

# **SQL COMMANDS**



**With a simple explanation.**

1. **SELECT** - retrieves data from a database
2. **INSERT** - inserts new data into a database
3. **UPDATE** - updates existing data in a database
4. **DELETE** - deletes data from a database
5. **CREATE DATABASE** - creates a new database
6. **CREATE TABLE** - creates a new table in a database
7. **ALTER TABLE** - modifies an existing table structure
8. **DROP TABLE** - deletes a table from a database
9. **TRUNCATE TABLE** - removes all records from a table
10. **CREATE INDEX** - creates an index on a table
11. **DROP INDEX** - deletes an index from a table
12. **JOIN** - combines rows from two or more tables based on a related column
13. **INNER JOIN** - returns rows when there is a match in both tables
14. **LEFT JOIN** - returns all rows from the left table, and the matched rows from the right table
15. **RIGHT JOIN** - returns all rows from the right table, and the matched rows from the left table
16. **FULL JOIN** - returns rows when there is a match in one of the tables
17. **UNION** - combines the results of two or more SELECT statements
18. **UNION ALL** - combines the results of two or more SELECT statements, including duplicates
19. **GROUP BY** - groups rows that have the same values into summary rows
20. **HAVING** - filters records based on a specified condition
21. **ORDER BY** - sorts the result set in ascending or descending order
22. **COUNT** - returns the number of rows that satisfy the condition
23. **SUM** - calculates the sum of a set of values
24. **AVG** - calculates the average of a set of values
25. **MIN** - returns the smallest value in a set of values
26. **MAX** - returns the largest value in a set of values
27. **DISTINCT** - selects unique values from a column
28. **WHERE** - filters records based on specified conditions

29. **AND** - combines multiple conditions in a WHERE clause
30. **OR** - specifies multiple alternative conditions in a WHERE clause
31. **NOT** - negates a condition in a WHERE clause
32. **BETWEEN** - selects values within a specified range
33. **IN** - specifies multiple values for a column
34. **LIKE** - selects rows that match a specified pattern
35. **IS NULL** - checks for NULL values in a column
36. **IS NOT NULL** - checks for non-NUL values in a column
37. **EXISTS** - tests for the existence of any record in a subquery
38. **CASE** - performs conditional logic in SQL statements
39. **WHEN** -specifies conditions in a CASE statement
40. **THEN** - specifies the result if a condition is true in a CASE statement
41. **ELSE** - specifies the result if no condition is true in a CASE statement
42. **END** - ends the CASE statement
43. **PRIMARY KEY** - uniquely identifies each record in a table
44. **FOREIGN KEY** - establishes a relationship between tables
45. **CONSTRAINT** - enforces rules for data in a table
46. **DEFAULT** -specifies a default value for a column
47. **NOT NULL** - ensures that a column cannot contain NULL values
48. **UNIQUE** - ensures that all values in a column are unique
49. **CHECK** - enforces a condition on the values in a column
50. **CASCADE** - automatically performs a specified action on related records
51. **SET NULL** - sets the value of foreign key columns to NULL when a referenced record is deleted
52. **SET DEFAULT** - sets the value of foreign key columns to their default value when a referenced record is deleted
53. **NO ACTION** - specifies that no action should be taken on related records when a referenced record is deleted
54. **RESTRICT** - restricts the deletion of a referenced record if there are related records
55. **CASE WHEN** -conditional expression in SELECT statements

56. **WITH** - defines a common table expression (CTE)
57. **INTO** - specifies a target table for the result set of a SELECT statement
58. **TOP** - limits the number of rows returned by a query
59. **LIMIT** - limits the number of rows returned by a query (used in some SQL dialects)
60. **OFFSET** - specifies the number of rows to skip before starting to return rows
61. **FETCH** - retrieves rows from a result set one at a time
62. **ROW\_NUMBER()** - assigns a unique sequential integer to each row in a result set
63. **RANK()** - assigns a unique rank to each row in a result set, with gaps in the ranking sequence possible
64. **DENSE\_RANK()** - assigns a unique rank to each row in a result set, with no gaps in the ranking sequence
65. **NTILE()** - divides the result set into a specified number of equally sized groups
66. **LEAD()** - retrieves the value from the next row in a result set
67. **LAG()** - retrieves the value from the previous row in a result set
68. **PARTITION BY** - divides the result set into partitions to which the window function is applied separately
69. **ORDER BY** - specifies the order of rows within each partition for window functions
70. **ROWS** - specifies the window frame for window functions
71. **RANGE** - specifies the window frame based on values rather than rows for window functions
72. **CURRENT\_TIMESTAMP** - returns the current date and time
73. **CURRENT\_DATE** - returns the current date
74. **CURRENT\_TIME** - returns the current time
75. **DATEADD** - adds a specified time interval to a date
76. **DATEDIFF** - calculates the difference between two dates
77. **DATEPART** - extracts a specific part of a date

78. **GETDATE** - returns the current date and time (similar to CURRENT\_TIMESTAMP)
79. **GROUPING SETS** - specifies multiple groupings for aggregation
80. **CUBE** - generates all possible combinations of grouping sets for aggregation
81. **ROLLUP** - generates subtotal values for a hierarchy of values
82. **INTERSECT** - returns the intersection of two result sets
83. **EXCEPT** - returns the difference between two result sets
84. **MERGE** - performs insert, update, or delete operations on a target table based on the results of a join with a source table
85. **CROSS APPLY** - performs a correlated subquery against each row of the outer table
86. **OUTER APPLY** - similar to CROSS APPLY, but also returns rows from the outer table that have no matching rows in the inner table
87. **PIVOT** - rotates a table-valued expression by turning the unique values from one column into multiple columns in the output
88. **UNPIVOT** - rotates a table-valued expression by turning multiple columns into unique rows in the output
89. **COALESCE** - returns the first non-NULL expression in a list
90. **NULLIF** - returns NULL if the two specified expressions are equal, otherwise returns the first expression
91. **IIF** - returns one of two values based on a Boolean expression
92. **CONCAT** - concatenates two or more strings
93. **SUBSTRING** - extracts a substring from a string
94. **CHARINDEX** - finds the position of a substring within a string
95. **REPLACE** - replaces all occurrences of a specified substring within a string with another substring
96. **LEN** - returns the length of a string
97. **UPPER** - converts a string to uppercase
98. **LOWER** - converts a string to lowercase
99. **TRIM** - removes leading and trailing spaces from a string
100. **ROUND** - rounds a numeric value to a specified number of decimal places.

**Remember that practice is the key here. It will be more clear and perfect with continuous practice.**