# Difference Between DROP, DELETE, and TRUNCATE Commands in SQL

## 1. DELETE Command

Purpose: Removes specific rows (or all rows) from a table.

Syntax:

* DELETE FROM table\_name WHERE condition;

Key Points:

- Can use WHERE clause to delete selected rows.  
- Can be rolled back (if used inside a transaction).  
- Table structure remains after deletion.  
- Slower compared to TRUNCATE because it logs each row deleted.

Example:

* DELETE FROM employees WHERE department = 'HR';

## 2. TRUNCATE Command

Purpose: Removes all rows from a table, but keeps the structure.

Syntax:

* TRUNCATE TABLE table\_name;

Key Points:

- Deletes all rows — no WHERE clause allowed.  
- Much faster than DELETE (minimal logging).  
- Cannot be rolled back in most databases.  
- Resets identity counters (like auto-increment IDs).

Example:

* TRUNCATE TABLE employees;

## 3. DROP Command

Purpose: Deletes the entire table structure and data from the database.

Syntax:

* DROP TABLE table\_name;

Key Points:

- Completely removes the table (and all its data).  
- Cannot be rolled back.  
- You must recreate the table if you need it again.

Example:

* DROP TABLE employees;

## Summary Table

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Command | Deletes Data | Deletes Structure | WHERE Clause | Rollback Possible | Speed | Resets Auto ID |
| DELETE | Yes | No | Yes | Yes | Slow | No |
| TRUNCATE | Yes (All Rows) | No | No | No | Fast | Yes |
| DROP | Yes | Yes | No | No | Fastest | N/A |