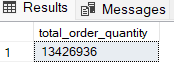
**AtliQ Mart Supply Chain Insights**

**-------------------------Quantity Metrics KPIs-------------------------**

1. **Total Order Quantity**

SELECT *Sum*(order\_qty) AS total\_order\_quantity

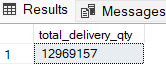
FROM [dbo].[fact\_order\_lines]



1. **Total Delivery Quantity**

SELECT *Sum*(delivery\_qty) AS total\_delivery\_qty

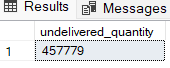
FROM [dbo].[fact\_order\_lines]



1. **Total Undelivered Quantity**

SELECT *Sum*(order\_qty) - *Sum*(delivery\_qty) AS undelivered\_quantity

FROM [dbo].[fact\_order\_lines]



**--------------OTIF, OT, IF, VOFR, LIFR Percentage KPI’s----------**

1. **OTIF (On time in full) Percentage**

SELECT

**Concat**(*Round*((*Cast*((SELECT *Count*(\*)

FROM [dbo].[fact\_orders\_aggregate]

WHERE otif = 'Yes') AS *FLOAT*) / *Cast*((SELECT *Count*(\*) FROM [dbo].[fact\_orders\_aggregate]) AS

*FLOAT*))\* 100, 2), '%') AS otif\_percentage



1. **OT (On time) Percentage**

SELECT

**Concat**(*Round*(( *Cast*((SELECT *Count*(\*)

FROM [dbo].[fact\_orders\_aggregate]

WHERE on\_time = 'Yes') AS *FLOAT*) / *Cast*((SELECT *Count*(\*)FROM [dbo].[fact\_orders\_aggregate]) AS

*FLOAT*)) \* 100, 2), '%') AS on\_time\_percentage



1. **IF (In full) Percentage**

SELECT

Concat(*Round*((*Cast*((SELECT *Count*(\*)

FROM [dbo].[fact\_orders\_aggregate]

WHERE in\_full='Yes') AS *FLOAT*) / *Cast(*(SELECT *Count*(\*) FROM [dbo].[fact\_orders\_aggregate]) AS *FLOAT*)) \* 100, 2), '%') AS in\_full\_percentage as float)) \* 100, 2), '%') AS on\_time\_percentage



1. **VOFR (Volume fill rate) Percentage**

SELECT Concat(*Round*(( *Cast*((SELECT *Sum*(delivery\_qty)

FROM [dbo].[fact\_order\_lines])

AS *FLOAT*) / *Cast*((SELECT *Sum*(order\_qty)FROM [dbo].[fact\_order\_lines]) AS *FLOAT*)) \* 100, 2), '%') AS vofr\_percentage



1. **LIFR (Line fill rate) Percentage**

WITH cte

AS (SELECT *Count*(\*) AS total\_order\_lines,

*Count*(CASE

WHEN f.in\_full = 'Yes' THEN 1

ELSE NULL

END) AS fulfilled\_order\_lines

FROM [dbo].[dim\_products] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.product\_id = f.product\_id)

SELECT Concat(*Round*(*Cast*(fulfilled\_order\_lines AS *FLOAT*) / *Cast*(total\_order\_lines AS *FLOAT*)\* 100, 2), '%') AS LIFR\_percentage FROM cte

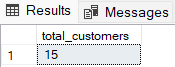


**---------------------------Customer Matrices-----------------------------**

1. **Total Number of customers**

SELECT *Count*(DISTINCT( customer\_name )) AS total\_customers

FROM [dbo].[dim\_customers]



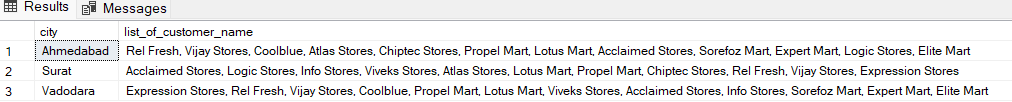
1. **List of all Customers Name in each City**

