



LeetCode

50 Days 50 SQL Questions
Work In Progress

Day 12/50

***12. Students and
Examinations***





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Question

Write a solution to find the number of times each student attended each exam.

Return the result table ordered by `student_id` and `subject_name`.





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Table

Input:

Students table:

student_id	student_name
1	Alice
2	Bob
13	John
6	Alex

Subjects table:

subject_name
Math
Physics
Programming

Examinations table:

student_id	subject_name
1	Math
1	Physics
1	Programming
2	Programming
1	Physics
1	Math
13	Math
13	Programming
13	Physics
2	Math
1	Math





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Approach

I used 2 CTEs, first to make get a list of which student gave particular exam and the times he gave that exam and second to get a list of all student with all the subject name. In main query, I used a left join to join these CTEs on id and subject name and then order the result by id and subject name.





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Query

MySQL   Auto

```
1  # Write your MySQL query statement below
2  WITH a AS (
3      SELECT student_id, subject_name, COUNT(subject_name) AS attended_exams
4      FROM Examinations
5      GROUP BY student_id, subject_name
6  ),
7  b AS (
8      SELECT s.student_id, s.student_name, sub.subject_name
9      FROM Students s
10     CROSS JOIN Subjects sub
11  )
12  SELECT
13     b.student_id,
14     b.student_name,
15     b.subject_name,
16     COALESCE(a.attended_exams, 0) AS attended_exams
17  FROM b
18  LEFT JOIN a ON b.student_id = a.student_id AND b.subject_name = a.subject_name
19  ORDER BY b.student_id, b.subject_name;
20
```





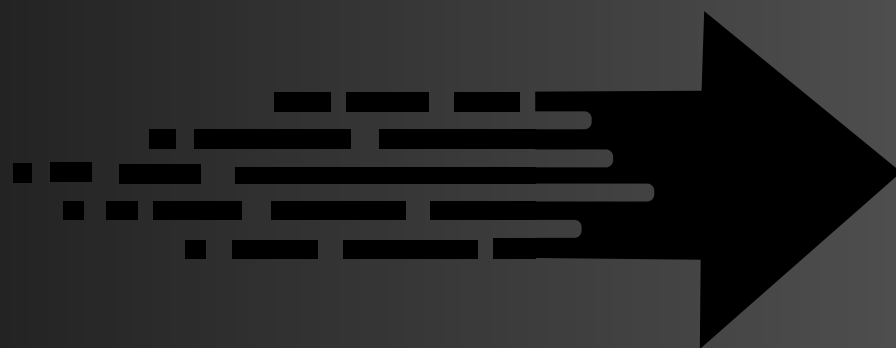
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Output

Output:

student_id	student_name	subject_name	attended_exams
1	Alice	Math	3
1	Alice	Physics	2
1	Alice	Programming	1
2	Bob	Math	1
2	Bob	Physics	0
2	Bob	Programming	1
6	Alex	Math	0
6	Alex	Physics	0
6	Alex	Programming	0
13	John	Math	1
13	John	Physics	1
13	John	Programming	1





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Thank You :)

