SQL TIPS AND TRICKS

PART 29

ITC Infotech

Interview Question

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Example--

distance	source	destination
100	New Delhi	Panipat
200	Ambala	New Delhi
150	Bangalore	Mysore
150	Mysore	Bangalore
250	Mumbai	Pune
250	Pune	Mumbai
2500	Chennai	Bhopal
2500	Bhopal	Chennai
60	Tirupati	Tirumala
80	Tirumala	Tirupati

Result Grid | Filter Rows:

Remove duplicate and in case of source, destination, distance are same then keep the first value only

```
17      -- method 1
18 •    SELECT c1.* -- , c2.*
19      FROM city_distance c1
20      LEFT JOIN city_distance c2 ON c1.source = c2.destination
21                                 AND c1.destination = c2.source
22      WHERE c2.distance IS NULL OR
23          c1.distance != c2.distance OR
24          c1.source < c1.destination;
25
```

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

distance	source	destination
100	New Delhi	Panipat
200	Ambala	New Delhi
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80	Tirumala	Tirupati

```sql
-- method 2
WITH cte AS (
    SELECT *,
    CASE WHEN source<destination THEN source ELSE destination END AS city1,
    CASE WHEN source<destination THEN destination ELSE source END AS city2
    FROM city_distance
),
cte2 AS (
    SELECT *,
    COUNT(*) OVER(PARTITION BY city1, city2, distance) AS cunt
    FROM cte
)
SELECT distance, source, destination
FROM cte2
WHERE cunt=1 OR (source < destination);
```

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

distance	source	destination
200	Ambala	New Delhi
150	Bangalore	Mysore
2500	Bhopal	Chennai
250	Mumbai	Pune
100	New Delhi	Panipat
60	Tirupati	Tirumala
80	Tirumala	Tirupati

```sql
42      -- method 3
43  • ⊖ WITH cte AS (
44      │   SELECT *,
45      │   ROW_NUMBER() OVER(ORDER BY (SELECT NULL)) AS rno
46      │   FROM city_distance
47      └ )
48          SELECT c1.*
49          FROM cte c1
50          LEFT JOIN cte c2 ON c1.source = c2.destination AND c1.destination = c2.source
51          WHERE   c2.distance IS NULL OR
52            c1.distance != c2.distance OR
53            c1.rno < c2.rno;
```

distance	source	destination	rno
100	New Delhi	Panipat	1
200	Ambala	New Delhi	2
150	Bangalore	Mysore	3
250	Mumbai	Pune	5
2500	Chennai	Bhopal	7
60	Tirupati	Tirumala	9
80	Tirumala	Tirupati	10

THANK YOU

MAYURI DANDEKAR