

Execute Queries - Guide

SQL Commands for SchemaDesigner

What is a Query?

A query is an SQL command that does one of four things:

SELECT - Gets data from tables

INSERT - Adds new data to tables

UPDATE - Changes existing data

DELETE - Removes data from tables

How to Execute a Query

Step 1: Press Ctrl+Q or click [Query] button

Step 2: Type your SQL command

Step 3: Click [Execute]

Step 4: View results or error message

SELECT - View Data

Get information from your database.

Get All Data

```
SELECT * FROM users;
```

Returns all columns and all rows from users table.

Get Specific Columns

```
SELECT id, username, email FROM users;
```

Returns only id, username, and email (not all columns).

Get Data with Filter

```
SELECT * FROM users WHERE username = 'john';
```

Returns only rows where username equals 'john'.

Get Data with Order

```
SELECT * FROM users ORDER BY created_at DESC;
```

Returns users sorted by created_at (newest first).

Count Records

```
SELECT COUNT(*) FROM users;
```

Returns total number of users in the table.

INSERT - Add Data

Add new rows to your database.

Add Single Row

```
INSERT INTO users (username, email) VALUES ('john', 'john@example.com');
```

Adds one new user. The id is auto-generated automatically.

Add Multiple Rows

```
INSERT INTO users (username, email) VALUES ('john', 'john@example.com'), ('jane', 'jane@example.com'), ('bob', 'bob@example.com');
```

Adds three users at once.

UPDATE - Modify Data

Change existing data in your database.

Update Single Field

```
UPDATE users SET email = 'newemail@example.com' WHERE id = 1;
```

Changes the email of user with id 1.

Update Multiple Fields

```
UPDATE users SET email = 'new@example.com', username = 'newname' WHERE id = 1;
```

Changes both email and username for user 1.

Update All Rows

```
UPDATE users SET is_active = true;
```

Sets `is_active` to `true` for ALL users. WARNING: Without WHERE clause, all rows are updated!

DELETE - Remove Data

Remove rows from your database.

Delete Single Row

```
DELETE FROM users WHERE id = 1;
```

Removes user with id 1.

Delete Multiple Rows

```
DELETE FROM users WHERE created_at < '2020-01-01';
```

Removes all users created before 2020.

Delete All Rows

```
DELETE FROM users;
```

WARNING: Removes ALL users from the table!

Important Safety Rules

Always Use WHERE Clause

- Prevents accidental deletion or update of all data
- Be specific about which rows to modify
- Check your WHERE clause twice before executing

Test on Sample Data First

- Create a test table with a few rows
- Run your query on test data
- Verify the results are correct
- Only then run on real data

Cannot Undo DELETE

- Deleted data is gone forever
- No undo feature exists
- Always backup your data first
- Be very careful with DELETE commands

Backup Before Making Changes

- Export your data to a file
- Save SQL files
- Keep backup copies safe
- Know how to restore if needed

Quick Command Reference

Command	Purpose	Example
SELECT	Get data	SELECT * FROM users;
INSERT	Add data	INSERT INTO users VALUES (name);
UPDATE	Change data	UPDATE users SET email=X WHERE id=1;
DELETE	Remove data	DELETE FROM users WHERE id=1;

Tips for Safe Querying

1. Always use WHERE with UPDATE and DELETE
2. Test SELECT query first to see what data you will affect
3. Make backups before bulk operations
4. Use LIMIT clause to test: SELECT * FROM users LIMIT 1;
5. Double-check WHERE conditions before executing