

100+ SQL COMMANDS

FROM A-Z



**WALTER SHIELDS
DATA
ACADEMY**

Essential SQL Commands

A

ALTER TABLE: Modify an existing table's structure

AND: Combines multiple conditions in a WHERE clause

ANY/ALL: Compare a value to a set of values

AS: Rename a column or table with an alias

AVG(): Calculates the average (mean) of a set of values

B

BETWEEN: Select values within a given range

C

CASCADE: Automatically performs a specified action on related records

CASE: Perform conditional logic in SQL queries

CASE WHEN: Conditional expression in SELECT statements

CHARINDEX(): Finds the position of a substring within a string



Essential SQL Commands

02

C

CHECK: Enforces a condition on the values in a column

COALESCE(): Returns the first non-NULL expression in a list

CONCAT: Concatenates two or more strings

CONSTRAINT: Enforces rules for data in a table

COUNT(): Return the number of rows that match a specified condition

CREATE DATABASE: Creates a new database

CREATE TABLE: Creates a new table in the database

CREATE INDEX: Creates an index on a table for faster data retrieval

CROSS JOIN: Combines every row from one table with every row from another table

CROSS APPLY: Performs a correlated subquery against each row of the outer table

CUBE: Generates all possible combinations of grouping sets for aggregation

CURRENT_DATE: Returns the current date

CURRENT_TIME: Returns the current time

CURRENT_TIMESTAMP: Returns the current date and time



Essential SQL Commands

03

D

DATEADD(): Adds a specified time interval to a date

DATEDIFF(): Calculates the difference between two dates

DATEPART(): Extracts a specific part of a date

DEFAULT: Specifies a default value for a column

DELETE: Deletes data from a database

DENSE_RANK(): Assigns a dense rank to each row in the result set

DISTINCT: Returns unique values in the result set

DROP TABLE: Deletes an existing table and its data from the database

DROP INDEX: Deletes an index from a table

E

ELSE: Specifies the result if no condition is true in a CASE statement

END: Ends the CASE statement

EXCEPT: Returns the difference between two result sets



Essential SQL Commands

E

EXISTS: Checks if a subquery returns any results; returns true if it does

EXPLAIN: Provide information on how a SQL statement will be executed

F

FETCH: Limits the number of rows returned by a query

FIRST_VALUE(): Return the first value in an ordered set of values

FOREIGN KEY: Establishes a relationship between tables

FROM: Specify the table(s) to retrieve data from

FULL JOIN: Combines rows including all matching and non-matching rows

G

GETDATE: Returns the current date and time (similar to CURRENT_TIMESTAMP)

GROUP BY: Groups rows with the same values in specified columns for aggregation

GROUPING SETS: Specifies multiple groupings for aggregation



Essential SQL Commands

05

H

HAVING: Filter group rows based on specified conditions

I

IIF: Returns one of two values based on a Boolean expression

IN: Specify multiple values in a WHERE clause

INNER SELECT: Perform a subquery within a SELECT statement

INNER JOIN: Combines rows based on a common column

INSERT: Inserts new data into a database

INTERSECT: Returns the intersection of two result sets

INTO: Specifies a target table for the result set of a SELECT statement

IS NULL: Filters results where the value is empty or undefined

IS NOT NULL: Filters results where the value is not empty or undefined

J

JOIN: Combines rows from two or more tables based on a related column



Essential SQL Commands

06

L

LAG(): Retrieves data from a previous row in the result set

LAST_VALUE(): Return the last value in an ordered set of values

LEAD(): Access data from a subsequent row in the result set

LEFT JOIN: Returns all rows from the left table and matching rows from the right table

LEN(): Returns the length of a string

LIKE: Searches for a specified pattern in a column

LIMIT: Limit the number of rows returned by a query

LOWER(): Converts a string to lowercase

M

MAX(): Returns the largest value from a set of values

MERGE: Performs insert, update, or delete operations on a target table

MIN(): Returns the smallest value from a set of values



Essential SQL Commands

07

N

NO ACTION: Specifies that no action should be taken on related records

NOT: Negates a condition in a WHERE clause

NOT NULL: Ensures that a column cannot contain NULL values

NTILE(): Divide the result set into a specified number of groups

NULLIF(): Returns NULL if expressions are equal, otherwise returns the first expression

O

OFFSET: Skips a specified number of rows before starting to return rows

OR: Specifies multiple alternative conditions in a WHERE clause

ORDER BY: Specify the order of rows within the partition for window functions

OUTER APPLY: Similar to CROSS APPLY, returns rows with no match in the inner table

OVER(): Specify a window of rows for aggregate functions



Essential SQL Commands

08

P

PARTITION BY: Divides the result set into partitions

PERCENTILE_CONT(): Calculate a percentile value using linear interpolation

PERCENTILE_DISC(): Calculate a specific percentile value

PIVOT: Rotates a table-valued expression into multiple columns

PRIMARY KEY: Uniquely identifies each record in a table

R

RANGE: Specifies the window frame based on values

RANK(): Assign a rank to each row in the result set

REPLACE(): Replaces occurrences of a substring within a string

RESTRICT: Restricts the deletion of a referenced record

RIGHT JOIN: Returns all rows from the right table and matching rows from the left

ROLLUP: Generates subtotal values for a hierarchy



Essential SQL Commands

R

ROUND(): Rounds a numeric value to specified decimal places

ROWS: Specifies the window frame for functions

ROW_NUMBER(): Assign a unique sequential integer to each row

S

SELECT: Retrieve data from a database

SET DEFAULT: Sets the default value when a record is deleted

SET NULL: Sets the value to NULL when a record is deleted

SUBSTRING(): Extracts a substring from a string

SUM(): Calculates the sum of values in a column

T

THEN: Specifies the result if a condition is true

TOP: Limits the number of rows returned



Essential SQL Commands

10

T

TRANSACTION: Begin, commit, or rollback a transaction

TRIM(): Removes leading and trailing spaces

TRUNCATE TABLE: Removes all records from a table

U

UNION: Combines the results of multiple SELECT queries

UNPIVOT: Rotates multiple columns into unique rows

UPDATE: Updates existing data in a database

UPPER(): Converts a string to uppercase

W

WHEN: Specifies conditions in a CASE statement

WHERE: Filter rows based on a condition

WITH: Defines a common table expression (CTE)