SQL TIPS AND TRICKS

PART 23

MERGE Statements

Update, Insert, Delete

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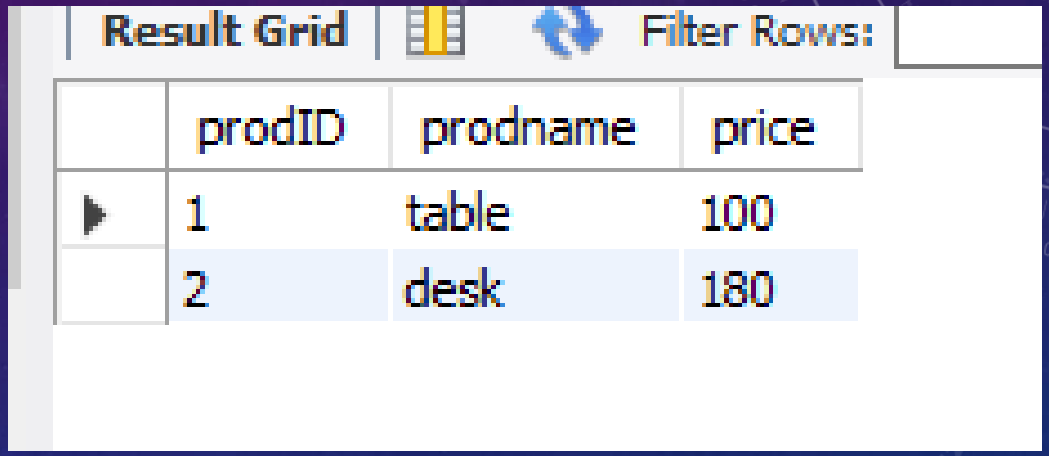
Example--

sourceproduct

Result Grid | Filter Rows:

	prodID	prodname	price
▶	1	table	90
	3	chair	70

targetproduct



Try in other than MYSQL

```
3     -- merge statements - update,insert, delete
4     MERGE targetproduct AS tp
5     USING sourceproduct AS sp
6     ON tp.prodID = sp.prodID
7     WHEN matched THEN UPDATE
8     SET tp.price = sp.price
9     WHEN NOT MATCHED BY TARGET THEN
10    INSERT VALUES(sp.prodID, sp.prodname, sp.price)
11    WHEN NOT MATCHED BY SOURCE THEN
12    DELETE;
13
```

This SQL statement is using the `MERGE` command to synchronize data between two tables (`targetproduct` and `sourceproduct`) based on their `prodID`.

1. `MERGE targetproduct AS tp USING sourceproduct AS sp`:
This sets up the merge operation, with `targetproduct` being the target table and `sourceproduct` being the source table. They are aliased as `tp` and `sp` respectively for easier reference.

2. `ON tp.prodID = sp.prodID`:
This specifies the condition for matching rows between the target and source tables. In this case, it's based on the `prodID` column.

3. `WHEN MATCHED THEN UPDATE SET tp.price = sp.price`:
When a match is found between a row in the target and source tables (based on `prodID`), this clause updates the `price` column in the target table (`targetproduct`) with the `price` value from the source table (`sourceproduct`).

4. `WHEN NOT MATCHED BY TARGET THEN INSERT VALUES(sp.prodID, sp.prodname, sp.price)`:
If a row exists in the source table but not in the target table, this clause inserts a new row into the target table using values from the corresponding row in the source table.

5. `WHEN NOT MATCHED BY SOURCE THEN DELETE`:
If a row exists in the target table but not in the source table, this clause deletes the row from the target table.

MYSQL

```
14 •    set sql_safe_updates=0;
15      -- UPDATE existing records
16 •    UPDATE targetproduct AS tp
17      INNER JOIN sourceproduct AS sp ON tp.prodID = sp.prodID
18      SET tp.price = sp.price;
19
```

Result Grid | Filter Rows:

	prodID	prodname	price
▶	1	table	90
	2	desk	180

```sql
19
20      -- INSERT new records
21      INSERT INTO targetproduct (prodID, prodname, price)
22      SELECT sp.prodID, sp.prodname, sp.price
23      FROM sourceproduct AS sp
24      LEFT JOIN targetproduct AS tp ON sp.prodID = tp.prodID
25      WHERE tp.prodID IS NULL;
26
```

Result Grid | Filter Rows:

prodID	prodname	price
1	table	90
2	desk	180
3	chair	70

```
26
27      -- DELETE records not present in the source
28      DELETE tp FROM targetproduct AS tp
29      LEFT JOIN sourceproduct AS sp ON tp.prodID = sp.prodID
30      WHERE sp.prodID IS NULL;
31
```

Result Grid | Filter Rows:

	prodID	prodname	price
▶	1	table	90
	3	chair	70

THANK YOU

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