

SQL QUERY

CHEAT SHEET



Basic SQL Syntax

- `SELECT column1, column2 FROM table_name;`
- `SELECT * FROM table_name;` (Select all columns)

Filtering Rows

- `SELECT column1, column2 FROM table_name WHERE condition;`
- `SELECT * FROM table_name WHERE column1 = 'value';` (Equality)
- `SELECT * FROM table_name WHERE column1 > 10;` (Comparison)
- `SELECT * FROM table_name WHERE column1 BETWEEN 10 AND 20;` (Range)
- `SELECT * FROM table_name WHERE column1 IN ('value1', 'value2');` (Multiple values)
- `SELECT * FROM table_name WHERE column1 IS NULL;` (NULL values)

Sorting Results

- `SELECT * FROM table_name ORDER BY column1 ASC;` (Ascending order)
- `SELECT * FROM table_name ORDER BY column1 DESC;` (Descending order)

Limiting Results

- `SELECT * FROM table_name LIMIT 10;` (Return the first 10 rows)
- `SELECT * FROM table_name LIMIT 5 OFFSET 2;` (Skip first 2 rows, fetch next 5)

Joining Tables

- `SELECT * FROM table1 INNER JOIN table2 ON table1.column = table2.column;` (Inner join)
- `SELECT * FROM table1 LEFT JOIN table2 ON table1.column = table2.column;` (Left join)
- `SELECT * FROM table1 RIGHT JOIN table2 ON table1.column = table2.column;` (Right join)
- `SELECT * FROM table1 LEFT JOIN table2 ON table1.column = table2.column UNION SELECT * FROM table1 RIGHT JOIN table2 ON table1.column = table2.column;` (Full outer join workaround)

Grouping and Aggregating

- `SELECT COUNT(column), AVG(column), SUM(column) FROM table_name;` (Aggregate functions: COUNT, AVG, SUM, MAX, MIN)
- `SELECT column1, COUNT(*) FROM table_name GROUP BY column1;` (Group by unique values in a column)
- `SELECT column1, COUNT(*) FROM table_name GROUP BY column1 HAVING COUNT(*) > 1;` (Having: Filter results after aggregation)

Modifying Data

- `INSERT INTO table_name (column1, column2) VALUES ('value1', 'value2');` (Inserting data)
- `UPDATE table_name SET column1 = 'new_value' WHERE condition;` (Updating data)
- `DELETE FROM table_name WHERE condition;` (Deleting data)

Table Creation and Modification

- `CREATE TABLE table_name (column1 datatype, column2 datatype, PRIMARY KEY (column1));` (Create a new table)
- `ALTER TABLE table_name ADD column3 datatype;` (Add a new column to an existing table)
- `DROP TABLE table_name;` (Drop a table)

Indexing

- `CREATE INDEX index_name ON table_name (column);` (Create an index on a column)
- `CREATE UNIQUE INDEX index_name ON table_name (column);` (Create a unique index)
- `DROP INDEX index_name ON table_name;` (Drop an index)

Constraints

- `CREATE TABLE table_name (column1 datatype NOT NULL, column2 datatype UNIQUE, column3 datatype DEFAULT 'default_value', column4 datatype CHECK (column4 > 0), PRIMARY KEY (column1));`
- `CREATE TABLE orders (order_id INT, customer_id INT, FOREIGN KEY (customer_id) REFERENCES customers(customer_id));` (Foreign key constraint)