

About AtliQ Hardwares & Problem Statement



AtliQ Hardwares, a leading hardware company specializing in PCs, printers, mice and computers with a global reach.

The expanding size of Excel files has led to performance problems, resulting in unresponsiveness and inefficiency. AtliQ Hardware has launched a project to tackle this issue by assembling a team of data analysts. They will utilize MySQL as their database management system to extract meaningful insight from the data. These insights will empower the company to enhance decision-making and optimize operations, ultimately boosting overall performance.



Croma India Product Wise Sales Report for Fiscal Year 2021

```
SELECT
    s.date,
    p.product_code,
    p.product,
    p.variant ,
    ROUND(g.gross_price,2) AS gross_price,
    ROUND(s.sold_quantity * g.gross_price,2) AS gross_price_total
FROM fact_sales_monthly s
JOIN dim_product p
ON p.product_code = s.product_code
JOIN fact_gross_price g
ON g.product_code = s.product_code AND g.fiscal_year = get_fiscal_year(s.date)
WHERE
    customer_code = 90002002 AND
    get_fiscal_year(date) = 2021
ORDER BY date ASC
limit 1000000
```

SQL Query

Output

date	product_code	product	variant	gross_price	gross_price_total
2020-09-01	A0118150101	AQ Dracula HDD ...	Standard	19.06	3849.57
2020-09-01	A0118150102	AQ Dracula HDD ...	Plus	21.46	3475.95
2020-09-01	A0118150103	AQ Dracula HDD ...	Premium	21.78	4203.44
2020-09-01	A0118150104	AQ Dracula HDD ...	Premium Plus	22.97	3354.04
2020-09-01	A0219150201	AQ WereWolf N...	Standard	23.70	3531.11
2020-09-01	A0219150202	AQ WereWolf N...	Plus	24.73	2646.24
2020-09-01	A0220150203	AQ WereWolf N...	Premium	23.62	2904.69
2020-09-01	A0320150301	AQ Zion Saga	Standard	23.72	3463.46
2020-09-01	A0321150302	AQ Zion Saga	Plus	27.10	6396.24
2020-09-01	A0321150303	AQ Zion Saga	Premium	28.01	3836.81
2020-09-01	A0418150103	AQ Mforce Gen X	Standard 3	19.52	449.04
2020-09-01	A0418150104	AQ Mforce Gen X	Plus 1	19.92	1633.76
2020-09-01	A0418150105	AQ Mforce Gen X	Plus 2	20.08	1726.59
2020-09-01	A0418150106	AQ Mforce Gen X	Plus 3	19.94	956.95
2020-09-01	A0519150201	AQ Mforce Gen Y	Standard 1	22.40	3090.98
2020-09-01	A0519150202	AQ Mforce Gen Y	Standard 2	24.93	1794.95
2020-09-01	A0519150203	AQ Mforce Gen Y	Standard 3	26.59	1010.31
2020-09-01	A0519150204	AQ Mforce Gen Y	Plus 1	26.11	3890.11
2020-09-01	A0519150205	AQ Mforce Gen Y	Plus 2	29.70	861.32
2020-09-01	A0519150206	AQ Mforce Gen Y	Plus 3	31.24	874.83
2020-09-01	A0519150207	AQ Mforce Gen Y	Premium 1	32.44	5547.70
2020-09-01	A0519150208	AQ Mforce Gen Y	Premium 2	30.58	3608.63
2020-09-01	A0619150301	AQ Mforce Gen Z	Standard 1	30.47	1553.95
2020-09-01	A0619150302	AQ Mforce Gen Z	Standard 2	34.10	6512.58

Monthly Total Gross Sales Report for Croma India



Output

```
SELECT MONTHNAME(s.date) AS months,  
       ROUND(SUM(g.gross_price * s.sold_quantity),2) AS total_gross_price  
FROM fact_sales_monthly s  
JOIN fact_gross_price g  
ON g.product_code = s.product_code AND  
   g.fiscal_year = get_fiscal_year(s.date)  
WHERE customer_code = 90002002  
GROUP BY s.date  
ORDER BY s.date ASC
```

SQL Query

months	total_gross_price
September	122407.56
October	162687.57
December	245673.80
January	127574.74
February	144799.52
April	130643.90
May	139165.10
June	125735.38
August	125409.88
September	343337.17
October	440562.08
December	653944.75
January	359025.02
February	356607.17
April	379549.69
May	340152.23
June	343792.04
August	338108.88
September	808250.44
October	1092622.20
December	1488174.02
January	812929.75

