Removing Data Using T-SQL Statements

Xavier Morera

HELPING DEVELOPERS UNDERSTAND SEARCH & BIG DATA

@xmorera www.xaviermorera.com

Modifying Data Using T-SQL Statements

INSERT

UPDATE

DELETE

Add Data

Modify Data

Remove Data

When using DELETE, make sure you don't need the data

Or create a backup!

DELETE Syntax

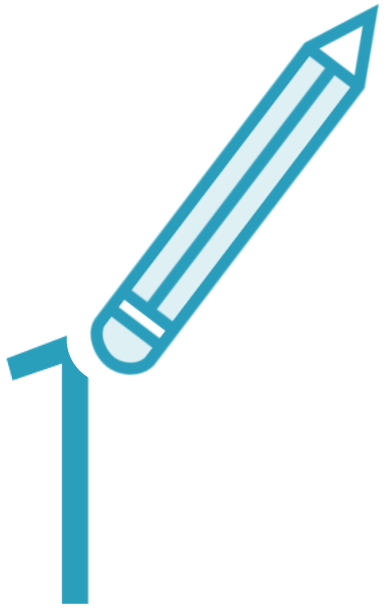
Specify table where records are going to be removed

Which records are going to be deleted

DELETE FROM table_name **WHERE { condition }**

- **rowset_function_limited**
- **WITH**
- **OUTPUT**

Removing a Specific Record with DELETE



Basic and very common scenario

Remove one record from a table

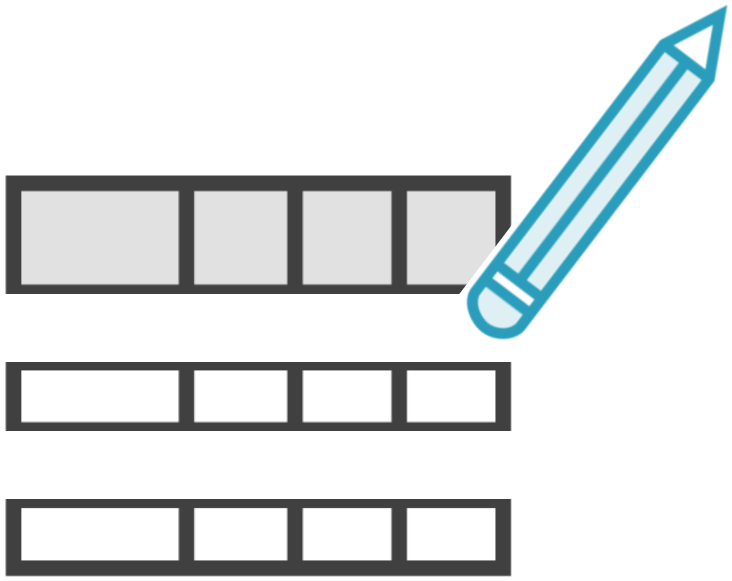
DELETE statement

- And a WHERE
- Narrows down to a simple record

Demo

Removing a Specific Record with DELETE

Removing Multiple Records with DELETE



Removing Multiple Records with DELETE

Another commonly used scenario

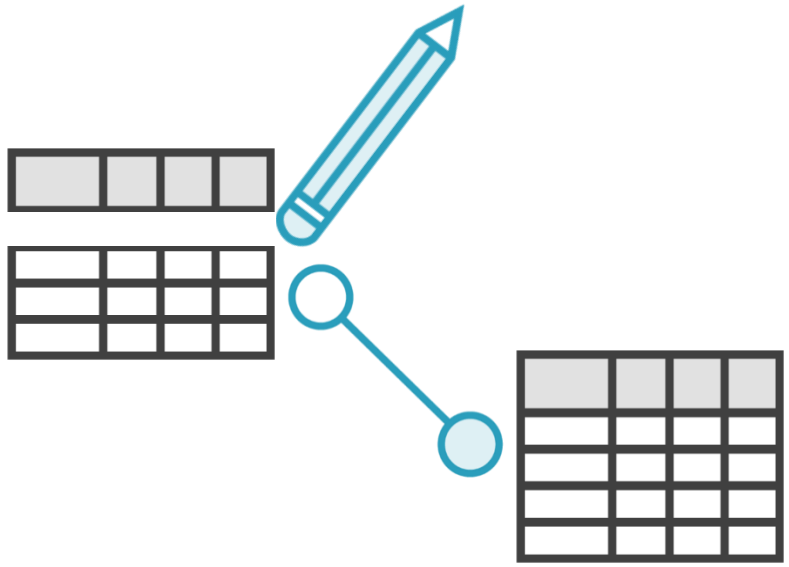
- Extra care required
- Easier to make a mistake
- With unintended consequences

