SQL Cheat Sheet: FUNCTIONS and Implicit JOIN

Command	Syntax (MySQL/DB2)	Description	Example (MySQL/DB2)
COUNT	SELECT COUNT(column_name) FROM table_name WHERE condition;	COUNT function returns the number of rows that match a specified criterion.	SELECT COUNT(dep_id) FROM employees;
AVG	SELECT AVG(column_name) FROM table_name WHERE condition;	AVG function returns the average value of a numeric column.	SELECT AVG(salary) FROM employees;
SUM	SELECT SUM(column_name) FROM table_name WHERE condition;	SUM function returns the total sum of a numeric column.	SELECT SUM(salary) FROM employees;
MIN	SELECT MIN(column_name) FROM table_name WHERE condition;	MIN function returns the smallest value of the SELECTED column.	SELECT MIN(salary) FROM employees;
MAX	SELECT MAX(column_name) FROM table_name WHERE condition;	MAX function returns the largest value of the SELECTED column.	SELECT MAX(salary) FROM employees;
ROUND	SELECT ROUND(number, decimals, operation) AS RoundValue;	ROUND function rounds a number to a specified number of decimal places.	SELECT ROUND(salary) FROM employees;
LENGTH	SELECT LENGTH(column_name) FROM table;	LENGTH function returns the length of a string (in bytes).	SELECT LENGTH(f_name) FROM employees;
UCASE	SELECT UCASE(column_name) FROM table;	UCASE function displays the column name in each table in uppercase.	SELECT UCASE(f_name) FROM employees;
LCASE	SELECT LCASE(column_name) FROM table;	LCASE function displays the column name in each table in lowercase.	SELECT LCASE(f_name) FROM employees;
DISTINCT	SELECT DISTINCT column_name FROM table;	DISTINCT function is used to display data without duplicates.	SELECT DISTINCT UCASE(f_name) FROM employees;
DAY	SELECT DAY(column_name) FROM table	DAY function returns the day of the month for a given date.	SELECT DAY(b_date) FROM employees where emp_id = '31002';
CURRENT_DATE	SELECT CURRENT_DATE;	CURRENT_DATE is used to display the current date.	SELECT CURRENT_DATE;
DATEDIFF()	SELECT DATEDIFF(date1, date2);	DATEDIFF() is used to calculate the difference between two dates or time stamps. The default value generated is the difference in number of days.	SELECT DATEDIFF(CURRENT_DATE, date_column) FROM table;
FROM_DAYS()	SELECT FROM_DAYS(number_of_days);	FROM_DAYS() is used to convert a given number of days to YYYY-MM-DD format.	SELECT FROM_DAYS(DATEDIFF(CURRENT_DATE, date_column)) FROM table;
DATE_ADD()	SELECT DATE_ADD(date, INTERVAL n type);	DATE_ADD() is used to calculate the date after lapse of mentioned number of units of date type, i.e. if n=3 and type=DAY, the result is a date 3 days after what is mentioned in date column. The type variable can also be months or years.	SELECT DATE_ADD(date, INTERVAL 3 DAY);
DATE_SUB()	SELECT DATE_SUB(date, INTERVAL n type);	DATE_SUB() is used to calculate the date prior to the record date by mentioned number of units of date type, i.e. if n=3 and type=DAY, the result is a date 3 days before what is mentioned in date column. The type variable can also be months or years.	SELECT DATE_SUB(date, INTERVAL 3 DAY);
Subquery	SELECT column_name [, column_name] FROM table1 [, table2] WHERE column_name OPERATOR (SELECT column_name [, column_name] FROM table1 [, table2] [WHERE])	Subquery is a query within another SQL query and embedded within the WHERE clause. 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.	SELECT emp_id, f_name, l_name, salary FROM employees where salary < (SELECT AVG(salary) FROM employees); SELECT * FROM (SELECT emp_id, f_name, l_name, dep_id FROM employees) AS emp4all;
Implicit Inner Join	SELECT column_name(s) FROM table1, table2 WHERE table1.column_name = table2.column_name;	Implicit Inner Join combines two or more records but displays only matching values in both tables. Inner join applies only the specified columns.	SELECT * FROM employees WHERE job_id IN (SELECT job_ident FROM jobs);
Implicit Cross Join	SELECT column_name(s) FROM table1, table2;	Implicit Cross Join is defined as a Cartesian product where the number of rows in the first table is multiplied by the number of rows in the second table.	SELECT * FROM employees, jobs where employees.job_id = jobs.job_ident; SELECT * FROM employees, jobs;

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Changelog

Date	Version	Changed by	Change Description
2023-10-03	1.3	Steve Hord	QA pass with edits
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