**1. Date and Time Conversion**

-- Convert transaction\_date to proper date format

UPDATE coffee\_shop\_sales

SET transaction\_date = STR\_TO\_DATE(transaction\_date, '%d-%m-%Y');

-- Change data type of transaction\_date to DATE

ALTER TABLE coffee\_shop\_sales

MODIFY transaction\_date DATE;

-- Convert transaction\_time to proper time format

UPDATE coffee\_shop\_sales

SET transaction\_time = STR\_TO\_DATE(transaction\_time, '%H:%i:%s');

-- Change data type of transaction\_time to TIME

ALTER TABLE coffee\_shop\_sales

MODIFY transaction\_time TIME;

**2. Total Sales Calculation**

-- Calculate total sales for May

SELECT ROUND(SUM(unit\_price \* transaction\_qty), 2) AS Total\_Sales

FROM coffee\_shop\_sales

WHERE MONTH(transaction\_date) = 5;

**3. Month-over-Month Growth Calculation**

-- Calculate MoM growth for total sales from April to May

SELECT

MONTH(transaction\_date) AS month,

ROUND(SUM(unit\_price \* transaction\_qty), 2) AS total\_sales,

ROUND((SUM(unit\_price \* transaction\_qty) - LAG(SUM(unit\_price \* transaction\_qty), 1)

OVER (ORDER BY MONTH(transaction\_date))) /

LAG(SUM(unit\_price \* transaction\_qty), 1)

OVER (ORDER BY MONTH(transaction\_date)) \* 100, 2) AS mom\_growth\_percent

FROM

coffee\_shop\_sales

WHERE

MONTH(transaction\_date) IN (4, 5)

GROUP BY

MONTH(transaction\_date)

ORDER BY

MONTH(transaction\_date);

**4. Total Orders Calculation**

-- Calculate total orders for May

SELECT COUNT(transaction\_id) AS Total\_Orders

FROM coffee\_shop\_sales

WHERE MONTH(transaction\_date) = 5;

**5. Daily Sales Comparison**

-- Compare daily sales to the average sales for May

SELECT

DAY(transaction\_date) AS day\_of\_month,

ROUND(SUM(unit\_price \* transaction\_qty), 2) AS total\_sales,

CASE

WHEN SUM(unit\_price \* transaction\_qty) > AVG(SUM(unit\_price \* transaction\_qty)) OVER () THEN 'Above Average'

WHEN SUM(unit\_price \* transaction\_qty) < AVG(SUM(unit\_price \* transaction\_qty)) OVER () THEN 'Below Average'

ELSE 'Average'

END AS sales\_status

FROM

coffee\_shop\_sales

WHERE

MONTH(transaction\_date) = 5

GROUP BY

DAY(transaction\_date)

ORDER BY

DAY(transaction\_date);

**6. Sales by Location**

-- Sales grouped by store location for May

SELECT

store\_location,

ROUND(SUM(unit\_price \* transaction\_qty), 2) AS Total\_Sales

FROM

coffee\_shop\_sales

WHERE

MONTH(transaction\_date) = 5

GROUP BY

store\_location

ORDER BY

Total\_Sales DESC;

**7. Sales by Product Category**

-- Calculate total sales by product category for May

SELECT

product\_category,

ROUND(SUM(unit\_price \* transaction\_qty), 2) AS Total\_Sales

FROM

coffee\_shop\_sales

WHERE

MONTH(transaction\_date) = 5

GROUP BY

product\_category

ORDER BY

Total\_Sales DESC;

**8. Sales by Day and Hour**

-- Calculate sales for a specific day and hour in May

SELECT

ROUND(SUM(unit\_price \* transaction\_qty), 2) AS Total\_Sales,

SUM(transaction\_qty) AS Total\_Quantity,

COUNT(\*) AS Total\_Orders

FROM

coffee\_shop\_sales

WHERE

DAYOFWEEK(transaction\_date) = 3 -- Tuesday

AND HOUR(transaction\_time) = 8 -- 8 AM

AND MONTH(transaction\_date) = 5; -- May