LAB ASSIGNMENT 6.4

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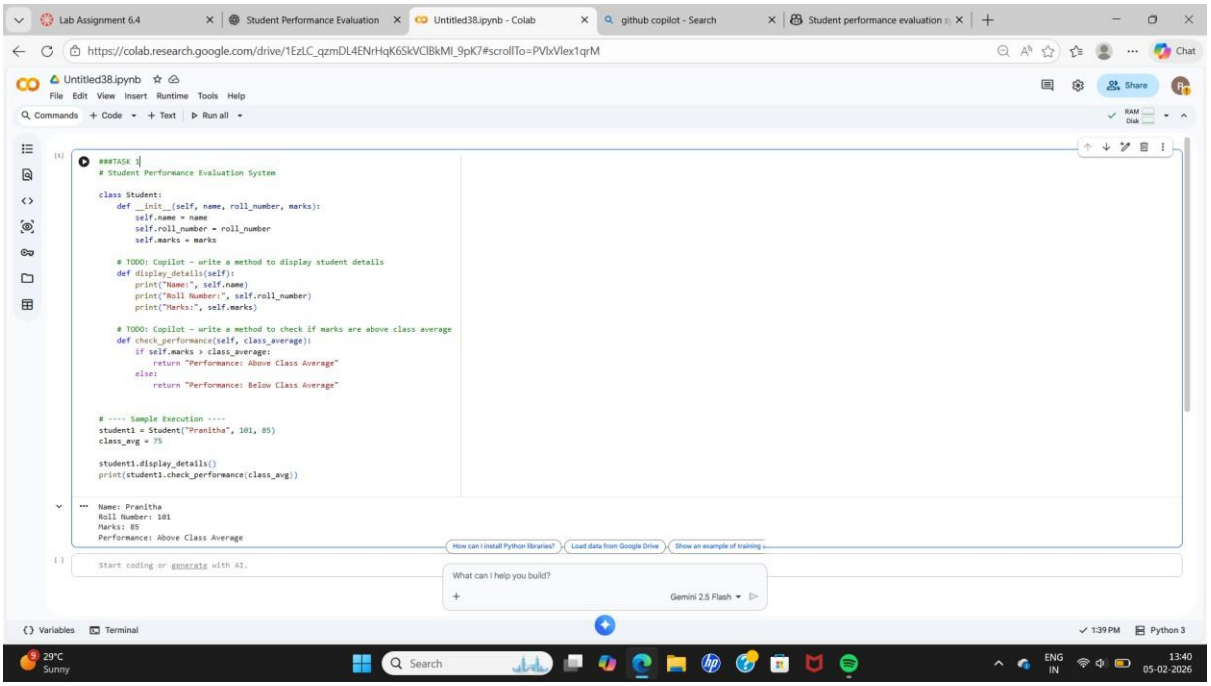
SUBJECT: AI ASST CODING

Task 1: Student Performance Evaluation System



Code Explanation:

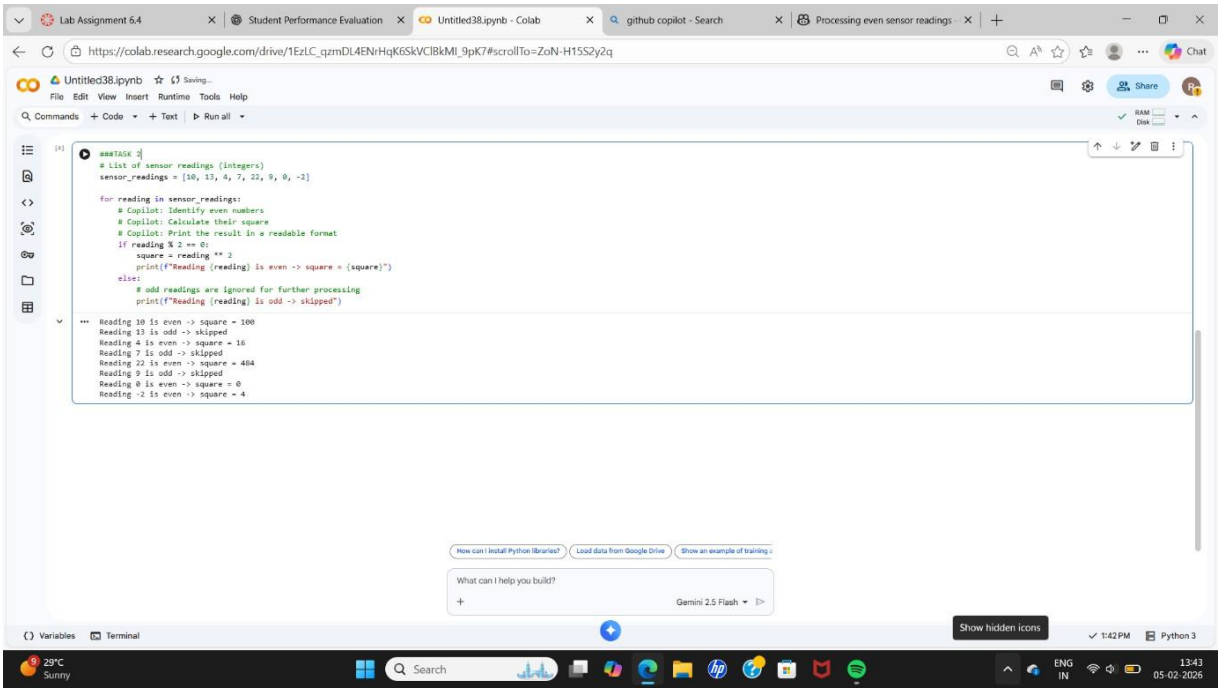
- A Student class is created with attributes name, roll_number, and marks.
- display_details() prints student information.
- check_performance() compares student marks with class average using if-else.
- If marks are greater than average, it returns **Above Class Average**, else **Below Class Average**.