SELECT city,

**String\_agg**(customer\_name, ', ') AS list\_of\_customer\_name

FROM [dbo].[dim\_customers]

GROUP BY city



**----------------------------City-wise Matrices-----------------------------**

1. **Total Order Quantity and Total Delivery Quantity by City**

SELECT d.city,

*Sum*(order\_qty) AS total\_order\_quantity,

*Sum*(delivery\_qty) AS total\_delivery\_quantity

FROM [dbo].[fact\_order\_lines] AS f

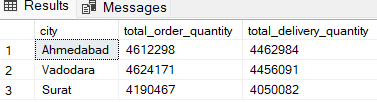
LEFT JOIN [dbo].[dim\_customers] AS d

ON f.customer\_id = d.customer\_id

GROUP BY d.city

ORDER BY total\_delivery\_quantity DESC,

total\_order\_quantity DESC



1. **Quantity Ordered V/S Quantity Delivered V/S Undelivered Quantity as per category and product.**

WITH cte

AS (SELECT d.category,

d.product\_name,

f.order\_qty,

f.delivery\_qty

FROM [dbo].[fact\_order\_lines] AS f

LEFT JOIN [dbo].[dim\_products] AS d

ON f.product\_id = d.product\_id)

SELECT category,

product\_name,

*Sum*(order\_qty) AS total\_order\_quanity,

*Sum*(delivery\_qty) AS total\_delivery\_quantity,

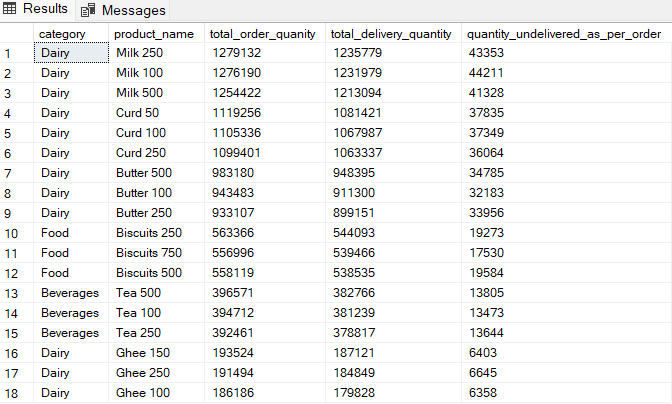
*Sum*(order\_qty) - *Sum*(delivery\_qty) AS quantity\_undelivered\_as\_per\_order

FROM cte

GROUP BY category,

product\_name

ORDER BY *Sum*(delivery\_qty) DESC



**------------------Customer Performance Metrics--------------------**

1. **List of Customer Name from each City with Highest Delivery Quantity.**

WITH cte

AS (SELECT d.city,

d.customer\_name,

f.order\_qty,

f.delivery\_qty

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON f.customer\_id = d.customer\_id),

semi\_final

AS (SELECT C.city,

C.customer\_name,

*Sum*(C.order\_qty) AS total\_order\_qty,

*Sum*(C.delivery\_qty) AS total\_delivery\_qty,

**Dense\_rank**()

OVER (

partition BY city

ORDER BY *Sum*(delivery\_qty) DESC) AS Ranking

FROM cte AS C

GROUP BY C.city,

C.customer\_name)

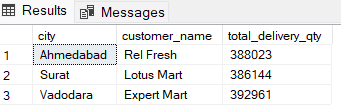
SELECT city,

customer\_name,

total\_delivery\_qty

FROM semi\_final

WHERE ranking = 1



1. **List of Customer Name from each City with Lowest Delivery Quantity.**

WITH cte

AS (SELECT d.city,

d.customer\_name,

f.order\_qty,

f.delivery\_qty

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON f.customer\_id = d.customer\_id),

semi\_final

AS (SELECT C.city,

C.customer\_name,

*Sum*(C.order\_qty) AS total\_order\_qty,

*Sum*(C.delivery\_qty) AS total\_delivery\_qty,

**Dense\_rank**()

OVER (

partition BY city

ORDER BY *Sum*(delivery\_qty) ASC) AS Ranking

FROM cte AS C

GROUP BY C.city,

C.customer\_name)

