



SQL PROJECT

FINANCE & SUPPLY CHAIN ANALYTICS

AT ATLIQ HARDWARES

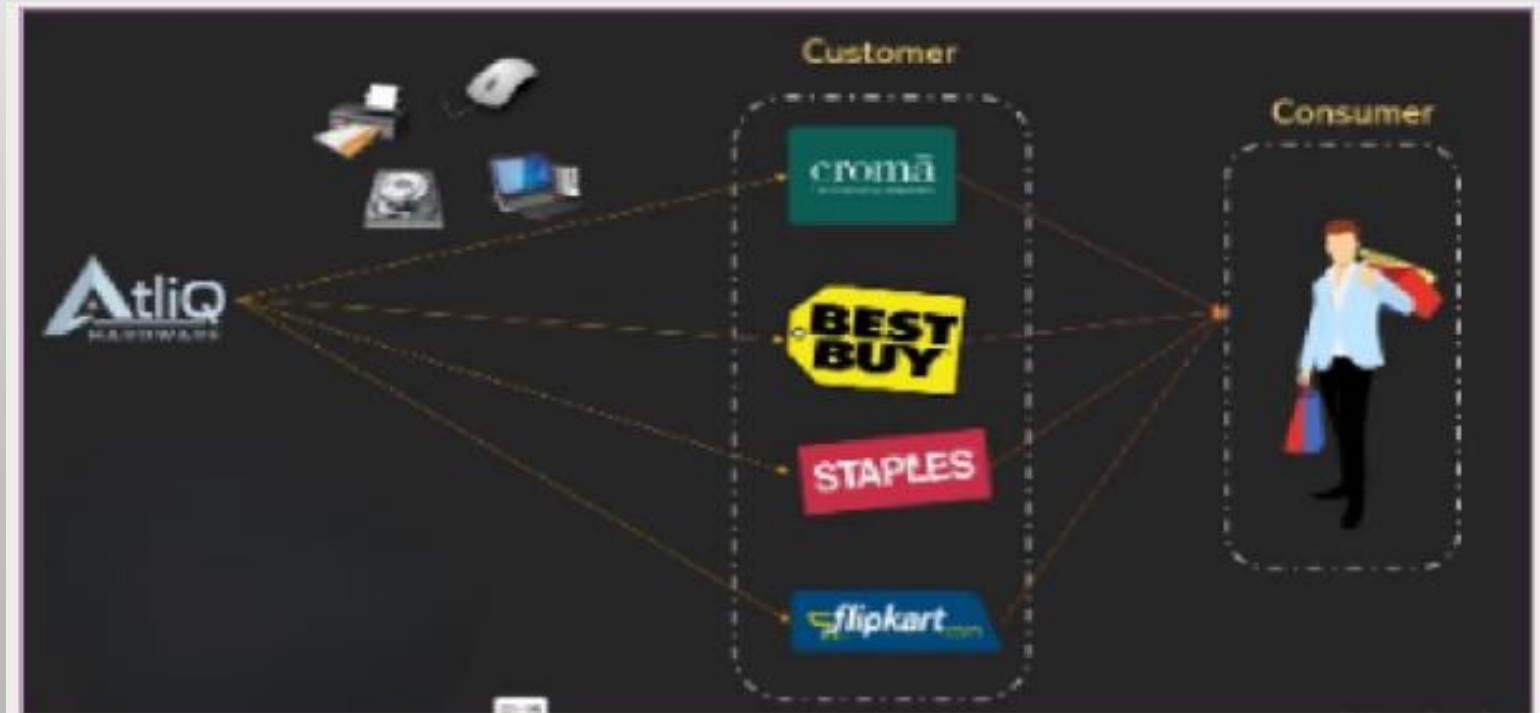


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ATLIQ HARDWARE & BUSINESS MODEL

AtliQ Hardware is a distinguished global leader in electronics manufacturing, specializing in the production and distribution of an extensive range of high-quality hardware products. Our offerings include personal computers, printers, mice and a variety of other computer peripherals, serving the diverse needs of customers worldwide.





