## 100 SQL COMMANDS



- SELECT retrieves data from a database
- · INSERT inserts new data into a database
- UPDATE updates existing data in a database
- . DELETE deletes data from a database
- CREATE DATABASE creates a new database
- CREATE TABLE creates a new table in a database
- ALTER TABLE modifies an existing table structure
- DROP TABLE deletes a table from a database
- TRUNCATE TABLE removes all records from a table
- CREATE INDEX creates an index on a table
- . DROP INDEX deletes an index from a table
- JOIN combines rows from two or more tables based on a related column
- INNER JOIN returns rows when there is a match in both tables
- LEFT JOIN returns all rows from the left table, and the matched rows from the right table
- RIGHT JOIN returns all rows from the right table, and the matched rows from the left table



- FULL JOIN returns rows when there is a match in one of the tables
- UNION combines the results of two or more SELECT statements
- UNION ALL combines the results of two or more SELECT statements, including duplicates
- GROUP BY groups rows that have the same values into summary rows
- HAVING filters records based on a specified condition
- ORDER BY sorts the result set in ascending or descending order
- COUNT returns the number of rows that satisfy the condition
- . SUM calculates the sum of a set of values
- AVG calculates the average of a set of values
- . MIN returns the smallest value in a set of values
- MAX returns the largest value in a set of values
- . DISTINCT selects unique values from a column
- WHERE filters records based on specified conditions



- AND combines multiple conditions in a WHERE clause
- OR specifies multiple alternative conditions in a WHERE clause
- NOT negates a condition in a WHERE clause
- BETWEEN selects values within a specified range
- IN specifies multiple values for a column
- LIKE selects rows that match a specified pattern
- IS NULL checks for NULL values in a column
- IS NOT NULL checks for non-NULL values in a column
- EXISTS tests for the existence of any record in a subquery
- CASE performs conditional logic in SQL statements
- . WHEN specifies conditions in a CASE statement
- THEN specifies the result if a condition is true in a CASE statement
- ELSE specifies the result if no condition is true in a CASE statement
- . END ends the CASE statement



- PRIMARY KEY uniquely identifies each record in a table
- FOREIGN KEY establishes a relationship between tables
- . CONSTRAINT enforces rules for data in a table
- DEFAULT specifies a default value for a column
- NOT NULL ensures that a column cannot contain NULL values
- UNIQUE ensures that all values in a column are unique
- CHECK enforces a condition on the values in a column
- CASCADE automatically performs a specified action on related records
- SET NULL sets the value of foreign key columns to NULL when a referenced record is deleted
- SET DEFAULT sets the value of foreign key columns to their default value when a referenced record is deleted
- NO ACTION specifies that no action should be taken on related records when a referenced record is deleted



- RESTRICT restricts the deletion of a referenced record if there are related records
- CASE WHEN conditional expression in SELECT statements
- WITH defines a common table expression (CTE)
- INTO specifies a target table for the result set of a SELECT statement
- . TOP limits the number of rows returned by a query
- LIMIT limits the number of rows returned by a query (used in some SQL dialects)
- OFFSET specifies the number of rows to skip before starting to return rows
- FETCH retrieves rows from a result set one at a time
- ROW\_NUMBER() assigns a unique sequential integer to each row in a result set
- RANK() assigns a unique rank to each row in a result set, with gaps in the ranking sequence possible
- DENSE\_RANK() assigns a unique rank to each row in a result set, with no gaps in the ranking sequence

- NTILE() divides the result set into a specified number of equally sized groups
- LEAD() retrieves the value from the next row in a result set
- LAG() retrieves the value from the previous row in a result set
- PARTITION BY divides the result set into partitions to which the window function is applied separately
- ORDER BY specifies the order of rows within each partition for window functions
- ROWS specifies the window frame for window functions
- RANGE specifies the window frame based on values rather than rows for window functions
- CURRENT\_TIMESTAMP returns the current date and time
- . CURRENT\_DATE returns the current date
- . CURRENT\_TIME returns the current time
- . DATEADD adds a specified time interval to a date
- DATEDIFF calculates the difference between two dates



- . DATEPART extracts a specific part of a date
- GETDATE returns the current date and time (similar to CURRENT\_TIMESTAMP)
- GROUPING SETS specifies multiple groupings for aggregation
- CUBE generates all possible combinations of grouping sets for aggregation
- ROLLUP generates subtotal values for a hierarchy of values
- INTERSECT returns the intersection of two result sets
- EXCEPT returns the difference between two result sets
- MERGE performs insert, update, or delete operations on a target table based on the results of a join with a source table
- CROSS APPLY performs a correlated subquery against each row of the outer table
- OUTER APPLY similar to CROSS APPLY, but also returns rows from the outer table that have no matching rows in the inner table
- PIVOT rotates a table-valued expression by turning the unique values from one column into multiple columns in the output

- UNPIVOT rotates a table-valued expression by turning multiple columns into unique rows in the output
- COALESCE returns the first non-NULL expression in a list
- NULLIF returns NULL if the two specified expressions are equal, otherwise returns the first expression
- IIF returns one of two values based on a Boolean expression
- · CONCAT concatenates two or more strings
- SUBSTRING extracts a substring from a string
- CHARINDEX finds the position of a substring within a string
- REPLACE replaces all occurrences of a specified substring within a string with another substring
- . LEN returns the length of a string
- UPPER converts a string to uppercase
- LOWER converts a string to lowercase
- TRIM removes leading and trailing spaces from a string
- ROUND rounds a numeric value to a specified number of decimal places