

DML in MS-SQL Server



Soyeb Ghachi

Technical Trainer | Mentor | SME

Overview



DML in MS-SQL Server

- Insert
- Delete
- Update

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INSERT

Introduction to SQL Server INSERT statement

```
1 INSERT INTO table_name (column_list)
2 VALUES (value_list);
```

```
----INSERT INTO--
```

```
INSERT INTO categories VALUES(1,'external wear')
```

```
INSERT INTO brands VALUES(3,'Axor')
```

```
INSERT INTO CUSTOMERS(FIRST_NAME, LAST_NAME, EMAIL, PIN_CODE)
VALUES('scott', 'tiger', 'scott@gmail.com', 422011)
```

INSERT Multiple Rows

```
1 INSERT INTO table_name (column_list)
2 VALUES
3     (value_list_1),
4     (value_list_2),
5     ...
6     (value_list_n);
```

```
INSERT INTO CUSTOMERS(FIRST_NAME, LAST_NAME, EMAIL, PIN_CODE) VALUES
('adam','jhones','adam@gmail.com',422023),
('marry','jhones','marry@gmail.com',422024)
```

UPDATE

To modify existing data in a table, you use the following UPDATE statement:
with the following syntax:

```
1 UPDATE table_name
2 SET c1 = v1, c2 = v2, ... cn = vn
3 [WHERE condition]
```

```
--UPDATE----
```

```
UPDATE CUSTOMERS SET
```

```
FIRST_NAME='adam123',LAST_NAME='jhones',email='adam123@gmail.com'
```

```
WHERE CUSTOMER_ID=5
```

DELETE

Introduction to SQL Server DELETE statement

To remove one or more rows from a table completely, you use the DELETE statement. The following illustrates its syntax:

```
1 DELETE [ TOP ( expression ) [ PERCENT ] ]  
2 FROM table_name  
3 [WHERE search_condition];
```

-----DELETE-----

DELETE FROM CUSTOMERS

DELETE FROM CUSTOMERS WHERE CUSTOMER_ID=4

DELETE FROM CUSTOMERS WHERE CUSTOMER_ID=5 AND FIRST_NAME='Adam'

DELETE FROM CUSTOMERS WHERE CUSTOMER_ID=5 OR FIRST_NAME='Adam'

DELETE TOP 10 FROM CUSTOMERS

TRUNCATE

You can use the TRUNCATE TABLE statement to remove all rows from a table.

- It's important to note that the TRUNCATE TABLE statement is a DDL (Data Definition Language) statement and not a DML (Data Manipulation Language) statement like DELETE.
- This means that TRUNCATE TABLE is faster than DELETE because it doesn't generate individual delete statements for each row. Instead, it deallocates the data pages and resets the identity counter, effectively removing all rows from the table.

```
TRUNCATE TABLE table_name;
```

```
---TRUNCATE---  
TRUNCATE TABLE Order_Item_Info
```


Differences between Delete and Truncate

DELETE	TRUNCATE
The DELETE statement is a DML (Data Manipulation Language) statement that removes specific rows from a table based on a condition.	The TRUNCATE statement is a DDL (Data Definition Language) statement that removes all rows from a table, essentially resetting the table.
DELETE is a logged operation, meaning that each row deleted is recorded in the transaction log and can be rolled back if necessary. It allows you to selectively delete rows and provides more control over the process.	TRUNCATE is not logged as extensively as DELETE. It deallocates the data pages and resets the identity counter, making it faster and less resource-intensive. However, TRUNCATE cannot be rolled back, as it removes all rows in a single operation.
The DELETE statement honors referential integrity constraints defined on the table. If a row being deleted is referenced by other tables through foreign key constraints, the DELETE operation may fail or require additional actions, such as cascading deletes.	TRUNCATE does not check or enforce referential integrity constraints. Instead, it removes all data from the table, leaving it in an empty state.
When you use the DELETE statement, triggers defined on the table may be fired for each affected row.	TRUNCATE does not activate triggers. Instead, it executes the TRUNCATE operation as a whole, without invoking any trigger logic.

References

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