PROBLEM STATEMENT

AtliQ Hardware is currently facing performance challenges due to the increasing size and complexity of its Excel files. To resolve this issue, the company has appointed a dedicated team of data analysts to leverage MySQL for extracting valuable insights and enhancing operational efficiency.



OBJECTIVE

The primary objective of this project is to derive actionable insights regarding sales performance, market dynamics, customer behavior, and to forecast supply chain trends.

The background of the slide is a light gray color, decorated with several realistic water droplets of various sizes. These droplets are scattered across the top and bottom edges, with some appearing as small beads and others as larger, more elongated shapes. Each droplet has a subtle gradient and a soft shadow, giving it a three-dimensional appearance.

FINANCE ANALYTICS



CROMA SALES REPORT

- Query – Generate a monthly product transactions report for Gross Sales for the FY -2021.

```
1 • SELECT
2     s.date,
3     s.product_code,
4     p.product,
5     p.variant,
6     s.sold_quantity,
7     g.gross_price,
8     ROUND(s.sold_quantity*g.gross_price,2) as gross_price_total
9 FROM fact_sales_monthly s
10 JOIN dim_product p
11     ON s.product_code=p.product_code
12 JOIN fact_gross_price g
13     ON g.fiscal_year=get_fiscal_year(s.date)
14     AND g.product_code=s.product_code
15 WHERE
16     customer_code=90002002 AND
17     get_fiscal_year(s.date)=2021
18 LIMIT 1000000;
```

date	product_code	product	variant	sold_quantity	gross_price	gross_price_total
2020-09-01	A0118150101	AQ Dracula HDD – 3.5 Inch SATA 6 Gb...	Standard	202	19.0573	3849.57
2020-09-01	A0118150102	AQ Dracula HDD – 3.5 Inch SATA 6 Gb...	Plus	162	21.4565	3475.95
2020-09-01	A0118150103	AQ Dracula HDD – 3.5 Inch SATA 6 Gb...	Premium	193	21.7795	4203.44
2020-09-01	A0118150104	AQ Dracula HDD – 3.5 Inch SATA 6 Gb...	Premium Plus	146	22.9729	3354.04
2020-09-01	A0219150201	AQ WereWolf NAS Internal Hard Drive ...	Standard	149	23.6987	3531.11
2020-09-01	A0219150202	AQ WereWolf NAS Internal Hard Drive ...	Plus	107	24.7312	2646.24
2020-09-01	A0220150203	AQ WereWolf NAS Internal Hard Drive ...	Premium	123	23.6154	2904.69
2020-09-01	A0320150301	AQ Zion Saga	Standard	146	23.7223	3463.46
2020-09-01	A0321150302	AQ Zion Saga	Plus	236	27.1027	6396.24
2020-09-01	A0321150303	AQ Zion Saga	Premium	137	28.0059	3836.81
2020-09-01	A0418150103	AQ Mforce Gen X	Standard 3	23	19.5235	449.04
2020-09-01	A0418150104	AQ Mforce Gen X	Plus 1	82	19.9239	1633.76
2020-09-01	A0418150105	AQ Mforce Gen X	Plus 2	86	20.0766	1726.59
2020-09-01	A0418150106	AQ Mforce Gen X	Plus 3	48	19.9365	956.95
2020-09-01	A0519150201	AQ Mforce Gen Y	Standard 1	138	22.3984	3090.98
2020-09-01	A0519150202	AQ Mforce Gen Y	Standard 2	72	24.9298	1794.95
2020-09-01	A0519150203	AQ Mforce Gen Y	Standard 3	38	26.5871	1010.31
2020-09-01	A0519150204	AQ Mforce Gen Y	Plus 1	149	26.1081	3890.11
2020-09-01	A0519150205	AQ Mforce Gen Y	Plus 2	29	29.7008	861.32
2020-09-01	A0519150206	AQ Mforce Gen Y	Plus 3	28	31.2439	874.83



