

Find Customer Referee



LeetCode

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Editorial

Solution

Approach: Using `<>` (`!=`) and `IS NULL` [Accepted]

Intuition

Some people come out the following solution by intuition.

```
SELECT name FROM customer WHERE referee_Id <> 2;
```

However, this query will only return one result: Zack although there are 4 customers not referred by Jane (including Jane herself). All the customers who were referred by nobody at all (`NULL` value in the `referee_id` column) don't show up. But why?

Algorithm

MySQL uses three-valued logic -- TRUE, FALSE and UNKNOWN. Anything compared to NULL evaluates to the third value: UNKNOWN. That "anything" includes NULL itself! That's why MySQL provides the `IS NULL` and `IS NOT NULL` operators to specifically check for NULL.

Thus, one more condition '`referee_id IS NULL`' should be added to the WHERE clause as below.

MySQL

```
SELECT name FROM customer WHERE referee_id <> 2 OR referee_id IS NULL;
```

or

```
SELECT name FROM customer WHERE referee_id != 2 OR referee_id IS NULL;
```

Tips

The following solution is also wrong for the same reason as mentioned above. The key is to always use `IS NULL` or `IS NOT NULL` operators to specifically check for NULL value.

```
SELECT name FROM customer WHERE referee_id = NULL OR referee_id <> 2;
```