

SQL



DEAF YOUNG
CODE

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Learning Objectives



- What is SQL and where it is used
- Identify the core SQL commands: **SELECT**, **INSERT**, **UPDATE**, **DELETE**
- Write and run simple SQL statements
- Read and reason about table



Video

SQL



15 SQL IS



What is SQL?

- **Structured Query Language used to communicate with databases.**
- **Common in apps, websites, business analytics, and education.**
- **Data lives in tables (rows/records, columns/fields) and queries return result sets.**



Tools We'll Use



Online SQL editor

<https://www.programiz.com/sql/online-compiler>

1.

Ready to Paste Scripts

Reset Script available for a clean restart.

No installation needed



SQL Basics



BASIC FUNCTIONS

- SELECT <columns> FROM <table>
- WHERE filters rows; combine conditions with AND / OR
- ORDER BY ASC/DESC
- Safe-edit habit: Preview with SELECT → Change → Verify with SELECT



TABLES

- Database • Table • Row/Record • Column/Field
- Primary Key uniquely identifies each row.

Example tables:

- Books(Id, Title, Author, Category, Year, Price)
- Customers(Id, Name, Email, City)



SELECT Examples

List Fiction books:

```
SELECT * FROM Books WHERE Category = 'Fiction';
```

Customers in Vienna by name:

```
SELECT Name, Email FROM Customers WHERE  
City = 'Vienna' ORDER BY Name;
```



Changing Data Safely

- **INSERT INTO <table> (<columns>) VALUES (...);**
- **UPDATE <table> SET <column>=<value> WHERE <condition>**
- **DELETE FROM <table> WHERE <condition>**
- **Always: Preview → Change → Verify**



Data Change Examples

Add a customer:

- `INSERT INTO Customers (Name, Email, City) VALUES ('John Doe', 'john@example.com', 'New York');`

Update a price:

- `UPDATE Books SET Price = 9.99 WHERE Title = 'SQL Basics';`

Remove older books:

- `DELETE FROM Books WHERE Year < 2000;`



Online Setup (Programiz)



1. Open Programiz SQL Online Compiler
2. Paste the Setup Script (creates Books & Customers)
3. Run quick checks (COUNT rows)
4. Use the Reset Script if needed



Query Detective



- Translate 4–5 natural-language prompts into SELECT queries (filters + ORDER BY).
- Compare outputs in pairs and fix mismatches.
- Tip: choose specific columns instead of * when helpful.



Safe Edit

- Preview with SELECT
- One INSERT, one UPDATE, one DELETE
- Verify with SELECT
- Share how WHERE protected the data.



Reflection & Wrap-Up



- What helped you complete tasks?
- Which parts felt most natural?
- What was difficult or unexpected?



Thank you for your attention!



Stay tuned for the next presentation!

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