CROMA YEARLY GROSS SALES REPORT

- Query - Generate a yearly report for Croma India where there are two columns -
 1. Fiscal Year
 2. Total Gross Sales Amount in that year from Croma.

```
1  SELECT
2      s.fiscal_year,
3      ROUND(SUM(s.sold_quantity * g.gross_price),2) AS yearly_gross_sales
4  FROM fact_sales_monthly s
5  JOIN fact_gross_price g
6      ON g.product_code = s.product_code AND
7      g.fiscal_year = s.fiscal_year
8  WHERE customer_code = 90002002
9  GROUP BY fiscal_year
10 ORDER BY fiscal_year;
```

fiscal_year	yearly_gross_sales
2018	1324097.44
2019	3555079.02
2020	6502181.91
2021	23216512.22
2022	44638198.92

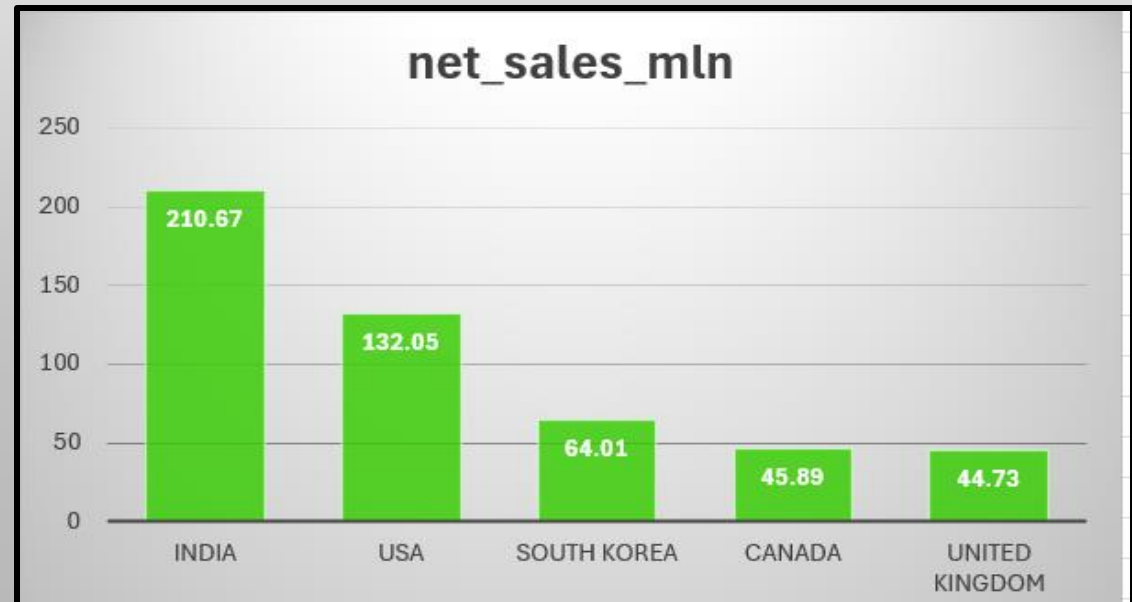


TOP 5 MARKETS

Query - Generate a report for getting Top 5 markets by Net Sales in Fiscal Year 2021.

```
1 • SELECT
2     market,
3     ROUND(SUM(net_sales)/1000000,2) as net_sales_mln
4 FROM net_sales
5 WHERE fiscal_year = 2021
6 GROUP BY market
7 ORDER BY net_sales_mln DESC
8 LIMIT 5;
```

market	net_sales_mln
India	210.67
USA	132.05
South Korea	64.01
Canada	45.89
United Kingdom	44.73