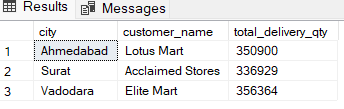
SELECT city,

customer\_name,

total\_delivery\_qty

FROM semi\_final

WHERE ranking = 1



1. **Customer Name from each city which has the highest otif (On-Time-In-Full).**

WITH cte

AS (SELECT d.city,

d.customer\_name,

f.on\_time,

f.in\_full,

f.otif

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_orders\_aggregate] AS f

ON d.customer\_id = f.customer\_id),

final

AS (SELECT C.city,

C.customer\_name,

*Count*(otif) AS total\_otif,

**Dense\_rank**()

OVER(

partition BY city

ORDER BY *Count*(otif) DESC) AS ranking

FROM cte AS C

WHERE otif = 'Yes'

GROUP BY C.city,

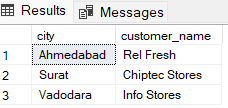
C.customer\_name)

SELECT city,

customer\_name

FROM final

WHERE ranking = 1



1. **Customer Name from each city which has the lowest otif (On-Time-In-Full).**

WITH cte

AS (SELECT d.city,

d.customer\_name,

f.on\_time,

f.in\_full,

f.otif

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_orders\_aggregate] AS f

ON d.customer\_id = f.customer\_id),

semi

AS (SELECT C.city,

C.customer\_name,

*Count*(otif) AS total\_otif,

**Dense\_rank**()

OVER(

partition BY city

ORDER BY *Count*(otif) DESC) AS ranking

FROM cte AS C

WHERE otif = 'No'

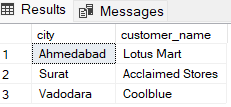
GROUP BY C.city,

C.customer\_name)

SELECT city,

customer\_name

FROM semi WHERE ranking = 1



1. **Calculate Delivery-to-Order-Ratio of each Customer Name by City.**

WITH cte

AS (SELECT d.city,

d.customer\_name,

f.order\_qty,

f.delivery\_qty

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.customer\_id = f.customer\_id),

final

AS (SELECT city,

customer\_name,

*Sum*(delivery\_qty) AS total\_delivery\_qty,

*Sum*(order\_qty) AS total\_order\_qty

FROM cte

GROUP BY city,

customer\_name)

SELECT city,

customer\_name,

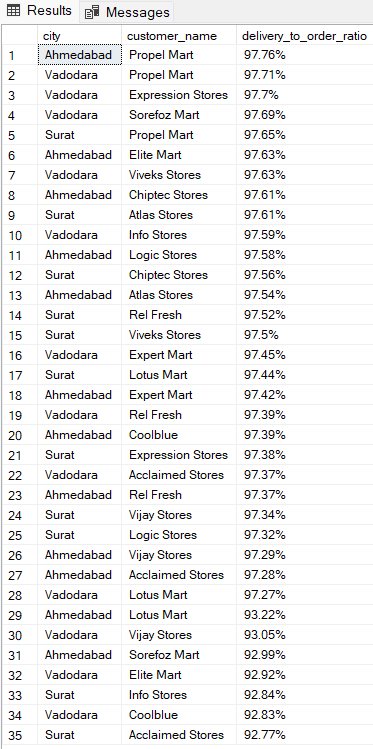
**Concat**(*Round*(( *Cast*(total\_delivery\_qty AS *FLOAT*) /

*Cast*(total\_order\_qty AS *FLOAT*) ) \*

100, 2), '%') AS delivery\_to\_order\_ratio

FROM final

ORDER BY delivery\_to\_order\_ratio DESC



**--------------------------------Product Metrics------------------------------**

1. **Calculate the VOFR (volume fill rate) % of each Product Name.**

WITH cte

AS (SELECT d.product\_name,

f.delivery\_qty,

f.order\_qty

FROM [dbo].[dim\_products] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.product\_id = f.product\_id),

vofr\_data

AS (SELECT C.product\_name,

*Sum*(C.delivery\_qty) AS total\_delivery\_qty,

*Sum*(C.order\_qty) AS total\_order\_qty

FROM cte AS C

GROUP BY C.product\_name)

