



# Finance and supply chain analytics of AtliQ Hardware

Unlocking Data Insights for AtliQ Hardware with SQL

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# About AtliQ Hardware

AtliQ Hardware is a leading provider of computer hardware and peripherals, serving customers worldwide with cutting-edge technology solutions. Specializing in consumer electronics, our company operates on a global scale, reaching diverse markets across numerous countries.

# Business Model

- ❖ The business model of AtliQ hardware revolves around selling products to customers such as Amazon, Flipkart, and Croma, who then distribute them to the actual consumers.
- ❖ AtliQ Hardware operates through three primary platforms:
  1. Retailer: We partner with established retailers such as Croma and Best Buy
  2. Direct: AtliQ Stores
  3. Distributor: distributors like Neptune



# Problem Statement

AtliQ Hardware is experiencing performance issues due to the growing size and complexity of its Excel files. To address this, the company has initiated a project to assemble a team of data analysts. This team will utilize MySQL as their database management system to extract meaningful insights from the data. These insights will help enhance decision-making and optimize operations, ultimately improving overall performance.

# Project Overview

This project analyzes AtliQ Hardware's database to uncover insights on sales, market dynamics, customer behavior, and supply chain trends. It leverages SQL for data retrieval, advanced queries, finance analytics, and supply chain basics, aiming to enhance decision-making and operational efficiency.

# Task – Generate a report detailing the individual product sales for Croma India for the fiscal year 2021.

SQL Query

```
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
```

Output Sheet

	date	product_code	product	variant	sold_quantity	gross_price	gross_price_total
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	
2020-09-01	A0519150207	AQ Mforce Gen Y	Premium 1	171	32.4427	5547.70	
2020-09-01	A0519150208	AQ Mforce Gen Y	Premium 2	118	30.5816	3608.63	
2020-09-01	A0619150301	AQ Mforce Gen Z	Standard 1	51	30.4696	1553.95	
2020-09-01	A0619150302	AQ Mforce Gen Z	Standard 2	191	34.0973	6512.58	
2020-09-01	A0620150303	AQ Mforce Gen Z	Standard 3	167	34.2412	5718.28	

# Task – Generate monthly gross sales report for Croma India for all the years

SQL Query

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

Output Sheet

	date	monthly_sales
▶	2017-09-01	122407.57
	2017-10-01	162687.56
	2017-12-01	245673.84
	2018-01-01	127574.73
	2018-02-01	144799.54
	2018-04-01	130643.92
	2018-05-01	139165.06
	2018-06-01	125735.36
	2018-08-01	125409.90
	2018-09-01	343337.14
	2018-10-01	440562.10
	2018-12-01	653944.72
	2019-01-01	359025.06
	2019-02-01	356607.19
	2019-04-01	379549.74
	2019-05-01	340152.29

# Task - Generate monthly gross sales report for any customer using stored procedure

SQL Query

Name: get\_monthly\_gross\_sales

The name of the statement. The D

DDL:

```
1 • CREATE DEFINER='root'@'localhost' PROCEDURE `get_monthly_gross_sales`(
2     in_customer_codes text)
3 BEGIN
4     SELECT s.date ,
5         round(sum(g.gross_price * s.sold_quantity),2) as Monthly_sales
6     from fact_sales_monthly s
7     join fact_gross_price g
8     on g.product_code=s.product_code and
9         g.fiscal_year=get_fiscal_year (s.date)
10    where find_in_set(s.customer_code, in_customer_codes)>0
11    group by s.date;
12 END
```

Output Sheet

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	date	Monthly_sales
▶	2017-10-01	164940.34
	2017-11-01	220791.94
	2017-12-01	249767.46
	2018-02-01	142032.33
	2018-03-01	139358.23
	2018-04-01	124908.49
	2018-06-01	147559.75
	2018-07-01	140530.44
	2018-08-01	147409.67
	2018-10-01	470715.93
	2018-11-01	568214.20
	2018-12-01	645438.81
	2019-02-01	321065.10

# Task - Get the Net Invoice sales amount using the CTE's

SQL Query

```
1 • ⊖ WITH cte1 AS (
2     SELECT s.date, s.customer_code, s.product_code, p.product, p.variant,
3             s.sold_quantity,
4             g.gross_price AS gross_price_per_item,
5             ROUND(s.sold_quantity*g.gross_price,2) AS gross_price_total,
6             pre.pre_invoice_discount_pct
7     FROM fact_sales_monthly s
8     JOIN dim_product p
9         ON s.product_code=p.product_code
10    JOIN fact_gross_price g
11        ON g.fiscal_year=s.fiscal_year
12        AND g.product_code=s.product_code
13    JOIN fact_pre_invoice_deductions AS pre
14        ON pre.customer_code = s.customer_code AND
15           pre.fiscal_year=s.fiscal_year
16    WHERE s.fiscal_year=2021)
17    SELECT *,
18        (gross_price_total-pre.invoice_discount_pct*gross_price_total) AS net_invoice_sales
19    FROM cte1
```

