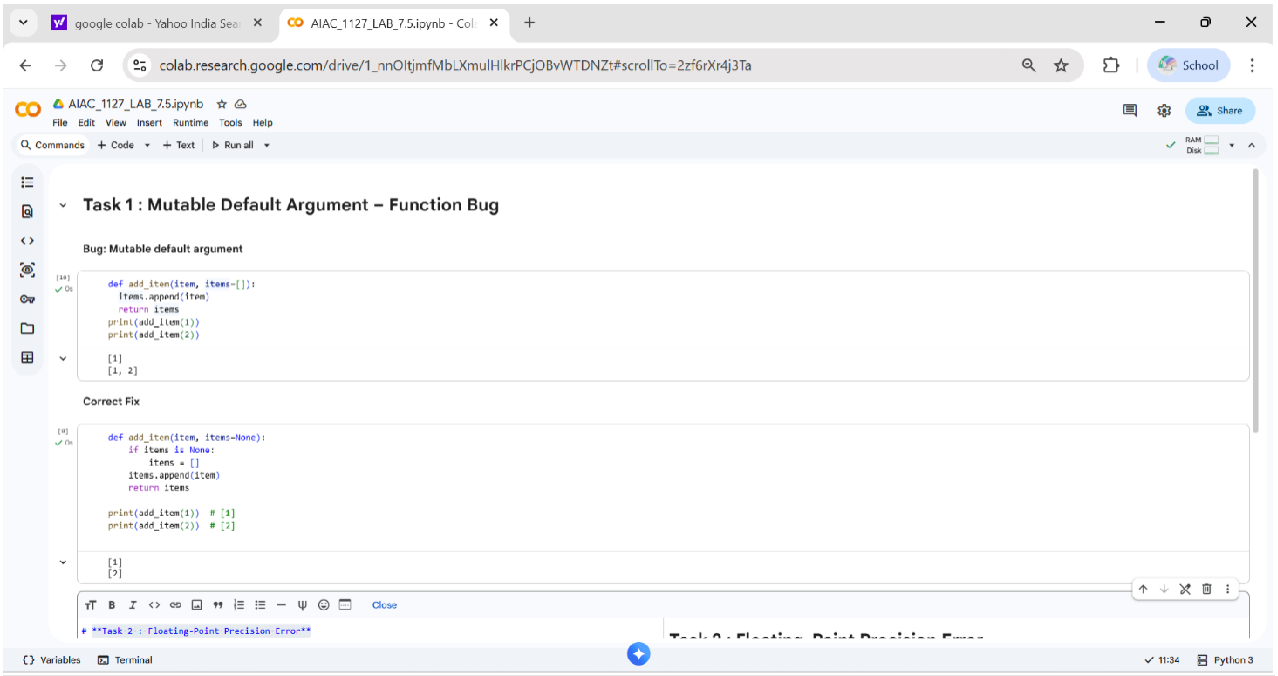
BATCH – 03 **06 – 02 – 2026**

ASSIGNMENT – 7.5

Lab 7: Error Debugging with AI: Systematic approaches to finding and fixing bugs

TASK - 01 : Mutable Default Argument – Function Bug

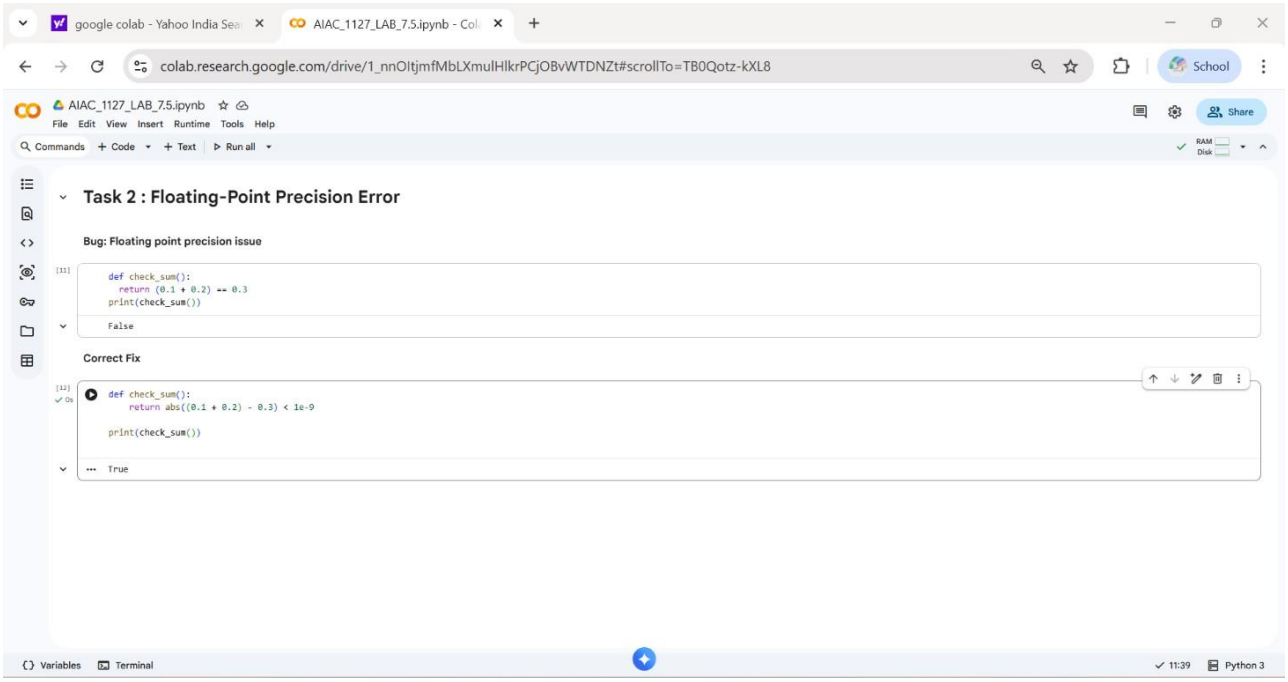
