197. Rising Temperature 🔗

July 10, 2017 | 66K views

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Given a `Weather` table, write a SQL query to find all dates' Ids with higher temperature compared to its previous (yesterday's) dates.

```
+---------+------------------+------------------+
| Id(INT) | RecordDate(DATE) | Temperature(INT) |
+---------+------------------+------------------+
|       1 |       2015-01-01 |               10 |
|       2 |       2015-01-02 |               25 |
|       3 |       2015-01-03 |               20 |
|       4 |       2015-01-04 |               30 |
+---------+------------------+------------------+
```

For example, return the following Ids for the above `Weather` table:

```
+----+
| Id |
+----+
|  2 |
|  4 |
+----+
```

Solution

Approach: Using `JOIN` and `DATEDIFF()` clause [Accepted]
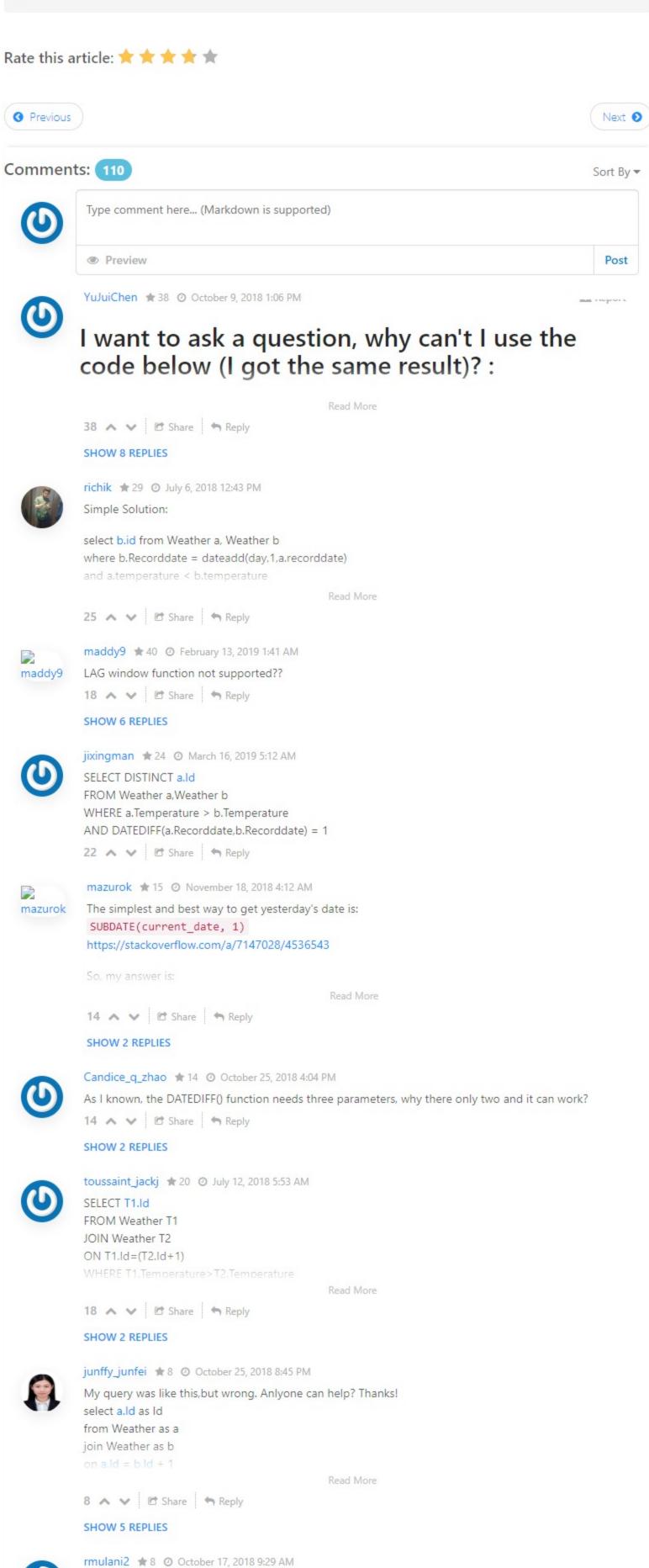
Algorithm

MySQL uses DATEDIFF to compare two date type values.

So, we can get the result by joining this table **weather** with itself and use this `DATEDIFF()` function.

MySQL

```
SELECT
    weather.id AS 'Id'
FROM
    weather
        JOIN
    weather w ON DATEDIFF(weather.date, w.date) = 1
        AND weather.Temperature > w.Temperature
;
```

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YuJuiChen ★ 38 ⏱ October 9, 2018 1:06 PM

I want to ask a question, why can't I use the code below (I got the same result)? :

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richik ★ 29 ⏱ July 6, 2018 12:43 PM

Simple Solution:

select b.id from Weather a, Weather b
where b.Recorddate = dateadd(day,1,a.recorddate)
and a.temperature < b.temperature

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maddy9 ★ 40 ⏱ February 13, 2019 1:41 AM

LAG window function not supported??

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jixingman ★ 24 ⏱ March 16, 2019 5:12 AM

SELECT DISTINCT a.Id
FROM Weather a,Weather b
WHERE a.Temperature > b.Temperature
AND DATEDIFF(a.Recorddate,b.Recorddate) = 1

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mazurok ★ 15 ⏱ November 18, 2018 4:12 AM

The simplest and best way to get yesterday's date is:
`SUBDATE(current_date, 1)`
https://stackoverflow.com/a/7147028/4536543

So, my answer is:

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Candice_q_zhao ★ 14 ⏱ October 25, 2018 4:04 PM

As I known, the DATEDIFF() function needs three parameters. why there only two and it can work?

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toussaint_jackj ★ 20 ⏱ July 12, 2018 5:53 AM

SELECT T1.Id
FROM Weather T1
JOIN Weather T2
ON T1.Id=(T2.Id+1)
WHERE T1.Temperature>T2.Temperature

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junffy_junfei ★ 8 ⏱ October 25, 2018 8:45 PM

My query was like this.but wrong. Anlyone can help? Thanks!
select a.Id as Id
from Weather as a
join Weather as b
on a.Id < b.Id - 1

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rmulani2 ★ 8 ⏱ October 17, 2018 9:29 AM

Simple query using a WHERE clause. No subquery or join required.

select W2.Id from Weather as W1, Weather as W2 where DATEDIFF(W2.RecordDate,
W1.RecordDate) = 1 and W1.Temperature < W2.Temperature;

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johnny7124 ★ 5 ⏱ October 12, 2018 7:55 AM

This solution is accepted
Oracle:
select a.id from weather a
where a.temperature > (select b.temperature from weather b where b.recorddate=a.recorddate-1)

5 ∧ ∨ | ⮌ Share | ↩ Reply

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