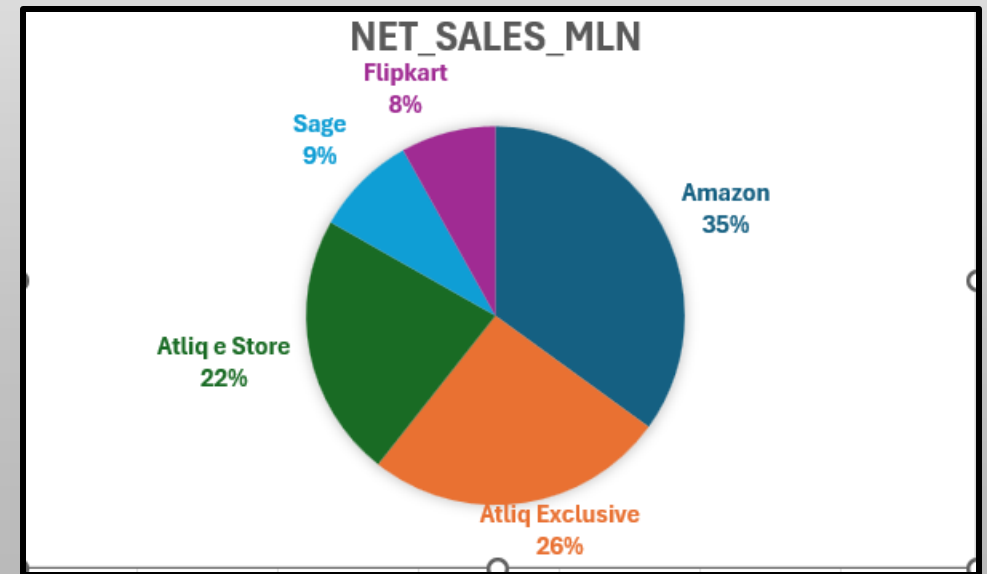
TOP 5 CUSTOMERS

- Query - Generate a report getting

Top 5 customers by Net Sales in Fiscal Year 2021.

```
1 • SELECT
2     c.customer,
3     ROUND(SUM(net_sales)/1000000,2) as net_sales_mln
4 FROM net_sales n
5 JOIN dim_customer c
6     ON c.customer_code = n.customer_code
7 WHERE
8     n.fiscal_year = 2021
9 GROUP BY c.customer
10 ORDER BY net_sales_mln DESC
11 LIMIT 5;
```

customer	net_sales_mln
Amazon	109.03
Atliq Exclusive	79.92
Atliq e Store	70.31
Sage	27.07
Flipkart	25.25





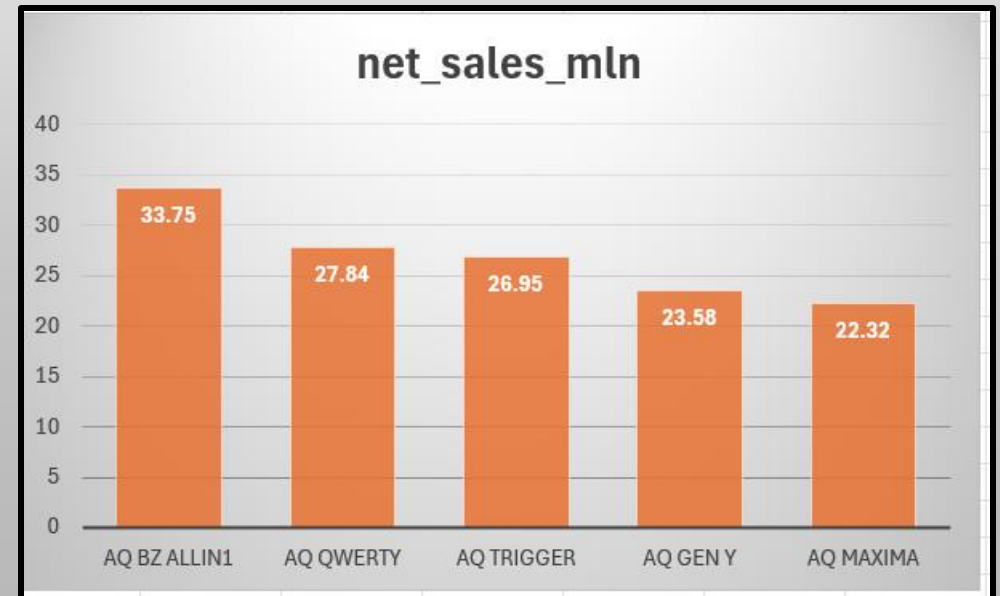
TOP 5 PRODUCTS

Query - Generate a report for getting

Top 5 products by Net Sales in Fiscal Year 2021.

```
1 • SELECT
2     p.product,
3     ROUND(SUM(net_sales)/1000000,2) as net_sales_mln
4 FROM net_sales n
5 JOIN dim_product p
6     ON p.product_code = n.product_code
7 WHERE
8     n.fiscal_year = 2021
9 GROUP BY p.product
10 ORDER BY net_sales_mln DESC
11 LIMIT 5;
```

