select \* from coffee\_shop\_sales;

-- CONVERT DATE (transaction\_date) COLUMN TO PROPER DATE FORMAT

UPDATE coffee\_shop\_sales

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

-- ALTER DATE (transaction\_date) COLUMN TO DATE DATA TYPE

ALTER TABLE coffee\_shop\_sales

MODIFY COLUMN transaction\_date DATE;

-- CONVERT TIME (transaction\_time) COLUMN TO PROPER DATE FORMAT

UPDATE coffee\_shop\_sales

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

-- ALTER TIME (transaction\_time) COLUMN TO DATE DATA TYPE

ALTER TABLE coffee\_shop\_sales

MODIFY COLUMN transaction\_time TIME;

-- DATA TYPES OF DIFFERENT COLUMNS

DESCRIBE coffee\_shop\_sales;

-- CHANGE COLUMN NAME `ï»¿transaction\_id` to transaction\_id

ALTER TABLE coffee\_shop\_sales

CHANGE COLUMN `ï»¿transaction\_id` transaction\_id INT;

select \* from coffee\_shop\_sales;

-- TOTAL SALES

select concat((round(sum(unit\_price \* transaction\_qty)))/1000, "k") as total\_sales

from coffee\_shop\_sales

where

month (transaction\_date) = 3; -- March month

-- selected month / CM (current month) May=5 -- PM (Privious Month) April=4

-- TOTAL SALES KPI - MOM DIFFERENCE AND MOM GROWTH

select

Month(transaction\_Date) as month, -- Number of Month

round(sum(unit\_price \* transaction\_qty)) as totla\_sales, -- total sales column

(sum(unit\_price \* transaction\_qty) - lag(sum(unit\_price \* transaction\_qty), 1) -- month sales difference

over(order by month(transaction\_date))) / lag(sum(unit\_price \* transaction\_qty), 1) -- division by previous month sales

over(order by month(transaction\_date)) \* 100 as mom\_increase\_percentage -- percentage

from

coffee\_shop\_sales

where

month(transaction\_date) in (4, 5) -- for months of April and May

group by

month(transaction\_date)

Order by

month(transaction\_date);

select \* from coffee\_shop\_sales;

select count(transaction\_id) as total\_orders

from coffee\_shop\_sales

where

month(transaction\_date) = 5; -- may month

select \* from coffee\_shop\_sales;

-- TOTAL ORDERS KPI - MOM DIFFERENCE AND MOM GROWTH

select

Month(transaction\_date) AS Month,

round(count(transaction\_date)) as Total\_orders,

(COUNT(transaction\_id) - LAG(COUNT(transaction\_id), 1)

OVER (ORDER BY MONTH(transaction\_date))) / LAG(COUNT(transaction\_id), 1)

OVER (ORDER BY MONTH(transaction\_date)) \* 100 AS mom\_increase\_percentage

FROM

coffee\_shop\_sales

Where

Month(transaction\_date) IN(4,5) -- for Apirl and May

Group by

Month(transaction\_date)

order by

Month(transaction\_date);

select \* from coffee\_shop\_sales;

-- TOTAL QUANTITY SOLD

select sum(transaction\_qty) AS Total\_qty\_Sold

from coffee\_shop\_sales

where

month(transaction\_date) = 5; -- May Month

-- TOTAL QUANTITY SOLD KPI - MOM DIFFERENCE AND MOM GROWTH

select

month(transaction\_date) as Month,

round(sum(transaction\_qty)) as total\_qty\_sold,

(sum(transaction\_qty) - lag(sum(transaction\_qty),1)

over(order by month(transaction\_date))) / lag(sum(transaction\_qty),1)

over(order by month(transaction\_date))\*100 as mon\_increase\_percentage

from

coffee\_shop\_sales

where

month(transaction\_date) in (4,5) -- for April and may

group by

Month(transaction\_date)

order by

month(transaction\_date);

select \* from coffee\_shop\_sales;

-- CALENDAR TABLE – DAILY SALES, QUANTITY and TOTAL ORDERS

select

concat(round(sum(unit\_price \* transaction\_qty)/ 1000, 1), 'k') as Total\_sales,

concat(round(sum(transaction\_qty)/ 1000, 1), 'k') as Total\_qty\_sold,

concat(round(count(transaction\_id)/ 1000, 1), 'k') as Total\_orders

from coffee\_shop\_sales

where

transaction\_date = '2023-03-27';

select \* from coffee\_shop\_sales;

-- SALES BY WEEKDAY / WEEKEND

-- weekends sat/sum

-- weekdays mon to fri

-- Sun = 1

-- Mon = 2

-- .

-- .

