**-- A1. Calculate the total sales for each respective month**

Create View A1 As

Select

To\_Char(Transaction\_Date, 'Month') as Month\_Name,

Sum(Quantity \* Unit\_Price) as Total\_Sales

From Transactions

Group By

To\_Char(Transaction\_Date, 'Month'),

Date\_Part('Month', Transaction\_Date)

Order By Date\_Part('Month', Transaction\_Date);

Select \* From A1

**-- A2. Determine the month-on-month increase or decrease in sales**

Create View AA2 As

SELECT

TO\_CHAR(transaction\_date, 'Mon YYYY') AS month,

SUM(quantity \* unit\_price) AS total\_sales,

LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date)) AS previous\_month\_sales,

(SUM(quantity \* unit\_price) - LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date))) AS sales\_change,

ROUND(((SUM(quantity \* unit\_price) - LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date)))

/ NULLIF(LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date)), 0)

) \* 100, 2

) AS percent\_change

FROM transactions

GROUP BY

DATE\_TRUNC('month', transaction\_date),

TO\_CHAR(transaction\_date, 'Mon YYYY')

ORDER BY

DATE\_TRUNC('month', transaction\_date);

Select \* From AA2

**-- A3. Calculate the difference in sales between the selected month and the previous month**

SELECT

TO\_CHAR(transaction\_date, 'Mon YYYY') AS month,

SUM(quantity \* unit\_price) AS total\_sales,

LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date)) AS previous\_month\_sales,

(SUM(quantity \* unit\_price) - LAG(SUM(quantity \* unit\_price)) OVER (ORDER BY DATE\_TRUNC('month', transaction\_date))) AS sales\_difference

FROM

transactions

GROUP BY

DATE\_TRUNC('month', transaction\_date),

TO\_CHAR(transaction\_date, 'Mon YYYY')

ORDER BY

DATE\_TRUNC('month', transaction\_date);

**--B1. Calculate the total number of orders for each respective month**

Create View B1 As

Select

To\_Char(Transaction\_Date, 'Mon YYYY') as Month,

Count(Transaction\_Id) as Total\_Orders

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date);

Select \* From B1

**--B2. Determine the month-on-month increase or decrease in the number of orders.**

Create View B2 as

Select

To\_Char(Transaction\_Date, 'Mon YYYY') as Month,

Count(Transaction\_Id) as Total\_Orders,

Lag(Count(Transaction\_Id))

Over(Order By Date\_Trunc('Month', Transaction\_Date)) as Previous\_Month\_Orders,

(Count(Transaction\_Id) - Lag(Count(Transaction\_Id))

Over(Order by Date\_Trunc('Month', Transaction\_Date))) as Order\_Change,

Round(((Count(Transaction\_Id) - Lag(Count(Transaction\_Id))

Over(Order By Date\_Trunc('Month', Transaction\_Date)))::numeric

/ Nullif(Lag(Count(Transaction\_Id))

Over(Order By Date\_Trunc('Month', Transaction\_Date)), 0)) \*100,2) as Percent\_Change

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date);

Select \* From B2

**--B3. Calculate the difference in the number of orders between the selected month and the previous month**

Create View B3 As

Select

To\_Char(Transaction\_Date, 'Mon YYYY') as Month,

Count(Transaction\_Id) as Total\_Orders,

Lag(Count(Transaction\_Id))

Over(Order By Date\_Trunc('Month', Transaction\_Date)) as Previous\_Month\_Orders,

(Count(Transaction\_Id) - Lag(Count(Transaction\_Id))

Over(Order By Date\_Trunc('Month', Transaction\_Date))) as Order\_Change

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date);

Select \* From B3

**--C1. Calculate the total quantity sold for each respective month.**

Create View CC1 as

Select

To\_Char(Transaction\_Date, 'Mon YYYY') as Month,

Sum(Quantity) as Total\_Quantity

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date);

Select \* From CC1

**--C2. Determine the month-on-month increase or decrease in the total quantity sold.**

Create View C2 as

Select

To\_Char(Transaction\_Date, 'Mon YYYY') as Month,

Sum(Quantity) as Total\_Quantity,

Lag(Sum(Quantity))

Over(Order by Date\_Trunc('Month', Transaction\_Date)) as Previous\_Month\_Quantity,

(Sum(Quantity) - Lag(Sum(Quantity))

Over(Order by Date\_Trunc('Month', Transaction\_Date))) as Quantity\_Change,

Round(((Sum(Quantity) - Lag(Sum(Quantity))

Over(Order By Date\_Trunc('Month', Transaction\_Date)))::numeric

/ nullif(Lag(Sum(Quantity))

Over(Order by Date\_Trunc('Month', Transaction\_Date)),0)) \* 100,2) as Percent\_Change

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date);

Select \* From C2

**--C3. Calculate the difference in the total quantity sold between the selected month and the previous month**

Create View C3 As

Select

To\_Char(Transaction\_Date, 'Mon YYYY') As Month,

Sum(Quantity) As Total\_Quantity,

Lag(Sum(Quantity))

Over(Order By Date\_Trunc('Month', Transaction\_Date)) As Previous\_Month\_Quantity,

Sum(Quantity) - Lag(Sum(Quantity))

Over(Order By Date\_Trunc('Month', Transaction\_Date)) As Quantity\_Change

From Transactions

Group By

Date\_Trunc('Month', Transaction\_Date),

To\_Char(Transaction\_Date, 'Mon YYYY')

Order By

Date\_Trunc('Month', Transaction\_Date)

Select \* From C3