Yearly Gross Sales Report for Croma India



```
SELECT get_fiscal_year(date) AS fiscal_year,  
       ROUND(SUM(g.gross_price * s.sold_quantity)/1000000,2) AS "yearly_sales(million)"  
FROM fact_sales_monthly s  
JOIN fact_gross_price g  
ON g.product_code = s.product_code AND  
   g.fiscal_year = get_fiscal_year(s.date)  
WHERE customer_code = 90002002  
GROUP BY get_fiscal_year(date)  
ORDER BY fiscal_year
```

SQL Query

Output

fiscal_year	yearly_sales(million)
2018	1.32
2019	3.56
2020	6.50
2021	23.22
2022	44.64



Top Market for Financial Year 2021

```
SELECT market,  
       ROUND(SUM(net_sales)/1000000,2) AS net_sales_mln  
FROM net_sales s  
WHERE fiscal_year = 2021  
GROUP BY market  
ORDER BY net_sales_mln DESC  
LIMIT 5;
```

SQL Query

Output

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



Top *Product* for Financial Year 2021

```
SELECT product,  
       ROUND(SUM(net_sales)/1000000,2) AS net_sales_mln  
FROM net_sales s  
WHERE fiscal_year = 2021  
GROUP BY product  
ORDER BY net_sales_mln DESC  
LIMIT 5;
```

SQL Query

Output

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



Top Customer for Financial Year 2021

```
SELECT c.customer,  
       ROUND(SUM(net_sales)/1000000,2) AS net_sales_mln  
FROM net_sales s  
JOIN dim_customer c  
     ON c.customer_code = s.customer_code  
WHERE fiscal_year = 2021  
GROUP BY c.customer  
ORDER BY net_sales_mln DESC  
LIMIT 5;
```

SQL Query

Output

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



Net Sales % Share by Customers

```
WITH CTE AS (  
    SELECT  
        customer, round(sum(net_sales)/1000000,2) AS net_sales_mln  
    FROM net_sales s  
    JOIN dim_customer c  
        ON s.customer_code = c.customer_code  
    WHERE s.fiscal_year = 2021  
    GROUP BY customer  
    ORDER BY net_sales_mln DESC  
)  
SELECT *,  
    ROUND(net_sales_mln *100/SUM(net_sales_mln)OVER(),2) AS net_sales_pct  
FROM CTE  
ORDER BY net_sales_pct DESC  
LIMIT 10;
```

SQL Query

Output

customer	net_sales_mln	net_sales_pct
Amazon	109.03	13.23
Atliq Exclusive	79.92	9.70
Atliq e Store	70.31	8.53
Sage	27.07	3.29
Flipkart	25.25	3.06
Leader	24.52	2.98
Neptune	21.01	2.55
Ebay	19.88	2.41
Electricalsociety	16.25	1.97
Synthetic	16.10	1.95

Net Sales % Share by Region – “APAC”



```
WITH CTE AS (  
    SELECT  
        c.customer,  
        c.region,  
        sum(net_sales) AS net_sales_mln  
    FROM net_sales s  
    JOIN dim_customer c  
        ON s.customer_code = c.customer_code  
    WHERE s.fiscal_year = 2021 AND region="APAC"  
    GROUP BY c.customer  
    ORDER BY net_sales_mln DESC  
)  
SELECT customer,region,  
    ROUND(net_sales_mln *100/SUM(net_sales_mln)OVER(),2) AS net_sales_pct  
FROM CTE  
LIMIT 10;
```

Output

customer	region	net_sales_pct
Amazon	APAC	12.99
Atliq Exclusive	APAC	11.67
Atliq e Store	APAC	8.36
Leader	APAC	5.55
Sage	APAC	5.17
Neptune	APAC	4.75
Electricalsocity	APAC	3.68
Propel	APAC	3.20
Synthetic	APAC	3.20
Flipkart	APAC	2.93

SQL Query



Top 3 Market in Every Region by their Gross Sales Amount

```
WITH CTE AS (  
    SELECT c.market,  
           c.region,  
           round(sum(gross_price_total)/1000000,2) AS gross_sales_mln  
    FROM gross_sales s  
    JOIN dim_customer c  
      ON c.customer_code = s.customer_code  
    WHERE fiscal_year = 2021  
    GROUP BY c.market  
    ORDER BY gross_sales_mln desc  
) ,  
CTE2 AS (  
    SELECT *,  
           dense_rank() OVER(partition by region order by gross_sales_mln desc) AS drnk  
    FROM CTE)  
SELECT * FROM CTE2 WHERE drnk <=3
```