PROMPT:

Create a method to display student details.

Create another method to check if student marks are above class average using if-else and return a message.

Task 2: Data Processing in a Monitoring System



Code Explanation :

- A list of sensor readings is iterated using a for loop.
- The modulus operator % checks for even numbers.
- Squares of even numbers are calculated using **.
- Output is printed in a readable format.

PROMPT:

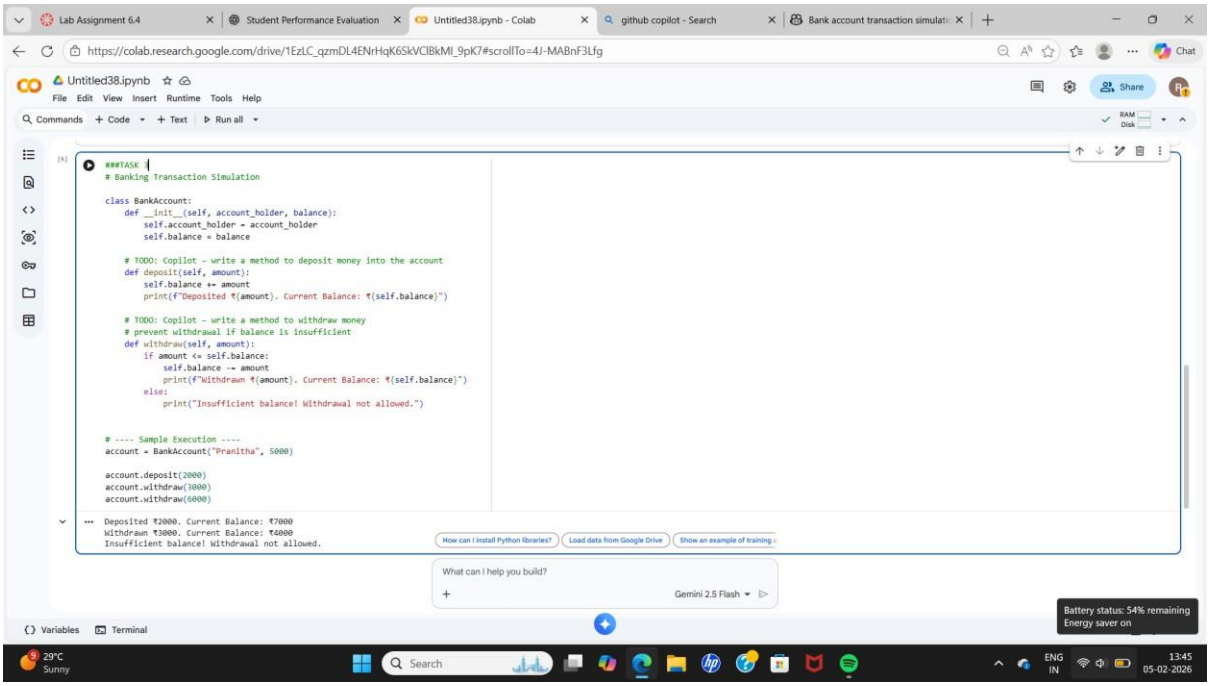
Iterate through the list.

Check if the number is even.

Calculate the square of even numbers.

Print the result in a readable format.

Task 3: Banking Transaction Simulation



Code Explanation:

- BankAccount class stores account holder name and balance.
- deposit() adds money to balance.
- withdraw() uses if-else to check balance before withdrawing.
- Prevents invalid withdrawals and shows clear messages.

