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SQL INSERT INTO SELECT Statement

In this tutorial, we'll learn to copy records from one table to another with the help of examples.

The `INSERT INTO SELECT` statement is used to copy records from one table to another existing table. For example,

```
INSERT INTO OldCustomers
SELECT *
FROM Customers;
```

Run Code >>

Here, the SQL command copies all records from the `Customers` table to the `OldCustomers` table.

Note: To run this command,

- Old
- the database must already have a table named `OldCustomers`
 - the column names of the `OldCustomers` table and the `Customers` table must match

If we want to copy data to a new table (rather than copying in an existing table), we should use the `SELECT INTO` statement.

Copy Selected Columns Only

We can also copy only the selected columns from one table to another. For example,

```
INSERT INTO OldCustomers(customer_id, age)
SELECT customer_id, age
FROM Customers;
```

Run Code >>

Here, the SQL command only copies records from the `customer_id` column and `country` column to the `OldCustomers` table.

Note: If there are columns other than `customer_id` and `age` in the `OldCustomers` table, the value of those columns will be `NULL`.

Copy Records Matching a Condition

We can use the `WHERE` clause with `INSERT INTO` to copy those rows that match the specified condition. For example,

```
INSERT INTO OldCustomers
SELECT *
FROM Customers
WHERE country = 'USA';
```

Run Code >>

Here, the SQL command copies rows that are the value of the `country` column as `USA`.

Copy From two Tables to One

We can also copy records from two different tables using the `JOIN` clause with `INSERT INTO SELECT`. For example,

```
INSERT INTO OldCustomerOrders
SELECT Customers.customer_id, Customers.first_name, Orders.amount
FROM Customers
JOIN Orders
ON Customers.customer_id = Orders.customer_id;
```

Run Code >>

Here, the SQL command copies `customer_id` and `first_name` from the `Customers` table and the `amount` from the `Orders` table in an existing table `OldCustomerOrders`. To learn more, visit [SQL JOIN](#).

Note: If records are already present in an existing table, new rows will be appended. Columns in the existing table may throw errors such as `NOT NULL Constraint Failed`, `UNIQUE Constraint Failed` while copying data.

Avoid Duplicates in INSERT INTO SELECT

If there is already a row with a similar value, SQL may throw an error while using the `INSERT INTO SELECT` command.

However, we can skip copying duplicate rows using the `NOT EXISTS` clause. For example,

```
INSERT INTO OldCustomers(customer_id, age)
SELECT customer_id, age
FROM Customers
WHERE NOT EXISTS(
    SELECT customer_id
    FROM OldCustomers
    WHERE OldCustomers.customer_id = Customers.customer_id
);
```

Run Code >>

Here, the SQL command will only copy row to a new table if the `customer_id` does not have the same value.

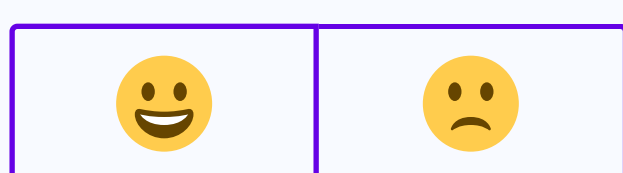
Recommended Readings

- [SQL INSERT INTO Statement](#)

Previous Tutorial:
[SQL Select Into](#)

Next Tutorial: [SQL Delete and Truncate Rows](#) →

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