



SQL Pocket Dictionary

IMPORTANT SQL TERMS

A

ADD COLUMN

SQL command used to add a new column to an existing database table.

AGGREGATE FUNCTION

Functions like SUM, COUNT, AVG, MAX, and MIN used to perform calculations on groups of rows.

ALTER TABLE

SQL command used to modify an existing database table's structure, such as adding, deleting, or renaming columns.

AND

Logical operator used in a WHERE clause to combine multiple conditions, where all conditions must be true.

ANY/SOME

Operator used in a WHERE clause to compare a value with any value in a list returned by a subquery.

AS

Keyword used to assign an alias to a table or column in a query, providing a shorthand reference to it.

ASC

Keyword used in an ORDER BY clause to sort results in ascending order (from the lowest value to the highest value).

AUTO_INCREMENT

Attribute used to automatically generate a unique value for a column, typically used with integer data types.

AVG

Aggregate function that calculates the average value of a numeric column in a SELECT statement.

ACID PROPERTIES

A set of properties (Atomicity, Consistency, Isolation, Durability) that guarantee the reliability of database transaction

ALIAS

A temporary name given to a table or column in a query for readability and convenience.

B

BEGIN TRANSACTION

SQL command used to start a new transaction.

BETWEEN

Operator used in a WHERE clause to retrieve rows with a value within a specified range, inclusive.

C

CASE

Conditional statement in SQL used to perform different actions based on specified conditions.

CHECK

Constraint used to enforce a condition that must be true for all rows in a table.

COLUMN

A vertical element in a database table that holds data of a specific type.

COMMIT

SQL command used to save all changes made in a transaction.

COMMON TABLE EXPRESSION (CTE)

Temporary result set that can be referenced within a SELECT, INSERT, UPDATE, or DELETE statement.

CONSTRAINT

Rule defined on a column or a group of columns to enforce data integrity.

COUNT

Aggregate function used to count the number of rows or non-null values in a column.

CREATE DATABASE

SQL command used to create a new database.

CREATE TABLE

SQL command used to create a new database table with specified columns and data types.

CROSS JOIN

Join all rows from two or more tables, resulting in a Cartesian product.

D

DELETE

SQL command used to remove one or more rows from a table.

DESC

Keyword used in an ORDER BY clause to sort results in descending order (from the highest value to the lowest value).

DISTINCT

Keyword used in a SELECT statement to retrieve unique values from a column.

DROP DATABASE

SQL command used to delete an existing database.

DROP TABLE

SQL command used to delete an existing table from the database.

DEFAULT

Constraint used to set a default value for a column when no value is specified during an INSERT operation.

DDL (DATA DEFINITION LANGUAGE)

SQL commands used to define and manage database objects like tables, indexes, etc

DML (DATA MANIPULATION LANGUAGE)

SQL commands used to manipulate and interact with data in the database.

E

EXISTS

Operator used in a WHERE clause to check if a subquery returns any rows.

EXCEPT

Keyword used to retrieve rows from the first SELECT statement that are not present in subsequent SELECT statements.

F

FOREIGN KEY

Column that establishes a link between two tables, enforcing referential integrity.

FROM

Keyword used in a SELECT statement to specify the table(s) from which to retrieve data.

FULL OUTER JOIN

Join two or more tables, returning all rows when there is a match in either the left or right table.

G

GROUP BY

Clause used to group rows based on one or more columns in a SELECT statement.

H

HAVING

Clause used to filter the results of a GROUP BY clause.

I

INDEX

Database object used to speed up data retrieval from a table.

INNER JOIN

Join two or more tables, returning only the rows with matching values in both tables.

INSERT INTO

SQL command used to insert new rows into a table.

INTERSECT

Keyword used to retrieve common rows from two or more SELECT statements.

IS NULL

Operator used in a WHERE clause to check if a value is NULL.

J

JOIN

Keyword used to combine rows from two or more tables based on a related column.

L

LEFT JOIN

Join two or more tables, returning all rows from the left table and the matching rows from the right table.

LIKE

Operator used in a WHERE clause to perform pattern matching using wildcard characters.

LIMIT

Clause used to limit the number of rows returned by a SELECT statement.

M

MAX

Aggregate function that retrieves the maximum value from a column in a SELECT statement.

MIN

Aggregate function that retrieves the minimum value from a column in a SELECT statement.

N

NOT

Logical operator used to negate a condition in a WHERE clause.

NOT EXISTS

Operator used in a WHERE clause to check if a subquery returns no rows.

NOT IN

Operator used in a WHERE clause to check if a value does not match any value in a list.

NOT LIKE

Operator used in a WHERE clause to perform pattern matching with the negation of a pattern.

NOT NULL

Constraint used to ensure that a column must have a value during an INSERT operation.

NULL

Special value representing the absence of data in a column.

NORMALIZATION

The process of organizing data in a database to reduce redundancy and improve data integrity.

O

ON

Keyword used to specify the join condition in an SQL join.

OR

Logical operator used in a WHERE clause to combine multiple conditions, where at least one condition must be true.

ORDER BY

Clause used to sort the results of a SELECT statement based on one or more columns.

OUTER JOIN

Keyword used to combine rows from two or more tables, including non-matching rows.

OLAP (ONLINE ANALYTICAL PROCESSING)

A technology that enables interactive analysis of large datasets for business intelligence

OLTP (ONLINE TRANSACTION PROCESSING)

A technology designed for managing and processing transactional workloads.

P

PRIMARY KEY

Column or set of columns that uniquely identifies each row in a table.

R

ROLLBACK

SQL command used to undo all changes made in a transaction.

RIGHT JOIN

Join two or more tables, returning all rows from the right table and the matching rows from the left table.

S

SAVEPOINT

SQL command used to define a point within a transaction to which you can later roll back.

SELECT

SQL command used to retrieve data from a database table.

SET

Keyword used in an UPDATE statement to assign new values to columns.

SUBQUERY

Nested query within another SQL statement, often used as a data source.

SUM

Aggregate function that calculates the sum of values in a numeric column.

STORED PROCEDURE

A pre-compiled collection of SQL statements that can be executed as a single unit.

T

TABLE

A collection of related data organized in rows and columns.

TRANSACTION

A sequence of one or more SQL commands treated as a single unit of work.

TRIGGER

Database object that automatically executes in response to specified events.

TRUNCATE TABLE

A statement used to delete all rows from a table, preserving the table structure.

U

UNION

Combine the results of two or more SELECT statements, removing duplicates.

UNION ALL

Combine the results of two or more SELECT statements, including duplicates.

UNIQUE

Constraint used to ensure that all values in a column are unique.

UPDATE

SQL command used to modify existing rows in a table.

USING

Keyword used to specify the columns for joining in a NATURAL JOIN or INNER JOIN with an explicit join condition.

V

VIEW

Virtual table based on the result of a SELECT statement, allowing for data abstraction and security.

W

WHERE

Clause used to filter rows in a SELECT, UPDATE, or DELETE statement based on specified conditions.

WITH

Keyword used to define a common table expression (CTE) within a SELECT, INSERT, UPDATE, or DELETE statement.