SELECT product\_name,

**Concat**(*Round*(*Cast*(total\_delivery\_qty AS *FLOAT*) / *Cast*(

total\_order\_qty AS *FLOAT*)

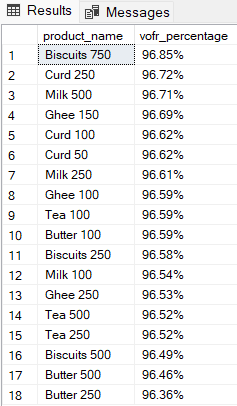
\* 100,

2), '%') AS vofr\_percentage

FROM vofr\_data

WHERE total\_order\_qty <> 0 *-- Filter out rows where total\_order\_qty is zero*

ORDER BY vofr\_percentage DESC



1. **Calculate the LIFR (line fill rate) % of each Product Name.**

WITH cte

AS (SELECT d.product\_id,

d.product\_name,

*Count*(\*) AS total\_order\_lines,

*Sum*(CASE

WHEN f.in\_full = 'Yes' THEN 1

ELSE 0

END) AS fulfilled\_order\_lines

FROM [dbo].[dim\_products] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.product\_id = f.product\_id

GROUP BY d.product\_id,

d.product\_name)

SELECT product\_name,

**Concat**(*Round*(( *Cast*(fulfilled\_order\_lines AS *FLOAT*) / *Cast*(

total\_order\_lines AS *FLOAT*)

) \*

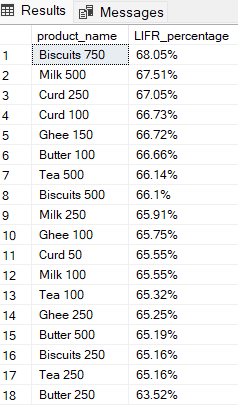
100.0, 2), '%') AS LIFR\_percentage

FROM cte

WHERE fulfilled\_order\_lines > 0

*-- Filtering out rows where no order lines were fulfilled*

ORDER BY lifr\_percentage DESC



**--------------------------------Monthly Metrics-----------------------------**

1. **List of Customer Names with Highest Delivery Quantity for Each Month in Each City.**

WITH cte

AS (SELECT \*

FROM [dbo].[dim\_date] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.date = f.order\_placement\_date),

semi\_data

AS (SELECT city,

customer\_name,

**Format**(date, 'MM') AS year\_month,

*Sum*(delivery\_qty) AS total\_delivery\_qty

FROM [dbo].[dim\_customers] AS d

INNER JOIN cte AS C

ON C.customer\_id = d.customer\_id

GROUP BY city,

**Format**(date, 'MM'),

customer\_name),

ranked\_data

AS (SELECT city,

year\_month,

customer\_name,

total\_delivery\_qty,

**Row\_number**()

OVER(

partition BY city, year\_month

ORDER BY total\_delivery\_qty DESC) AS rank

FROM semi\_data)

SELECT city,

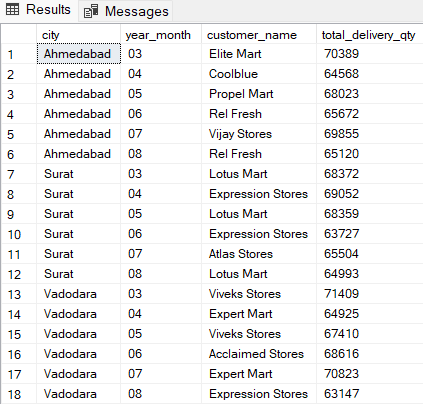
year\_month,

customer\_name,

total\_delivery\_qty

FROM ranked\_data

WHERE rank = 1;