	product	net_sales_mln
▶	AQ BZ Allin1	33.75
	AQ Qwerty	27.84
	AQ Trigger	26.95
	AQ Gen Y	23.58
	AQ Maxima	22.32





NET SALES % REPORT

Query - Generate a Net Sales% report of
Customers in different regions.

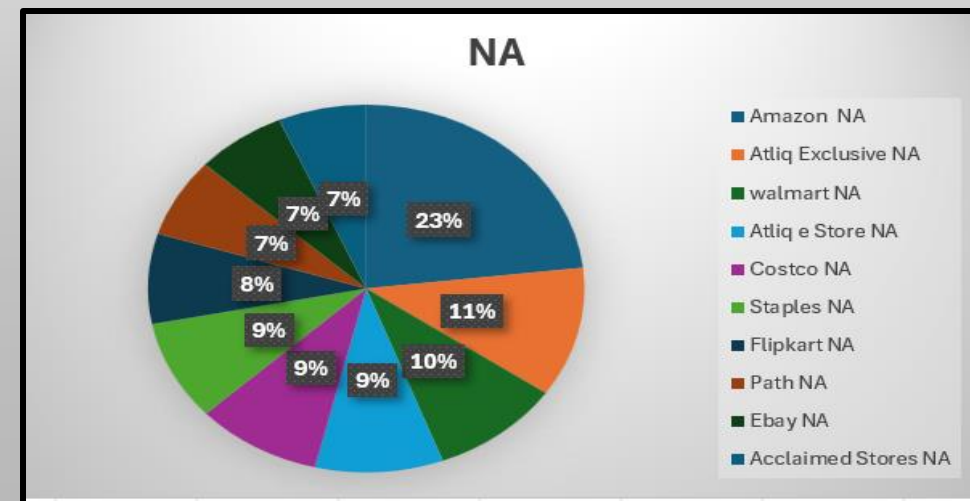
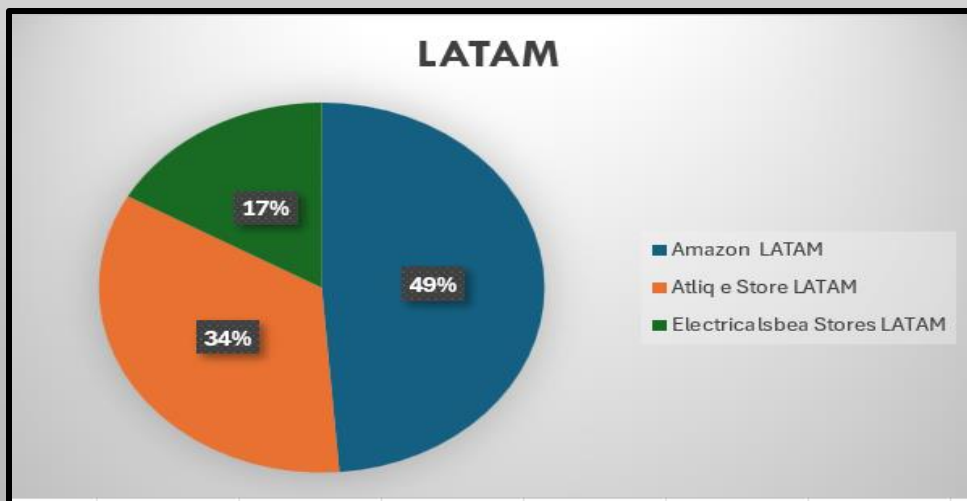
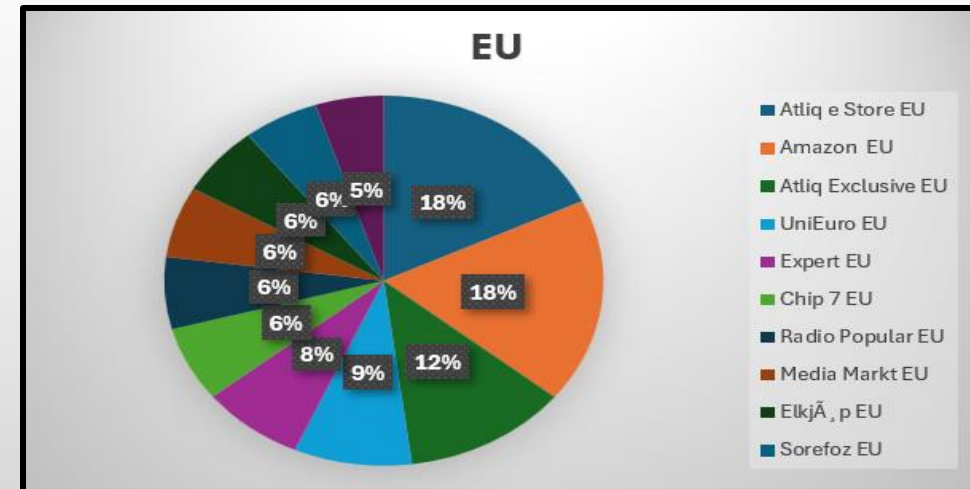
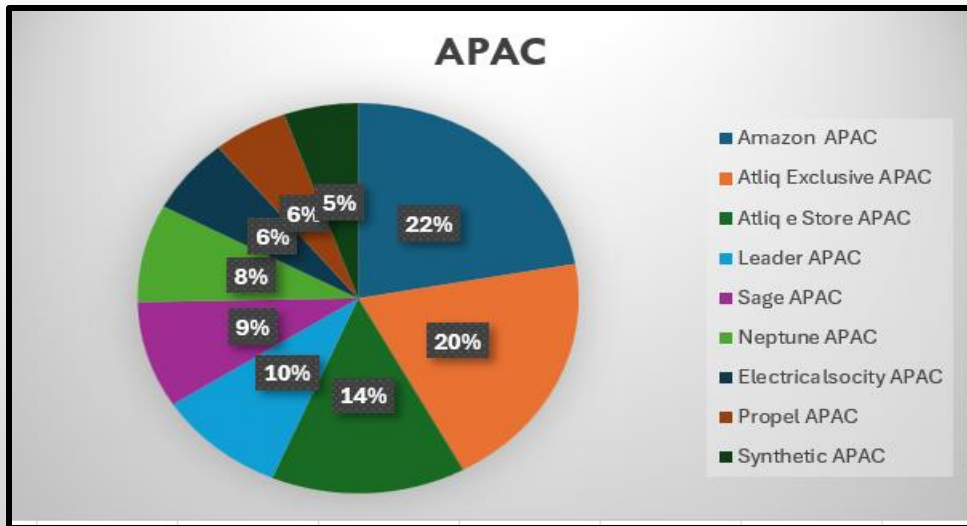
```
1 WITH cte1 AS(  
2     SELECT  
3         c.customer, c.region,  
4         ROUND(SUM(net_sales)/1000000,2) AS net_sales_mln  
5     FROM net_sales n  
6     JOIN dim_customer c  
7     ON c.customer_code=n.customer_code  
8     WHERE n.fiscal_year = 2021  
9     GROUP BY c.customer,c.region)  
10  
11 SELECT  
12     *,  
13     ROUND(net_sales_mln*100/SUM(net_sales_mln) OVER (PARTITION BY region),2) AS pct_share_region  
14 FROM cte1  
15 ORDER BY region, net_sales_mln DESC
```