-- Sat = 7

select

case

when dayofweek(transaction\_date) in (1,7) then 'Weekends'

else 'Weekdays'

end as Date\_type,

concat(round(sum(unit\_price \* transaction\_qty)/1000, 1), 'k') as Total\_sales

from coffee\_shop\_sales

where month(transaction\_date) = 5 -- may month

group by

case when dayofweek(transaction\_date) in (1,7) then 'Weekends'

else 'Weekdays'

end;

select \* from coffee\_shop\_sales;

-- SALES BY STORE LOCATION

select

store\_location,

concat(round(sum(unit\_price \* transaction\_qty)/1000, 2), 'k') as Total\_sales

from coffee\_shop\_sales

where month(transaction\_date) = 5 -- may

group by store\_location

order by sum(unit\_price \* transaction\_qty) desc;

select \* from coffee\_shop\_sales;

-- Display sales analysis with average line

select avg(unit\_price \* transaction\_qty) as Avg\_sales

from coffee\_shop\_sales

where month (transaction\_date) = 5; -- may

-- another way we can short it

select

concat(round(avg(Total\_sales)/1000, 1), 'k') as Avg\_sales

from

(

select sum(unit\_price \* transaction\_qty) as Total\_sales

from coffee\_shop\_sales

where month (transaction\_date) = 5 -- May month

group by transaction\_date

) as internal\_query;

-- daily sales for the particual month

select

day(transaction\_date) as Day\_of\_month,

sum(unit\_price \* transaction\_qty) as Total\_sales

from coffee\_shop\_sales

Where Month(transaction\_date) = 5 -- May Month

group by day(transaction\_date)

order by day(transaction\_date);

-- COMPARING DAILY SALES WITH AVERAGE SALES – IF GREATER THAN “ABOVE AVERAGE” and LESSER THAN “BELOW AVERAGE”

Select

Day\_of\_month,

case

When Total\_sales > Avg\_sales then 'Above Average'

when Total\_sales < Avg\_sales then 'Below Average'

else 'Average'

End as sales\_status,

Total\_sales

from(

SELECT

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

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

AVG(SUM(unit\_price \* transaction\_qty)) OVER () AS avg\_sales

FROM

coffee\_shop\_sales

WHERE

MONTH(transaction\_date) = 5 -- Filter for May

GROUP BY

DAY(transaction\_date)

) AS sales\_data

ORDER BY

day\_of\_month;

select \* from coffee\_shop\_sales;

-- sales analysis by product category

select

product\_type,

sum(unit\_price \* transaction\_qty) As Total\_sales

from coffee\_shop\_sales

where month(transaction\_date) = 5 and product\_category = 'coffee'

group by product\_type

order by sum(unit\_price \* transaction\_qty) desc

limit 10;

-- sales analysis by days and hours

select

sum(unit\_price \* transaction\_qty) as Total\_sales,

sum(transaction\_qty) as total\_qty\_sold,

Count(\*) as Total\_orders

from coffee\_shop\_sales

where month(transaction\_date) = 5 -- may month

and dayofweek(transaction\_date) = 1 -- Sunday day

and hour(transaction\_time) = 14; -- hour no 14

select

hour(transaction\_time),

sum(unit\_price \* transaction\_qty) as Total\_sales

from coffee\_shop\_sales

where month(transaction\_date) = 5 -- may month

group by hour(transaction\_time)

order by hour(transaction\_time);

-- weekdays sales

select

case

when dayofweek(transaction\_date) = 2 then 'Monday'

when dayofweek(transaction\_date) = 3 then 'Tuesday'

when dayofweek(transaction\_date) = 4 then 'Wednesday'

when dayofweek(transaction\_date) = 5 then 'Thursday'

when dayofweek(transaction\_date) = 6 then 'Friday'

when dayofweek(transaction\_date) = 7 then 'Saturday'

else 'Sunday'

end as Day\_of\_Week,

round(sum(unit\_price \* transaction\_qty)) as Total\_sales

from

coffee\_shop\_sales

where

month(transaction\_date) = 5 -- filter for may (month number 5)

group by

case

when dayofweek(transaction\_date) = 2 then 'Monday'

when dayofweek(transaction\_date) = 3 then 'Tuesday'

when dayofweek(transaction\_date) = 4 then 'Wednesday'

when dayofweek(transaction\_date) = 5 then 'Thursday'

when dayofweek(transaction\_date) = 6 then 'Friday'

when dayofweek(transaction\_date) = 7 then 'Saturday'

else 'Sunday'

end

**POWER BI**

**Total Sales Analysis**

**Current Month sales formula in POWER BI**

CM Sales = VAR selected\_month = SELECTEDVALUE('Date Table'[Month])

            RETURN

            TOTALMTD(CALCULATE([Total Sales], 'Date Table'[Month]=selected\_month),'Date Table'[Date])

**Previous Month Sales formula in Power BI**

PM sales = CALCULATE([CM Sales],DATEADD('Date Table'[Date],-1,MONTH))

**Month on Month Sales Growth with sing indicators**

MoM Growth & diff Sales =

    VAR Month\_diff = [CM Sales] - [PM sales]

    VAR Mom = ([CM Sales] - [PM sales]) / [PM sales]

    VAR \_sing = IF(Month\_diff > 0, "+","")

    VAR \_sing\_trend = IF(Month\_diff > 0,"▲","▼")

    RETURN

    \_sing\_trend & " " & \_sing & FORMAT(Mom, "#0.0%" & " | " & \_sing & FORMAT(Month\_diff/1000, "0.0K")) & " " & "vs LM"

**Total No of orders:**

**Current Month Orders formula in POWER BI**

Mom Growth & diff orders =

                        VAR Month\_diff = [CM Orders]-[PM Orders]

                        VAR Mom = [CM Orders]- [PM Orders]/[PM Orders]

                        VAR \_sign = IF(Month\_diff >0, "+","")

                        Var \_sign\_trend = IF(Month\_diff> 0,"▲","▼")

                        RETURN

                        \_sign\_trend & " " & \_sign & FORMAT(Mom, "#0.0%" & " | " & \_sign & FORMAT(Month\_diff/1000, "0.0K")) & " " & "vs LM"