180. Consecutive Numbers 💆

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Write a SQL query to find all numbers that appear at least three times consecutively.

times.

For example, given the above Logs table, 1 is the only number that appears consecutively for at least three

Solution

Algorithm

Approach: Using **DISTINCT** and **WHERE** clause [Accepted]

Consecutive appearing means the Id of the Num are next to each others. Since this problem asks for

numbers appearing at least three times consecutively, we can use 3 aliases for this table **Logs**, and then check whether 3 consecutive numbers are all the same.

SELECT *

```
FROM
Logs 11,
Logs 12,
Logs 13
WHERE
11.Id = 12.Id - 1
AND 12.Id = 13.Id - 1
AND 11.Num = 12.Num
AND 12.Num = 13.Num

Num Id Num Id Num
```

1	1	2	1	3	1
>Note: The first two columns are from I1, then the next two are from I2, and the last two are from I3.					
Then we can select any <i>Num</i> column from the above table to get th	e target o	lata. Ho	wever, v	we need	d to add a
keyword DISTINCT because it will display a duplicated number if of	ne numb	er appe	ars mor	e than 3	3 times

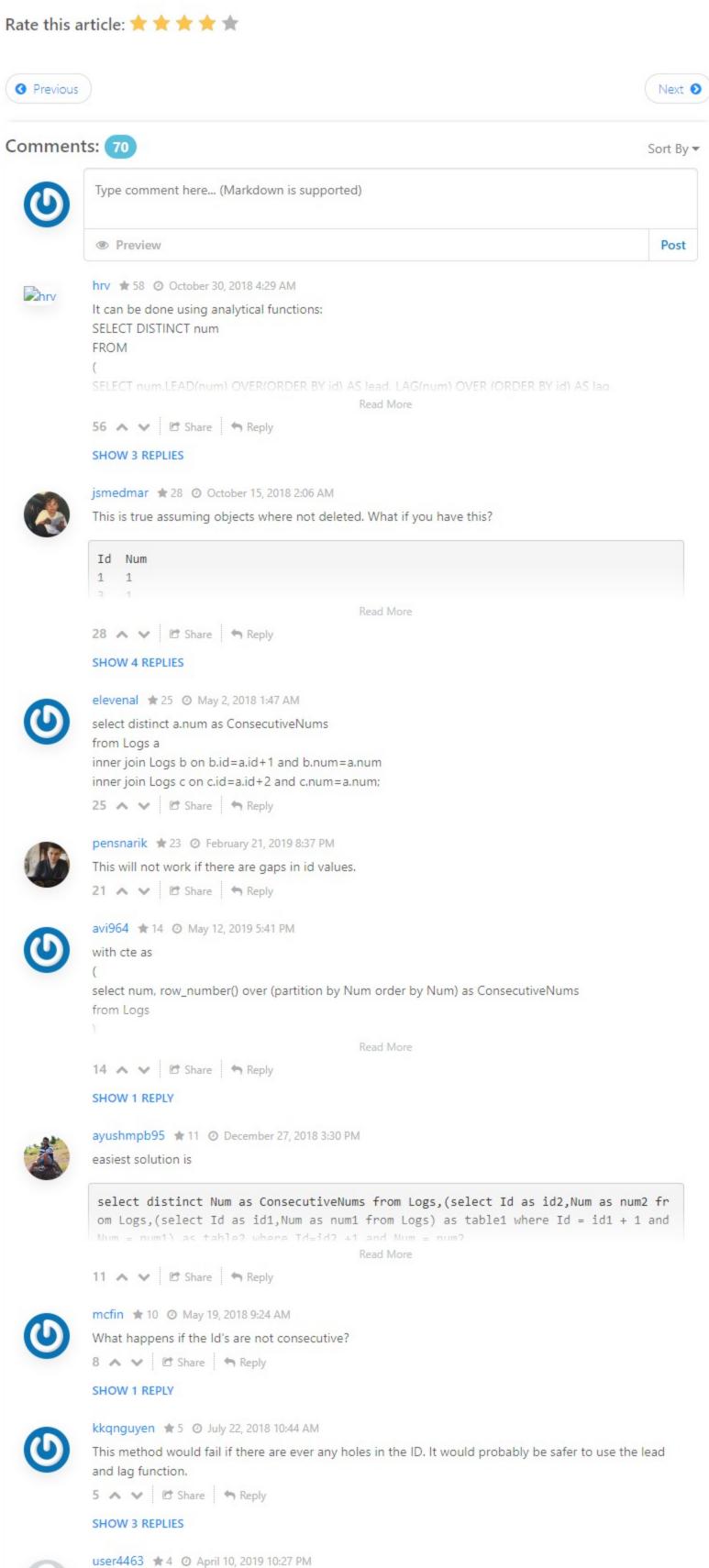
MySQL

SELECT DISTINCT 11.Num AS ConsecutiveNums

consecutively.

```
Logs 11,
Logs 12,
Logs 13
WHERE

11.Id = 12.Id - 1
AND 12.Id = 13.Id - 1
AND 11.Num = 12.Num
AND 12.Num = 13.Num
;
```



WITH src as (SELECT CASE WHEN t.num = LEAD(t.num) OVER(ORDER BY id)

SELECT DISTINCT src.ConsecutiveNums FROM src WHERE src.ConsecutiveNums IS NOT NULL

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AND t.num = LEAD(t.num,2) OVER(ORDER BY id)

ELSE NULL END as ConsecutiveNums FROM Logs t)

THEN t.num

from logs a inner join logs b

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jl4343 🛊 23 🗿 August 31, 2018 9:18 AM

on a.id + 1 = b.id and a.num = b.num

(1234567)

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select distinct a.num as ConsecutiveNums