

SQL Date Manipulation Cheat Sheet

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1. Extracting Parts of a Date:
SELECT YEAR(date_column) AS year,
      MONTH(date_column) AS month,
      DAY(date_column) AS day
FROM table_name;

SELECT HOUR(datetime_column) AS hour,
      MINUTE(datetime_column) AS minute,
      SECOND(datetime_column) AS second
FROM table_name;

SELECT WEEK(date_column) AS week_number FROM table_name;
SELECT DAYOFWEEK(date_column) AS day_of_week FROM table_name;
SELECT DAYOFYEAR(date_column) AS day_of_year FROM table_name;
SELECT QUARTER(date_column) AS quarter FROM table_name;

2. Adding/Subtracting Dates:
SELECT DATE_ADD(date_column, INTERVAL 5 DAY) AS future_date
FROM table_name;
SELECT DATE_SUB(date_column, INTERVAL 5 DAY) AS past_date FROM
table_name;
SELECT DATE_ADD(date_column, INTERVAL 2 MONTH) AS future_date
FROM table_name;
SELECT DATE_ADD(datetime_column, INTERVAL 3 HOUR) AS
future_time FROM table_name;

3. Comparing Dates:
SELECT * FROM table_name WHERE date_column < CURDATE(); --
past
SELECT * FROM table_name WHERE date_column > CURDATE(); --
future
SELECT * FROM table_name WHERE date_column = CURDATE(); --
today
SELECT * FROM table_name
WHERE date_column BETWEEN '2024-01-01' AND '2024-12-31'; --
date range

4. Formatting Dates:
SELECT DATE_FORMAT(date_column, '%Y-%m-%d') AS formatted_date
FROM table_name;
-- Example: '%d/%m/%Y %H:%i:%s' would return '02/10/2024
14:30:45'
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5. Calculating the Difference Between Dates:
SELECT DATEDIFF('2024-10-10', '2024-01-01') AS days_difference
;
SELECT TIMESTAMPDIFF(MONTH, '2023-01-01', '2024-10-10') AS
months_difference;
SELECT TIMESTAMPDIFF(HOUR, '2024-01-01 08:00:00', '2024-01-01
18:00:00') AS hours_difference;

6. Getting the Current Date and Time:
SELECT CURDATE() AS current_date;
SELECT CURTIME() AS current_time;
SELECT NOW() AS current_datetime;

7. Working with Weekdays and Weekends:
SELECT * FROM table_name WHERE DAYOFWEEK(date_column) IN (1,
7); -- weekend
SELECT * FROM table_name WHERE DAYOFWEEK(date_column) BETWEEN
2 AND 6; -- weekday

8. Truncating Dates:
SELECT DATE_FORMAT(date_column, '%Y-%m-01') AS first_of_month
FROM table_name;
SELECT DATE(datetime_column) AS truncated_date FROM table_name
;

9. Date Arithmetic with INTERVAL:
SELECT DATE_ADD(date_column, INTERVAL 2 WEEK) AS future_date
FROM table_name;
SELECT LAST_DAY(date_column) AS last_day_of_month FROM
table_name;
SELECT MAKEDATE(YEAR(CURDATE()), 1) AS first_day_of_year;

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