ERROR AND FIXED CODE:



Explanation : Using None instead of a mutable default argument creates a new list on every function call and avoids shared data issues.

Task 2: Floating-Point Precision Error

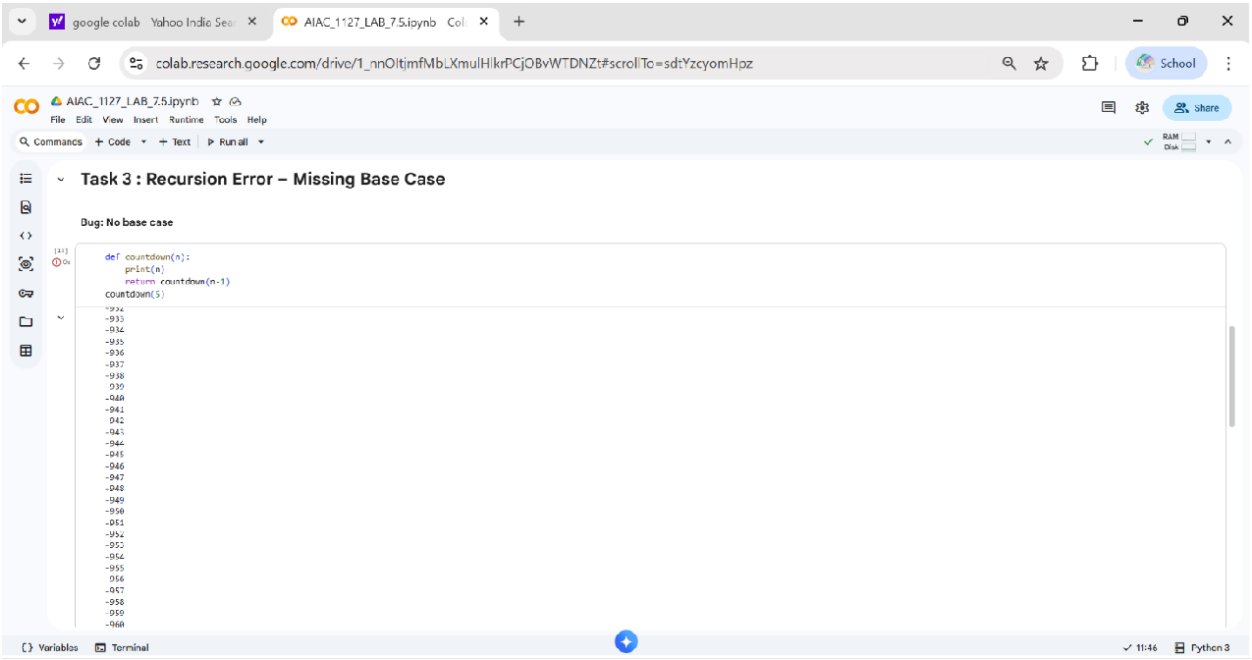
ERROR AND FIXED CODE:

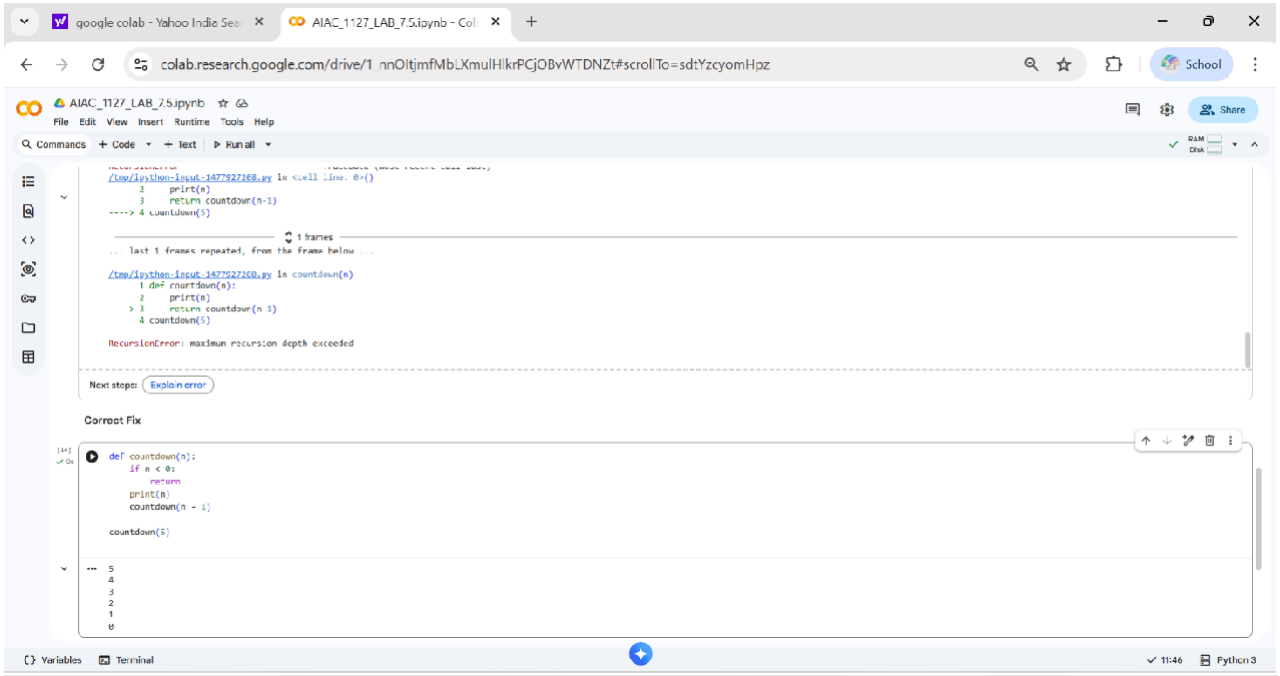


Explanation: Floating-point values are compared using a tolerance (or math.isclose) instead of direct equality to handle precision errors.

Task 3: Recursion Error – Missing Base Case

ERROR AND FIXED CODE :

