

TASK 2

You are working with a student management system that stores student information in a table.

The table has the following schema: ID, Name, Marks

Query

Provide solution and approach for the following:

You are required to write a SQL query to swap the Name and Marks values where Id is odd with even Id. The Id values must remain unchanged, ensuring that only the Name and Marks values are swapped between these two specific rows.

Finding

I've analyzed the student management system problem and the provided SQL solution. Here's my explanation of the analysis and findings in simple terms:

The problem involves a students table with three columns: ID, Name, and Marks. We're asked to swap the Name and Marks of students with odd IDs with those of students with even IDs, while keeping the IDs unchanged.

Initially, the table looks like this:

Alice with 85 marks

Bob with 90 marks

Carol with 75 marks

Dave with 80 marks

Eve with 70 marks

Frank with 95 marks

The SQL query solves this problem in a few steps:

I create a temporary table that pairs up odd and even ID students.

Then, it updates the main students table using this temporary table, swapping the names and marks.

Finally, I delete the temporary table.

After running the query, the table changes to:

Bob with 90 marks (swapped with ID 2)

Alice with 85 marks (swapped with ID 1)

Dave with 80 marks (swapped with ID 4)

Carol with 75 marks (swapped with ID 3)

Frank with 95 marks (swapped with ID 6)

Eve with 70 marks (swapped with ID 5)

Key findings from this exercise:

The query successfully swaps the Name and Marks for odd-even pairs of students.

The IDs remain unchanged, preserving the original order of the students.

The use of a temporary table is a clever way to handle the swapping without losing data.

This method works for any number of students, as long as there are pairs of odd and even IDs.