PROMPT:

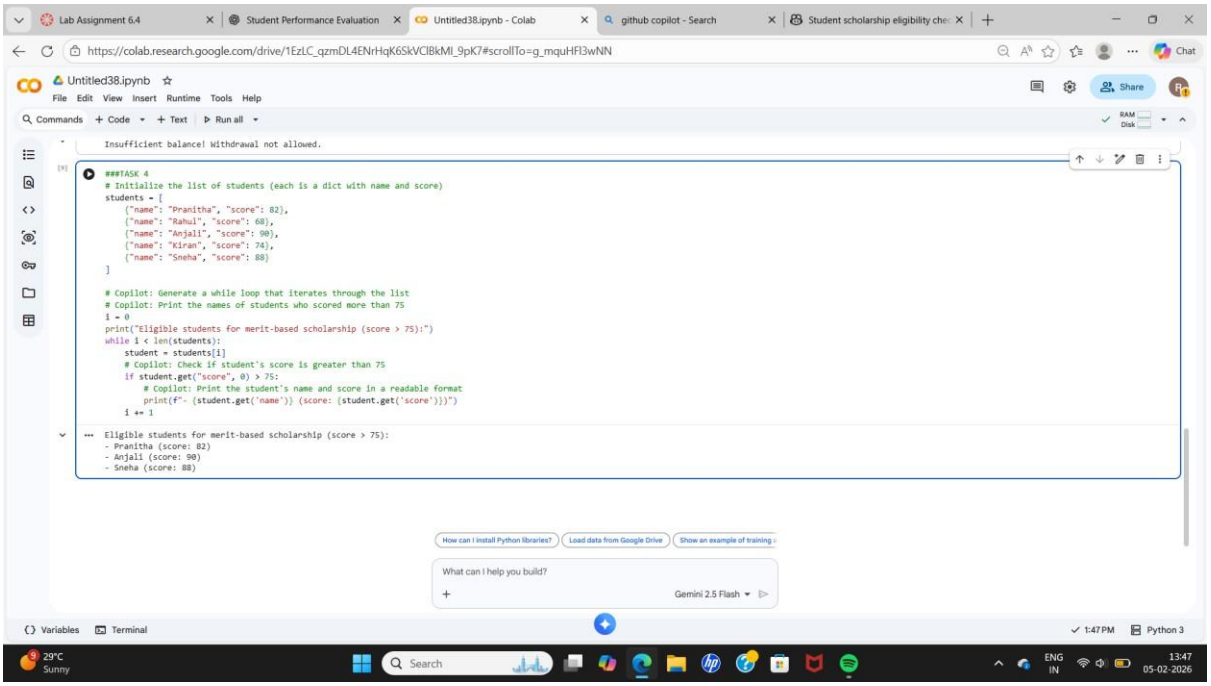
Write methods to deposit money.

Write a withdrawal method.

Prevent withdrawal if balance is insufficient.

Display user-friendly messages.

Task 4: Student Scholarship Eligibility Check



Code Explanation:

- A list of dictionaries stores student data.
- A while loop iterates using an index.
- if condition checks scholarship eligibility.
- Names of eligible students are printed.

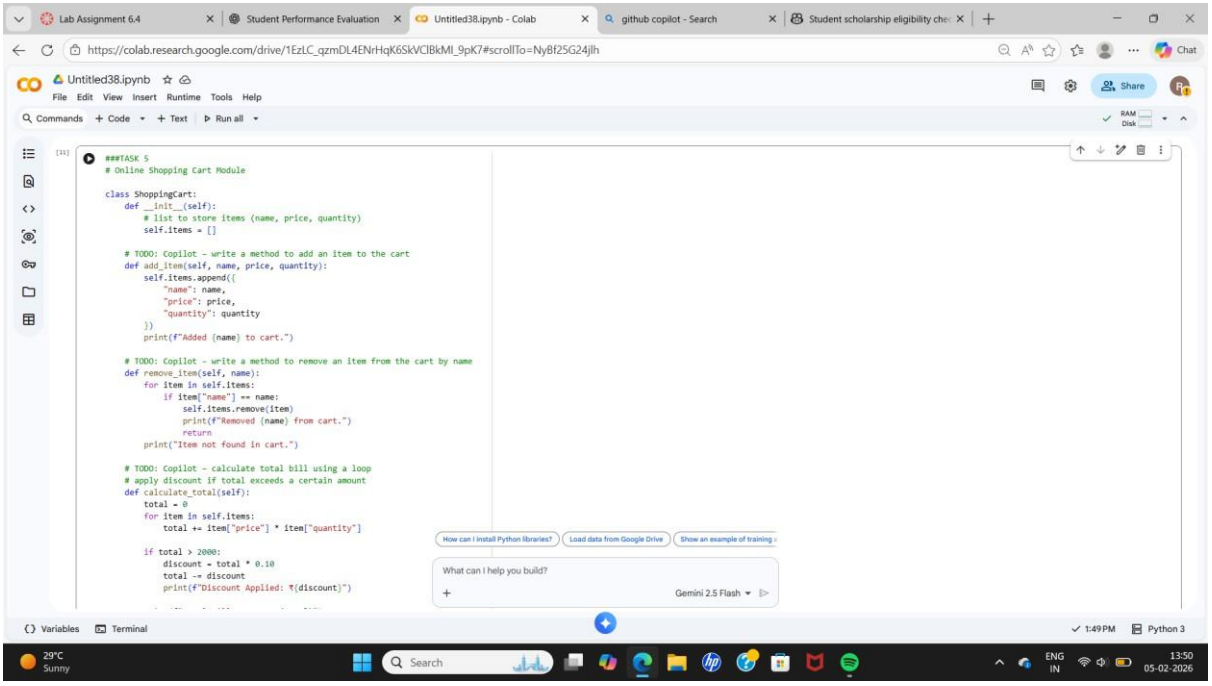
PROMPT:

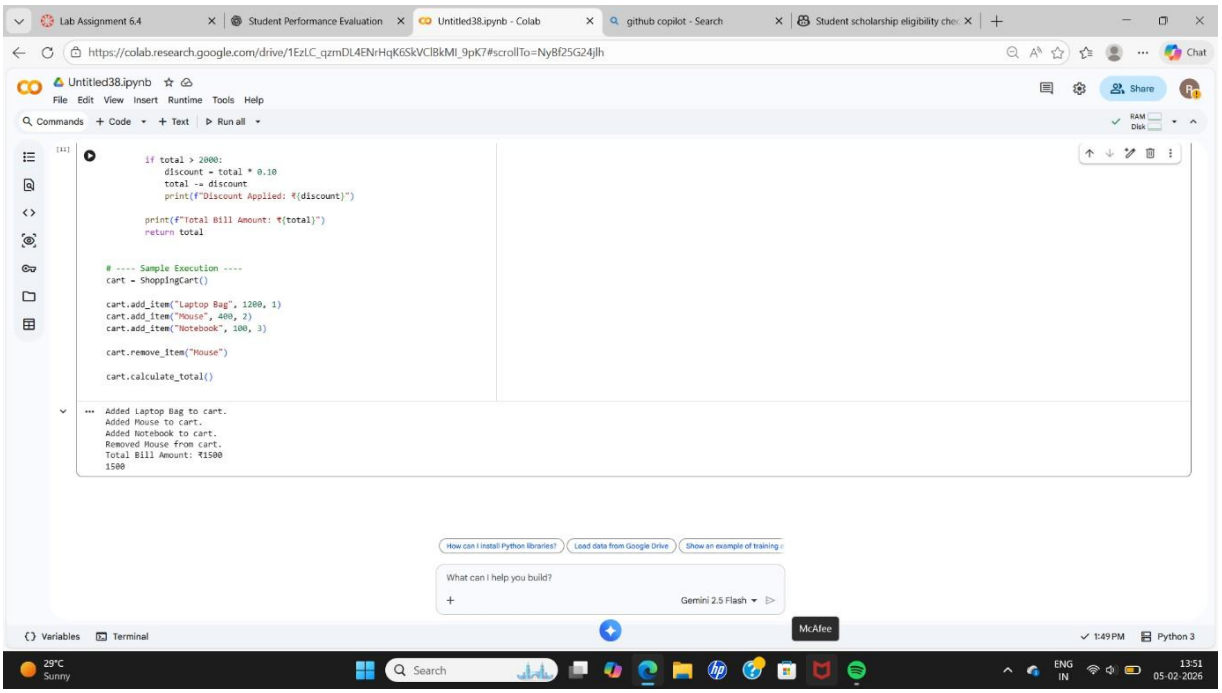
Use a while loop to iterate through students list.

Check score greater than 75.

Print eligible student names.

Task 5: Online Shopping Cart Module





Code Explanation:

- Shopping Cart class stores items in a list.
- Each item includes name, price, and quantity.
- add_item() adds products to the cart.

- remove_item() removes products by name.
- calculate_total() computes bill using a loop and applies discount using if.

PROMPT:

Create methods to add items.

Remove items from cart.

Calculate total using a loop.

Apply discount if total exceeds limit.