customer	region	net_sales_mln	pct_share_region
Amazon	APAC	57.41	12.99
Atliq Exclusive	APAC	51.58	11.67
Atliq e Store	APAC	36.97	8.36
Leader	APAC	24.52	5.55
Sage	APAC	22.85	5.17
Neptune	APAC	21.01	4.75
Electricalsociety	APAC	16.25	3.68
Propel	APAC	14.14	3.20
Synthetic	APAC	14.14	3.20
Flipkart	APAC	12.96	2.93
Novus	APAC	12.91	2.92
Expression	APAC	12.90	2.92
Girias	APAC	11.30	2.56
Vijay Sales	APAC	11.27	2.55
Ebay	APAC	11.14	2.52
Reliance Digital	APAC	11.10	2.51
Electricalslytical	APAC	11.08	2.51
Lotus	APAC	10.53	2.38
Ezone	APAC	10.30	2.33
Viveks	APAC	10.09	2.28



MARKET SHARE %

- Query- Top Customers in different Regions.





CONCLUSION

- AtliQ Hardware achieved record sales in 2022.
- India was the largest market in 2021 with sales of \$210.67 M.
- Amazon generated the highest net sales in 2021 with \$109.03 M.
- The AQ BZ all-in-one was the top-selling product in 2021 with the sales of \$33.75 M.
- Amazon captures the top market share% in APAC, LATAM & NA regions.
- AtliQ e store topped the chart in EU region.

The background is a solid teal color. It is decorated with numerous water droplets of various sizes. Some droplets are large and prominent, while others are small and scattered. The droplets have a realistic appearance with highlights and shadows, giving them a three-dimensional look. They are distributed across the entire frame, with a higher concentration in the top-left and bottom-right corners.

SUPPLY CHAIN ANALYTICS



FORECAST ACCURACY REPORT

- Query- Generate a Forecast Accuracy Report for all the customers for the FY-2021.

```
1  with forecast_err_table as (  
2      select  
3          s.customer_code as customer_code,  
4          c.customer as customer_name,  
5          c.market as market,  
6          sum(s.sold_quantity) as total_sold_qty,  
7          sum(s.forecast_quantity) as total_forecast_qty,  
8          sum(s.forecast_quantity-s.sold_quantity) as net_error,  
9          round(sum(s.forecast_quantity-s.sold_quantity)*100/sum(s.forecast_quantity),1) as net_error_pct,  
10         sum(abs(s.forecast_quantity-s.sold_quantity)) as abs_error,  
11         round(sum(abs(s.forecast_quantity-s.sold_quantity))*100/sum(s.forecast_quantity),2) as abs_error_pct  
12     from fact_act_est s  
13     join dim_customer c  
14     on s.customer_code = c.customer_code  
15     where s.fiscal_year=2021  
16     group by customer_code  
17 )  
18 select  
19     *,  
20     if (abs_error_pct > 100, 0, 100.0 - abs_error_pct) as forecast_accuracy  
21 from forecast_err_table  
22     order by forecast_accuracy desc;  
23  
24
```




FORECAST ACCURACY REPORT-2021

Result Grid									Filter Rows:	Export:	Wrap Cell Content:
	customer_code	customer_name	market	total_sold_qty	total_forecast_qty	net_error	net_error_pct	abs_error			
▶	90013120	Coolblue	Italy	109547	133532	23985	18.0	70467			
	70010048	Atiq e Store	Bangladesh	119439	142010	22571	15.9	75711			
	90023027	Costco	Canada	236189	279962	43773	15.6	149303			
	90023026	Relief	Canada	228988	273492	44504	16.3	146948			
	90017051	Forward Stores	Portugal	86823	118067	31244	26.5	63568			
	90017058	Mbit	Portugal	86860	110195	23335	21.2	59473			
	90023028	walmart	Canada	239081	283323	44242	15.6	153058			
	90023024	Sage	Canada	246397	287233	40836	14.2	155610			
	90015146	Mbit	Norway	147152	210507	63355	30.1	114189			
	90013124	Amazon	Italy	110898	136116	25218	18.5	73826			
	90015147	Chiptec	Norway	154897	223867	68970	30.8	122100			
	80001019	Neptune	China	1113979	1275248	161269	12.6	695779			
	90015144	Sound	Norway	160074	225637	65563	29.1	123257			
	90009130	Logic Stores	Newzealand	103290	110175	6885	6.2	60225			
	90015149	UniEuro	Norway	142086	212500	70414	33.1	116172			
	90021088	Electricalslytical	United Kin...	224350	323689	99339	30.7	176975			
	90017050	Electricalsara S...	Portugal	85272	114688	29416	25.6	62760			
	70013125	Atiq Exclusive	Italy	101658	123428	21770	17.6	67546			
	90021094	Coolblue	United Kin...	208512	301367	92855	30.8	165043			
	70009134	Atiq e Store	Newzealand	103747	110791	7044	6.4	60726			



