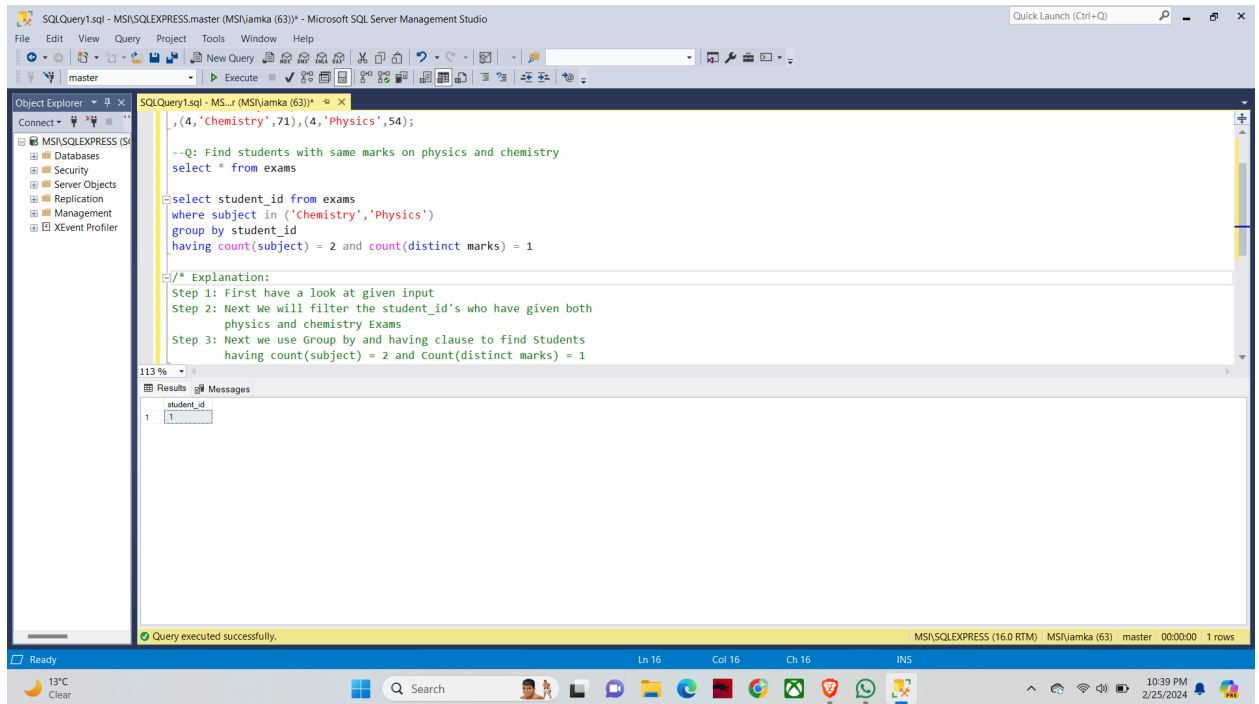


Day20 - Feb25th 2024

1. Started my day as usual and started lifting weights to build strong hands.
2. Opened leetcode and solved one Binary search medium question..took me around 2hrs..but I'll eventually get improved
3. Marketed my profile for Data Engineeringn
4. Went for grocery shopping and cooked food for my friends
5. Got an idea for real time pyspark project and will start implementing it from monday
6. Ended my day by solving two complex SQL question from Ankit bansal's YT



The screenshot shows the Microsoft SQL Server Management Studio interface. The main window displays a SQL query in the 'SQLQuery1.sql' file. The query is as follows:

```
INSERT INTO exams (student_id, subject, marks) VALUES (4, 'Chemistry', 71), (4, 'Physics', 54);

--Q: Find students with same marks on physics and chemistry
select * from exams

select student_id from exams
where subject in ('chemistry', 'Physics')
group by student_id
having count(subject) = 2 and count(distinct marks) = 1

/* Explanation:
Step 1: First have a look at given input
Step 2: Next we will filter the student_id's who have given both
physics and chemistry Exams
Step 3: Next we use Group by and having clause to find Students
having count(subject) = 2 and Count(distinct marks) = 1
```

The 'Results' pane at the bottom shows the output of the query, which is a single row with the value '1' in the 'student_id' column.

student_id
1

The status bar at the bottom indicates that the query was executed successfully. The Windows taskbar at the very bottom shows the date and time as 10:39 PM on 2/25/2024.

SQLQuery2.sql - MS\SQLEXPRESS.master (MSI\jamka (S2)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

master

Object Explorer

Connect - MSI\SQLEXPRESS (S2)

MSI\SQLEXPRESS (S2)

Databases

Security

Server Objects

Replication

Management

XEvent Profiler

SQLQuery2.sql - MS...r (MSI\jamka (S2))

```

insert into covid values('BANGALORE','2022-01-04',400);

--Q: Find Cities where the covid cases are increasing continuously
select * from covid;

with cte as(
select *,rank() over(partition by city order by days) as rd,
rank() over(partition by city order by cases) as cd
from covid)
select city--count(case when rd = cd then 1 end) as c,count(city)
from cte
group by city
having count(case when rd = cd then 1 end) = count(city)

```

113 %

Results Messages

	city	days	cases
1	DELHI	2022-01-01	100
2	DELHI	2022-01-02	200
3	DELHI	2022-01-03	300
4	MUMBAI	2022-01-01	100
5	MUMBAI	2022-01-02	100
6	MUMBAI	2022-01-03	300
7	CHENNAI	2022-01-01	100
8	CHENNAI	2022-01-02	200
9	CHENNAI	2022-01-03	150
10	BANGALORE	2022-01-01	100
11	BANGALORE	2022-01-02	300
12	BANGALORE	2022-01-03	200
13	BANGALORE	2022-01-04	400

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MSI\jamka (S2) master | 00:00:00 13 rows

Ready 12°C Clear

Ln 26 Col 12 Ch 12

11:44 PM 2/25/2024

SQLQuery2.sql - MS\SQLEXPRESS.master (MSI\jamka (S2)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

master

Object Explorer

Connect - MSI\SQLEXPRESS (S2)

MSI\SQLEXPRESS (S2)

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rank() over(partition by city order by cases) as cd
from covid)
select city--count(case when rd = cd then 1 end) as c,count(city)
from cte
group by city
having count(case when rd = cd then 1 end) = count(city)

/* Explanation:
Step 1: Task is to find cities where covid cases are increasing daily
Step 2: Used rank() on days and cases..and framed in CTE
Step 3: Now we will find cities where ranks of days and cases are equal to
count(city)

```

113 %

Results Messages

	city
1	DELHI

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MSI\jamka (S2) master | 00:00:00 1 rows

Ready 12°C Clear

Ln 23 Col 1 Ch 1

11:44 PM 2/25/2024