1. **List of Customer Names with Lowest Delivery Quantity for Each Month in Each City.**

WITH cte

AS (SELECT \*

FROM [dbo].[dim\_date] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.date = f.order\_placement\_date),

semi\_data

AS (SELECT city,

customer\_name,

**Format**(date, 'MM') AS year\_month,

*Sum*(delivery\_qty) AS total\_delivery\_qty

FROM [dbo].[dim\_customers] AS d

INNER JOIN cte AS C

ON C.customer\_id = d.customer\_id

GROUP BY city,

**Format**(date, 'MM'),

customer\_name),

ranked\_data

AS (SELECT city,

year\_month,

customer\_name,

total\_delivery\_qty,

**Row\_number**()

OVER(

partition BY city, year\_month

ORDER BY total\_delivery\_qty ASC) AS rank

FROM semi\_data)

SELECT city,

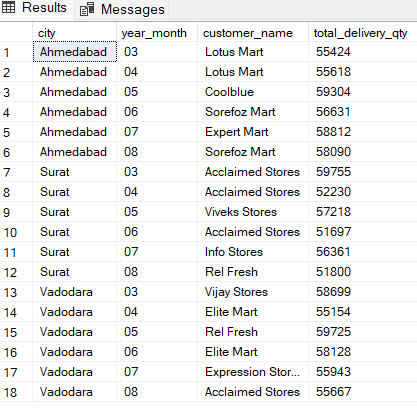
year\_month,

customer\_name,

total\_delivery\_qty

FROM ranked\_data

WHERE rank = 1;



**------------------------------Customer Metrics-----------------------------**

1. **Calculate the OTIF % (On-time-in-full) % of each Product Name.**

WITH cte

AS (SELECT d.city,

d.customer\_id,

dp.category,

d.customer\_name,

dp.product\_id,

dp.product\_name,

f.order\_qty,

f.delivery\_qty,

f.in\_full,

f.on\_time,

f.otif

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.customer\_id = f.customer\_id

RIGHT JOIN [dbo].[dim\_products] AS dp

ON dp.product\_id = f.product\_id),

sec\_cte

AS (SELECT \*,

CASE

WHEN in\_full = 'Yes'

AND on\_time = 'Yes' THEN 1

ELSE 0

END AS otif\_data

FROM cte)

SELECT customer\_name,

**Concat**(*Round*(( ( *Cast*(*Sum*(otif\_data) AS *FLOAT*) ) / ( *Cast*(

*Count*(customer\_id) AS *FLOAT*)

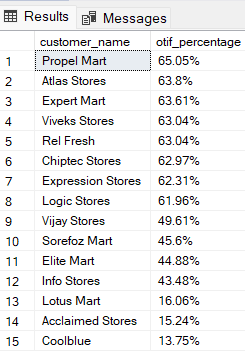
) ) \*

100.0, 2), '%') AS otif\_percentage

FROM sec\_cte

GROUP BY customer\_name

ORDER BY otif\_percentage DESC



1. **List of Customer name with their in-full delivery percentage (%)?**

WITH cte

AS (SELECT d.customer\_id,

d.customer\_name,

CASE

WHEN in\_full = 'Yes' THEN 1

ELSE 0

END AS in\_full\_detail

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_orders\_aggregate] AS f

ON d.customer\_id = f.customer\_id)

SELECT customer\_name,

Concat(*Round*(*Cast*(*Sum*(in\_full\_detail) AS *FLOAT*) / *Count*(\*) \* 100.0, 2),

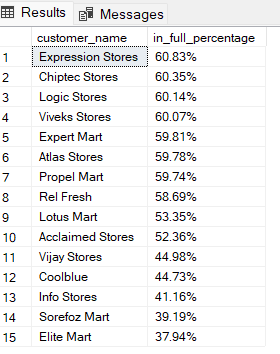
'%') AS

in\_full\_percentage

FROM cte

GROUP BY customer\_name

ORDER BY in\_full\_percentage DESC



1. **List of Customer name with their on-time delivery percentage (%)?**

WITH cte

AS (SELECT d.customer\_id,

d.customer\_name,

CASE

WHEN on\_time = 'Yes' THEN 1

ELSE 0

END AS on\_time\_detail

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_orders\_aggregate] AS f

ON d.customer\_id = f.customer\_id)