Output

market	region	gross_sales_mln	drnk
India	APAC	455.05	1
South Korea	APAC	131.86	2
Philippines	APAC	80.64	3
United Kingdom	EU	78.11	1
France	EU	67.62	2
Norway	EU	44.95	3
Mexico	LATAM	2.30	1
Brazil	LATAM	2.14	2
Chile	LATAM	1.46	3
USA	NA	264.46	1
Canada	NA	89.78	2

SQL Query





Supply Chain - Forecast

```
WITH forecast_err_table AS (
    SELECT
        s.customer_code AS customer_code,
        c.customer AS customer_name,
        c.market AS market,
        SUM(s.sold_quantity) AS total_sold_qty,
        SUM(s.forecast_quantity) AS total_forecast_qty,
        SUM(s.forecast_quantity - s.sold_quantity) AS net_err,
        ROUND(SUM(s.forecast_quantity - s.sold_quantity)*100 / SUM(s.forecast_quantity),1) AS net_error_pct,
        SUM(ABS(s.forecast_quantity - s.sold_quantity)) AS abs_net_err,
        ROUND(SUM(ABS(s.forecast_quantity - s.sold_quantity))*100 / SUM(forecast_quantity),1) AS abs_error_pct
    FROM fact_act_est s
    JOIN dim_customer c
        USING(customer_code)
    WHERE s.fiscal_year = 2021
    GROUP BY customer_code
)
SELECT *,
    IF(abs_error_pct > 100,0, 100 - abs_error_pct) AS forecast_accuracy
FROM forecast_err_table
ORDER BY forecast_accuracy ASC
```

Output

customer_code	customer_name	market	total_sold_qty	total_forecast_qty	net_err	net_error_pct	abs_net_err	abs_error_pct	forecast_accuracy
70014142	Atliq Exclusive	Netherlands	81324	44704	-36620	-81.9	47904	107.2	-7.2
70014143	Atliq e Store	Netherlands	81942	45314	-36628	-80.8	48544	107.1	-7.1
90014139	Elkjop	Netherlands	83198	46220	-36978	-80.0	48430	104.8	-4.8
90014138	Mbit	Netherlands	79249	43755	-35494	-81.1	45822	104.7	-4.7
90014140	Radio Popular	Netherlands	85581	47564	-38017	-79.9	49761	104.6	-4.6
90014135	Electricalance Stores	Netherlands	82731	46698	-36033	-77.2	48429	103.7	-3.7
90014141	Amazon	Netherlands	77462	43887	-33575	-76.5	45015	102.6	-2.6
90014137	Media Markt	Netherlands	77931	44783	-33148	-74.0	45748	102.2	-2.2
90014136	Reliance Digital	Netherlands	84808	48415	-36393	-75.2	48445	100.1	-0.1
90007197	Amazon	South Korea	344240	226857	-117383	-51.7	191047	84.2	15.8
90019202	Argos (Sainsbury's)	Sweden	26581	18075	-8506	-47.1	15130	83.7	16.3
90019203	Amazon	Sweden	27550	18912	-8638	-45.7	15780	83.4	16.6
70007198	Atliq Exclusive	South Korea	345667	228102	-117565	-51.5	188583	82.7	17.3
70007199	Atliq e Store	South Korea	358064	236637	-121427	-51.3	194953	82.4	17.6
80007196	Leader	South Korea	1456255	986574	-469681	-47.6	807109	81.8	18.2
90012036	Billa	Germany	118242	80367	-37875	-47.1	65667	81.7	18.3
90012034	Otto	Germany	112107	76219	-35888	-47.1	62208	81.6	18.4
90012035	Notebillig	Germany	116882	80119	-36763	-45.9	64997	81.1	18.9
90012037	Saturn	Germany	110414	76997	-33417	-43.4	62237	80.8	19.2
80007195	Sage	South Korea	1443568	976823	-466745	-47.8	786971	80.6	19.4
70012043	Atliq e Store	Germany	114116	80261	-33855	-42.2	64375	80.2	19.8
90019201	Expert	Sweden	25685	17974	-7711	-42.9	14281	79.5	20.5
70019204	Atliq e Store	Sweden	27840	19488	-8352	-42.9	15296	78.5	21.5

SQL Query





Supply Chain - Forecast

- Net Sales of Amazon is highest with 109.03M in fiscal year 2021 followed by AtliQ Exclusive with 79.92M
- Market in India generated maximum net sales with 210.67M in fiscal year 2021 followed by USA with 132.05M
- Amazon generated 13.23% of Total Net Sales among all customer in fiscal year 2021
- In APAC region, Amazon contributed maximum net sales % of 12.99% among rest customer in 2021
- In APAC, region India ranks 1 in terms of Total Gross Sales.



THANK YOU