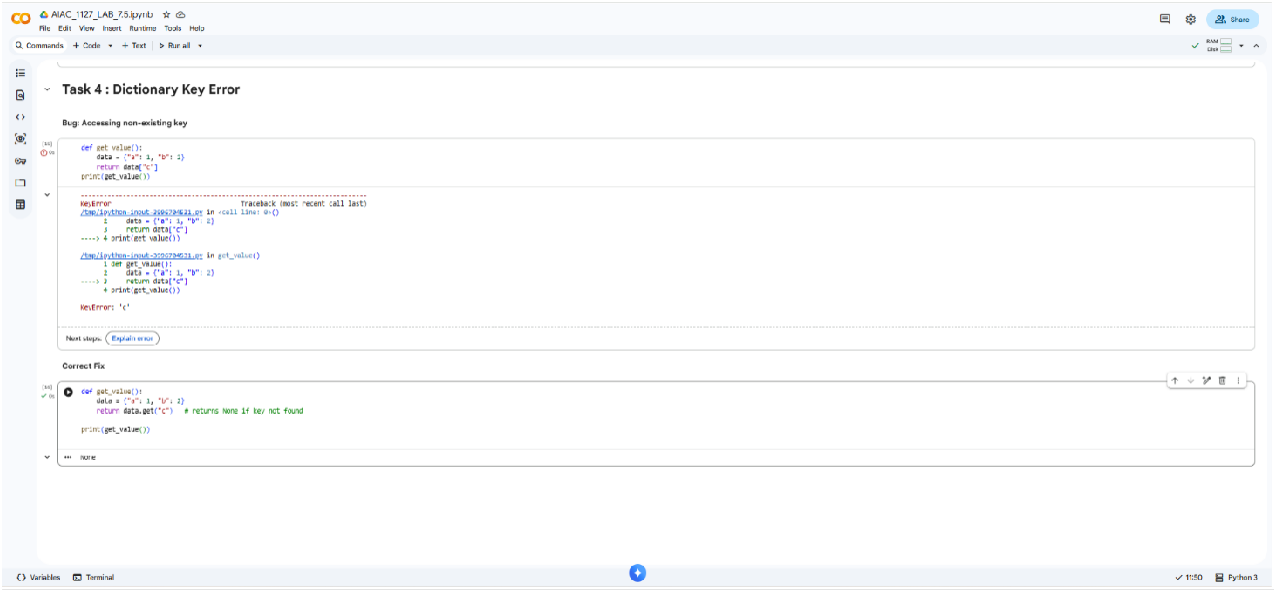




Explanation: A base case is added to stop recursive calls and prevent infinite recursion.

Task 4: Dictionary Key Error

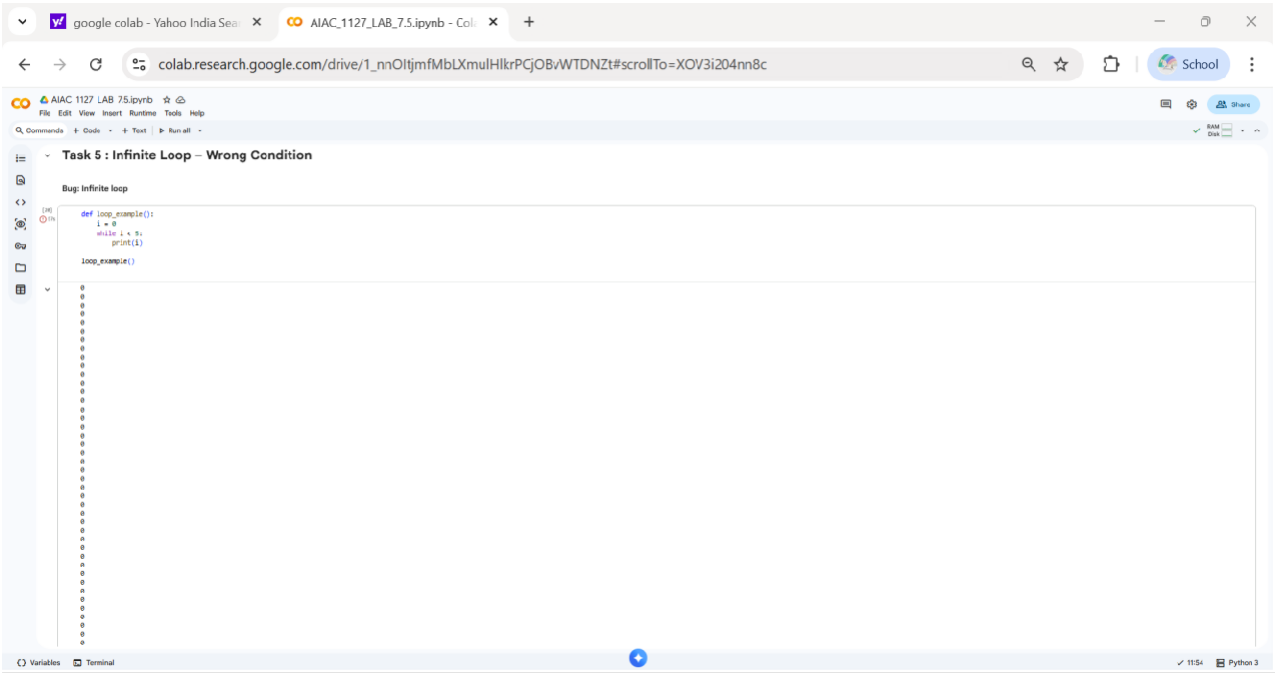
ERROR AND FIXED CODE:

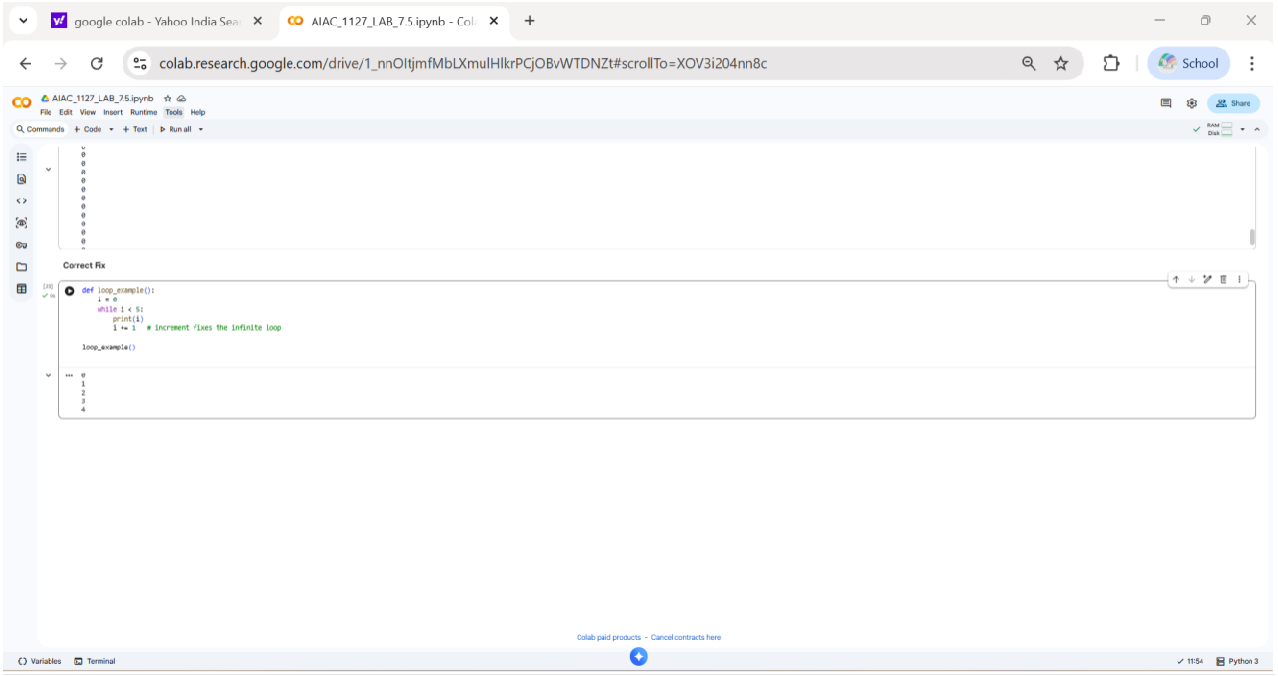


Explanation: Using dict.get() or exception handling prevents KeyError when accessing missing dictionary keys.

Task 5: Infinite Loop – Wrong Condition

ERROR AND FIXED CODE:

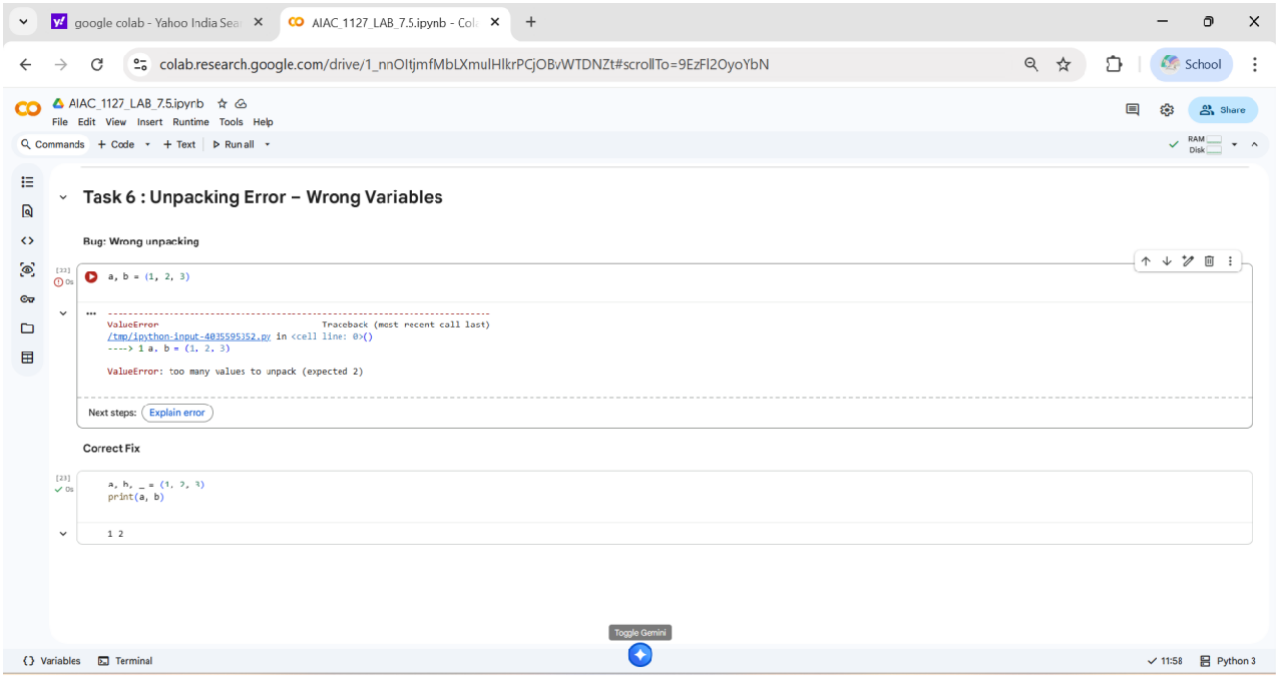




Explanation: Incrementing the loop variable ensures the loop condition eventually becomes false.

TASK 6: Unpacking Error – Wrong Variables

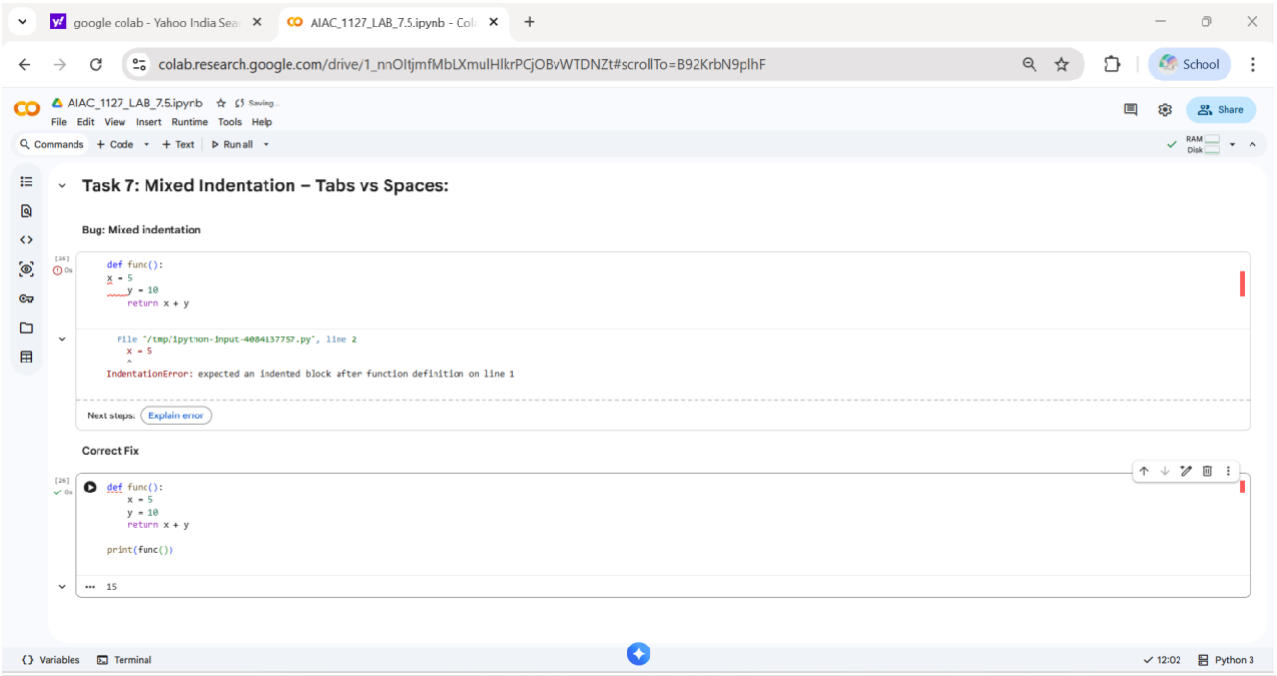
ERROR AND FIXED CODE:



Explanation: Correct unpacking is achieved by matching variable count or ignoring extra values using _ or *.

Task 7: Mixed Indentation – Tabs vs Spaces

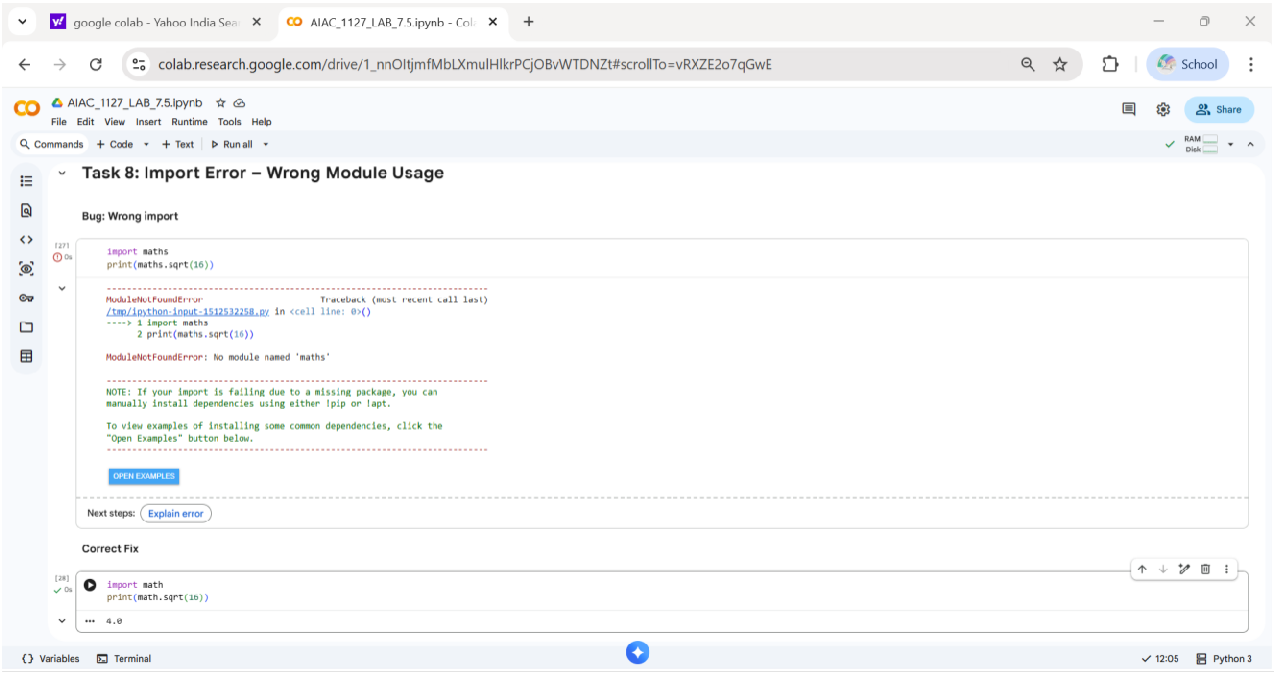
ERROR AND FIXED CODE:



EXPLANATION: Consistent indentation using spaces fixes IndentationError and allows proper code execution.

Task 8: Import Error – Wrong Module Usage

EERROR AND FIXED CODE: Correcting the module name to math resolves the import error.



Explanation: Correcting the module name to math resolves the import error.