SELECT customer\_name,

**Concat**(*Round*(*Cast*(*Sum*(on\_time\_detail) AS *FLOAT*) / *Count*(\*) \* 100.0, 2),

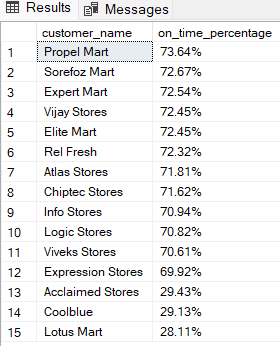
'%') AS

on\_time\_percentage

FROM cte

GROUP BY customer\_name

ORDER BY on\_time\_percentage DESC



1. **List of Customer name with their otif percentage (%)?**

WITH cte

AS (SELECT d.customer\_id,

d.customer\_name,

CASE

WHEN otif = 'Yes' THEN 1

ELSE 0

END AS otif\_detail

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_orders\_aggregate] AS f

ON d.customer\_id = f.customer\_id)

SELECT customer\_name,

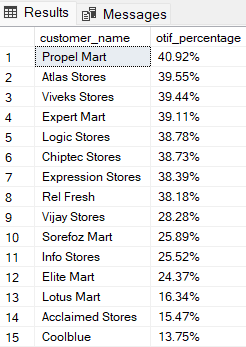
**Concat**(*Round*(*Cast*(*Sum*(otif\_detail) AS *FLOAT*) / *Count*(\*) \* 100.0, 2), '%')

AS

otif\_percentage

FROM cte

GROUP BY customer\_name ORDER BY otif\_percentage DESC



1. **List of Customer name with their LIFR percentage (%)?**

WITH cte

AS (SELECT d.customer\_name,

*Count*(\*) AS total\_order\_lines,

*Sum*(CASE

WHEN f.in\_full = 'Yes' THEN 1

ELSE 0

END) AS fulfilled\_order\_lines

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.customer\_id = f.customer\_id

GROUP BY d.customer\_name)

SELECT customer\_name,

**Concat**(*Round*(( *Cast*(fulfilled\_order\_lines AS *FLOAT*) / *Cast*(

total\_order\_lines AS *FLOAT*)

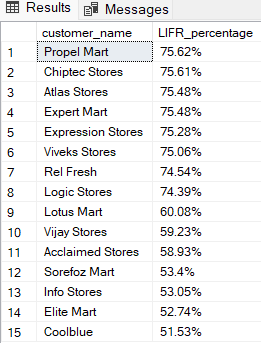
) \*

100.0, 2), '%') AS LIFR\_percentage

FROM cte

WHERE fulfilled\_order\_lines > 0

ORDER BY lifr\_percentage DESC



1. **List of Customer name with their Vofr percentage (%)?**

WITH cte

AS (SELECT d.customer\_name,

f.delivery\_qty,

f.order\_qty

FROM [dbo].[dim\_customers] AS d

LEFT JOIN [dbo].[fact\_order\_lines] AS f

ON d.customer\_id = f.customer\_id),

vofr\_data

AS (SELECT C.customer\_name,

*Sum*(C.delivery\_qty) AS total\_delivery\_qty,

*Sum*(C.order\_qty) AS total\_order\_qty

FROM cte AS C

GROUP BY C.customer\_name)

SELECT customer\_name,

**Concat**(*Round*(*Cast*(total\_delivery\_qty AS *FLOAT*) / *Cast*(

total\_order\_qty AS *FLOAT*)

\* 100,

2), '%') AS vofr\_percentage

FROM vofr\_data

WHERE total\_order\_qty <> 0 *-- Filter out rows where total\_order\_qty is zero*

ORDER BY vofr\_percentage DESC