FORECAST ACCURACY REPORT 2021 VS 2020

Query- Generate a report showing forecast accuracy for all customers for FY-2021 vs FY-2020

```
1 • create temporary table forecast_accuracy_2021
2 with forecast_err_table as (
3     select
4         s.customer_code as customer_code,
5         c.customer as customer_name,
6         c.market as market,
7         sum(s.sold_quantity) as total_sold_qty,
8         sum(s.forecast_quantity) as total_forecast_qty,
9         sum(s.forecast_quantity-s.sold_quantity) as net_error,
10        round(sum(s.forecast_quantity-s.sold_quantity)*100/sum(s.forecast_quantity),1) as net_error_pct,
11        sum(abs(s.forecast_quantity-s.sold_quantity)) as abs_error,
12        round(sum(abs(s.forecast_quantity-s.sold_quantity))*100/sum(s.forecast_quantity),2) as abs_error_pct
13    from fact_act_est s
14    join dim_customer c
15    on s.customer_code = c.customer_code
16    where s.fiscal_year=2021
17    group by customer_code)
18 select
19     *,
20     if (abs_error_pct > 100, 0, 100.0 - abs_error_pct) as forecast_accuracy
```

```
21 from
22     forecast_err_table
23     order by forecast_accuracy desc;
24 • with forecast_err_table as (
25     select
26         s.customer_code as customer_code,
27         c.customer as customer_name,
28         c.market as market,
29         sum(s.sold_quantity) as total_sold_qty,
30         sum(s.forecast_quantity) as total_forecast_qty,
31         sum(s.forecast_quantity-s.sold_quantity) as net_error,
32         round(sum(s.forecast_quantity-s.sold_quantity)*100/sum(s.forecast_quantity),1) as net_error_pct,
33         sum(abs(s.forecast_quantity-s.sold_quantity)) as abs_error,
34         round(sum(abs(s.forecast_quantity-s.sold_quantity))*100/sum(s.forecast_quantity),2) as abs_error_pct
35     from fact_act_est s
36     join dim_customer c
37     on s.customer_code = c.customer_code
38     where s.fiscal_year=2020
39     group by customer_code
40 )
```



```
41 select
42     *,
43     if (abs_error_pct > 100, 0, 100.0 - abs_error_pct) as forecast_accuracy
44 from
45     forecast_err_table
46 order by forecast_accuracy desc;
47 • select
48     f_2020.customer_code,
49     f_2020.customer_name,
50     f_2020.market,
51     f_2020.forecast_accuracy as forecast_acc_2020,
52     f_2021.forecast_accuracy as forecast_acc_2021
53 from forecast_accuracy_2020 f_2020
54 join forecast_accuracy_2021 f_2021
55 on f_2020.customer_code = f_2021.customer_code
56 where f_2021.forecast_accuracy < f_2020.forecast_accuracy
57 order by forecast_acc_2020 desc;
```

customer_code	customer	market	forecast_accuracy_2020	forecast_accuracy_2021
70006158	Atliq e Store	Philippines	42.65	24.49
70008170	Atliq e Store	Australia	40.96	38.74
90005161	Zone	Pakistan	40.08	37.10
90014140	Radio Popular	Netherlands	38.53	0.00
90008166	Sound	Australia	38.51	36.79
70014143	Atliq e Store	Netherlands	38.32	0.00
90004062	Flawless Stores	Japan	38.22	32.56



THANKYOU !

- Presented by
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