Output Sheet

date	customer_code	product_code	product	variant	sold_quantity	gross_price_per_item	gross_price_total	pre_invoice_discount_pct	net_invoice_sales
2020-09-01	70002017	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	248	19.0573	4726.21	0.0703	4393.957437
2020-09-01	70002018	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	240	19.0573	4573.75	0.2061	3631.100125
2020-09-01	70003181	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	31	19.0573	590.78	0.0974	533.238028
2020-09-01	70003182	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	37	19.0573	705.12	0.2065	559.512720
2020-09-01	70004069	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	7	19.0573	133.40	0.1068	119.152880
2020-09-01	70004070	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	12	19.0573	228.69	0.2612	168.956172
2020-09-01	70005163	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	17	19.0573	323.97	0.2471	243.917013
2020-09-01	70006157	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	60	19.0573	1143.44	0.0858	1045.332848
2020-09-01	70006158	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	34	19.0573	647.95	0.2450	489.202250
2020-09-01	70007198	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	24	19.0573	457.38	0.0736	423.716832
2020-09-01	70007199	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	88	19.0573	1677.04	0.2105	1324.023080
2020-09-01	70008169	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	49	19.0573	933.81	0.0793	859.758867
2020-09-01	70008170	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	60	19.0573	1143.44	0.1817	935.676952
2020-09-01	70009133	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	7	19.0573	133.40	0.0961	120.580260
2020-09-01	70009134	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	21	19.0573	400.20	0.2899	284.182020
2020-09-01	70010047	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	37	19.0573	705.12	0.0552	666.197376
2020-09-01	70011193	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	70	19.0573	1334.01	0.1056	1193.138544
2020-09-01	70011194	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	18	19.0573	343.03	0.1859	279.260723
2020-09-01	70012042	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	28	19.0573	533.60	0.0936	483.655040
2020-09-01	70012043	A0118150101	AQ Dracula HDD - 3.5 Inc...	Standard	29	19.0573	552.66	0.2287	426.266658

# Task - Get top 5 market by net sales in fiscal year 2021

**SQL Query**

```
1 •  SELECT
2         market,
3             round(sum(net_sales)/1000000,2) as net_sales_mln
4     FROM gdb0041.net_sales
5     where fiscal_year=2021
6     group by market
7     order by net_sales_mln desc
8     limit 5
```

**Output Sheet**

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

# Task - Determine the customer's contribution percentage to net sales.

SQL Query

```
1 • with cte1 as (
2     select      customer,
3                 round(sum(net_sales)/1000000,2) as net_sales_mln
4     from net_sales s
5     join dim_customer c
6         on s.customer_code=c.customer_code
7     where s.fiscal_year=2021
8     group by customer)
9
10    select
11        *, net_sales_mln*100/sum(net_sales_mln) over() as pct_net_sales
12    from cte1
13
14    order by net_sales_mln desc
```

Output Sheet

	customer	net_sales_mln	pct_net_sales
▶	Amazon	109.03	13.233402
	Atliq Exclusive	79.92	9.700206
	Atliq e Store	70.31	8.533803
	Sage	27.07	3.285593
	Flipkart	25.25	3.064692
	Leader	24.52	2.976089
	Neptune	21.01	2.550067
	Ebay	19.88	2.412914
	Electricalsocity	16.25	1.972327
	Synthetic	16.10	1.954121
	Electricalslytical	15.64	1.898289
	Acclaimed Sto...	14.32	1.738075
	Propel	14.14	1.716228
	My...	12.21	1.566228

Task - Get the top 3 products in each division based on the total quantity sold within a specific year.

SQL Query

```
1 •  with cte1 as
2   (select
3     c.market, c.region,
4     round(sum(gross_price_total)/1000000,2) as gross_sales_mln
5   from gross_sales g
6   join dim_customer c
7   on g.customer_code=c.customer_code
8   where g.fiscal_year = 2021
9   group by c.market, c.region order by gross_sales_mln desc),
10  Cte2 as (
11    Select *,
12      dense_rank () over (partition by region order by gross_sales_mln desc) as drnk
13    from cte1)
14  Select * from cte2
15  where drnk <= 3;
```

Output Sheet

	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

# Conclusion

- ❖ Croma India reported its peak sales in the fiscal year of 2022 (44.6 mln).
- ❖ Amazon recorded the highest net sales across all customers in the fiscal year of 2021.
- ❖ The Indian market saw the highest net sales at 210.67 mln, followed by the USA at 132.05 mln.
- ❖ In the APAC region, Amazon had the highest contribution in sales, followed by AtliQ Exclusive and AtliQ E-Store.
- ❖ In the APAC region, "AQ Pen-Drive DRC" of "N&S Division," "AQ Gamers ME" of "P&A Division," and "AQ Digit" of "PC Division" were the top-selling products in 2021.