Filter by those records you want to delete

Demo

Removing Multiple Records with DELETE

Using a Condition with Data from Other Tables



DELETE based on a known condition

- Specific id or ids
- By a date range
- Or similar

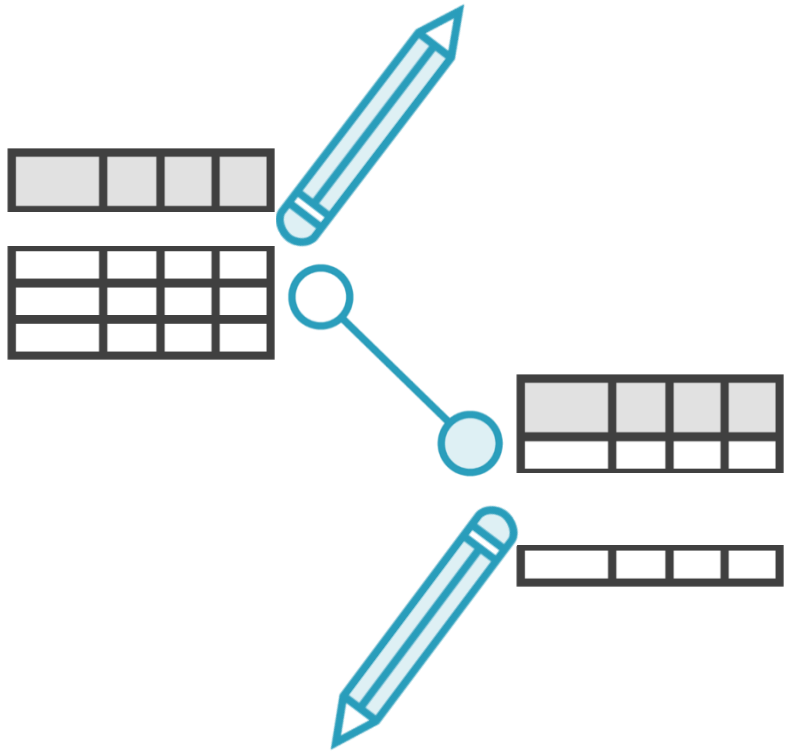
Other cases

- DELETE based on a relative condition
- Like data on another table
- JOIN

Demo

Removing Rows using a Condition Based on Data from Another Table

Constraints and Cascade Deleting of Data



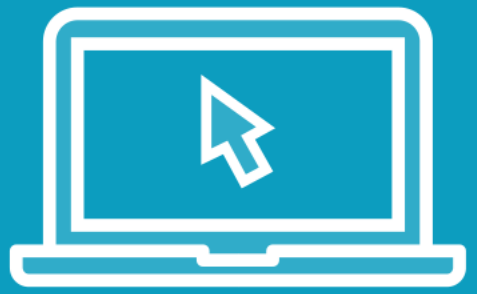
DELETE is not always possible

- You may get an error
- Constraint, like a foreign key

DELETE cascade

- Remove row being referenced
- And automatically removes “child” rows

Demo



Removing Data with Constraints and Cascade Deleting of Data

TRUNCATE Syntax

Specify table where all records are going to be removed

Used to delete the records from one or more partitions

TRUNCATE TABLE table_name WITH (PARTITIONS (partition_number_expression))

DELETE vs. TRUNCATE

DELETE	TRUNCATE
• Slow performance	• Better Performance
• Logs each deletion	• Does not log any deletion
• Can be rolled back	• Can not be rolled back
• Supports WHERE clauses	• Does not support WHERE
• Fires triggers	• No triggers fired
• Does not reset any identity columns	• Resets identity columns
• DML	• DDL

Demo

Clearing Tables Using TRUNCATE and How It Differs from DELETE

Takeaway

Remove records using DELETE

- Be careful!

DELETE

- One record
- Or multiple records
- Based on condition in another table
  - JOIN

Remove data with constraints

- Cascade DELETE

TRUNCATE