

# SQL Cheat Sheet: FUNCTIONS and Implicit JOIN



Skills  
Network

| Command             | Syntax  | Description   | Example   |
|---------------------|---|---|---|
| COUNT               | <pre>SELECT COUNT(column_name) FROM<br/>table_name WHERE condition;</pre>   | <b>COUNT</b> function returns the number of rows that matches a specified criterion.  | <pre>SELECT COUNT(dep_id) FROM employees;</pre>   |
| AVG                 | <pre>SELECT AVG(column_name) FROM<br/>table_name WHERE condition;</pre>   | <b>AVG</b> function returns the average value of a numeric column.  | <pre>SELECT AVG(salary) FROM employees;</pre>   |
| SUM                 | <pre>SELECT SUM(column_name) FROM<br/>table_name WHERE condition;</pre>   | <b>SUM</b> function returns the total sum of a numeric column.  | <pre>SELECT SUM(salary) FROM employees;</pre>   |
| MIN                 | <pre>SELECT MIN(column_name) FROM<br/>table_name WHERE condition;</pre>   | <b>MIN</b> function returns the smallest value of the SELECTed column.  | <pre>SELECT MIN(salary) FROM employees;</pre>   |
| MAX                 | <pre>SELECT MAX(column_name) FROM<br/>table_name WHERE condition;</pre>   | <b>MAX</b> function returns the largest value of the SELECTed column.   | <pre>SELECT MAX(salary) FROM employees;</pre>   |
| ROUND               | <pre>SELECT ROUND(2number, decimals,<br/>operation) AS RoundValue;</pre>  | <b>ROUND</b> function rounds a number to a specified number of decimal places.  | <pre>SELECT ROUND(salary) FROM employees;</pre>   |
| LENGTH              | <pre>SELECT LENGTH(column_name) FROM<br/>table;</pre>   | <b>LENGTH</b> function returns the length of a string (in bytes).   | <pre>SELECT LENGTH(f_name) FROM<br/>employees;</pre>  |
| UCASE               | <pre>SELECT UCASE(column_name) FROM<br/>table;</pre>  | <b>UCASE</b> function that displays the column name in each table in uppercase.   | <pre>SELECT UCASE(f_name) FROM employees;</pre>   |
| DISTINCT            | <pre>SELECT DISTINCT(column_name) FROM<br/>table;</pre>   | <b>DISTINCT</b> function is used to display data without duplicates.  | <pre>SELECT DISTINCT(UCASE(f_name)) FROM<br/>employees;</pre>   |
| DAY                 | <pre>SELECT DAY(column_name) FROM table</pre>   | <b>DAY</b> function returns the day of the month for a given date   | <pre>SELECT DAY(b_date) FROM employees<br/>where emp_id = 'E1002';</pre>  |
| CURRENT DATE        | <pre>SELECT (CURRENT DATE - COLUMN) FROM<br/>table;</pre>   | <b>CURRENT DATE</b> is used to display the current date. This can be subtracted from the previous date to get the difference.   | <pre>SELECT YEAR(CURRENT DATE - b_date)<br/>As AGE, CURRENT_DATE, b_date FROM<br/>employees;</pre>  |
| Subquery            | <pre>SELECT column_name [, column_name ]<br/>FROM table1 [, table2 ] WHERE<br/>column_name OPERATOR (SELECT<br/>column_name [, column_name ] FROM<br/>table1 [, table2 ] [WHERE])</pre> | <b>Subquery</b> is a query within another SQL query and embedded within the WHERE clause.<br><br>A subquery is used to return data that will be used in the main query as a condition to further restrict the data to be retrieved. | <pre>SELECT emp_id, fname, lname, salary<br/>FROM employees where salary &lt;<br/>(SELECT AVG(salary) FROM employees);<br/><br/>SELECT * FROM ( SELECT emp_id,<br/>f_name, l_name, dep_id FROM<br/>employees) AS emp4all;<br/><br/>SELECT * FROM employees WHERE job_id<br/>IN (SELECT job_id FROM jobs);</pre> |
| Implicit Inner Join | <pre>SELECT column_name(s) FROM table1,<br/>table2 WHERE table1.column_name =<br/>table2.column_name;</pre>   | <b>Implicit Inner Join</b> combines the two or more records but displays only matching values in both tables. Inner join applies only the specified columns.  | <pre>SELECT * FROM employees, jobs where<br/>employees.job_id = jobs.job_id;</pre>  |

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Implicit  
Cross Join

```
SELECT column_name(s) FROM table1,  
table2;
```

Implicit Cross Join defines as a Cartesian product where the number of rows in the first table multiplied by the number of rows in the second table..

```
SELECT * FROM employees, jobs;
```

## Author(s)

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## Changelog

| Date       | Version | Changed by    | Change Description |
|------------|---------|---------------|--------------------|
| 2021-07-28 | 1.0     | Lakshmi Holla | Initial Version    |