



ATLIQ HARDWARE



AtliQ Hardware

SALES INSIGHTS
from
AD-HOC REQUESTS



By NITIN MALIK.

Agenda



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ATLIQ HARDWARE

INTRODUCTION

AtliQ hardware ,
one of the leading computer hardware producers in
India with customers across the globe ,want to get
insights on company product sales to make data
informed decisions

Business Overview: - AtliQ Hardware is a fictitious company that sells computer hardware and peripherals like PC, mouse, printer etc. to clients across the world. -

They have a major B2B business model wherein they sell to stores like Croma, Best Buy, Staples, Flipkart etc. who then sell it to the end users (consumers).

- These stores are their main customers. - They sell through 3 channels: Retailer, Direct and Distributor.
- - AtliQ Hardware's Customers are of two types. Both these Platforms are called Retailer channels. 1. Brick & Mortar Customer: Actual physical stores e.g. Croma, Best Buy 2. E-commerce Customer: Online websites E.g. Amazon, Flipkart
- - AtliQ Hardware also has a minor B2C business model wherein they own stores: AtliQ E-store and AtliQ Exclusive. These are called Direct channels. - They manufacture products under 3 major divisions: Networking & Storage, PC, Peripherals & Accessories. -
- They are currently operational in NA, LATAM, EU and APAC regions. D

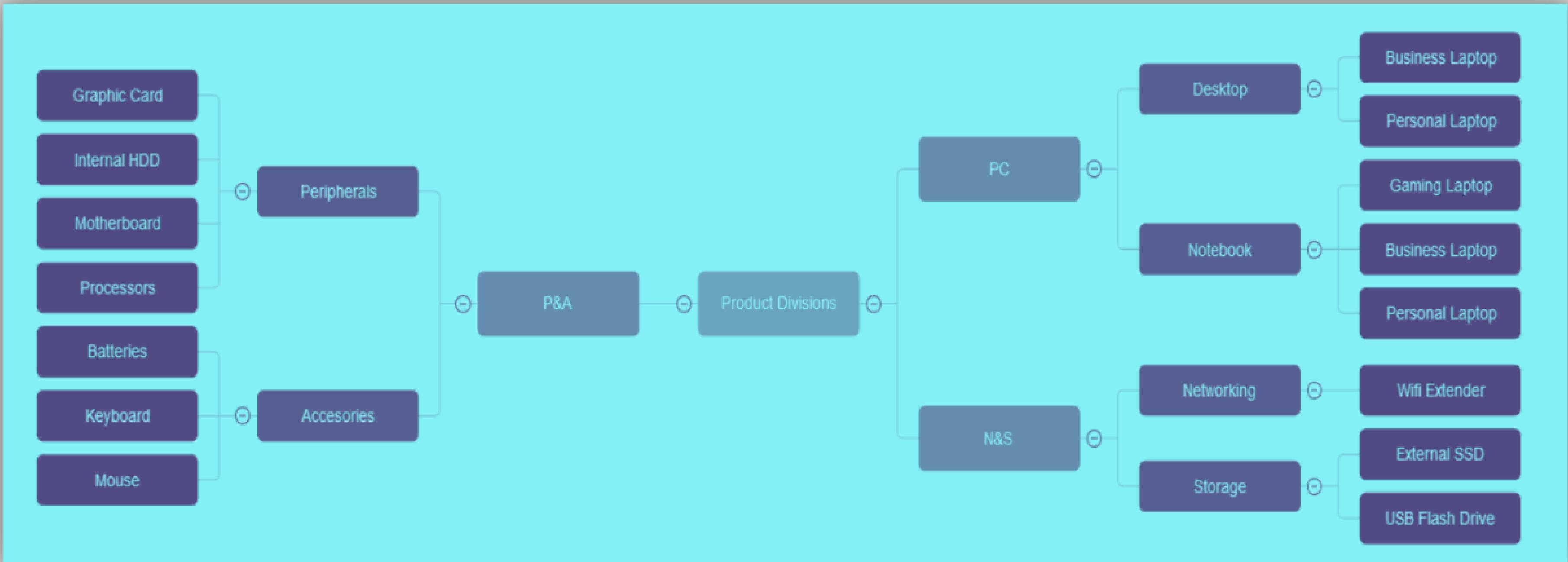
AD-HOC Queries



TOOLS: MYSQL - QUERIES |

The objective is to **craft efficient SQL queries** that address **10 on-demand business inquiries** from the Data Analytics Director, with the intention of gaining meaningful insights into the consumer goods industry. By tackling these varied requests, I provided targeted responses to key business questions, helping the company gain a clearer understanding of its product offerings, sales patterns among different customer segments, and a monthly summary of products sold.

Products division





1 Provide the list of markets in which customer “Atliq Exclusive” operates its business in the APAC region

Query and result

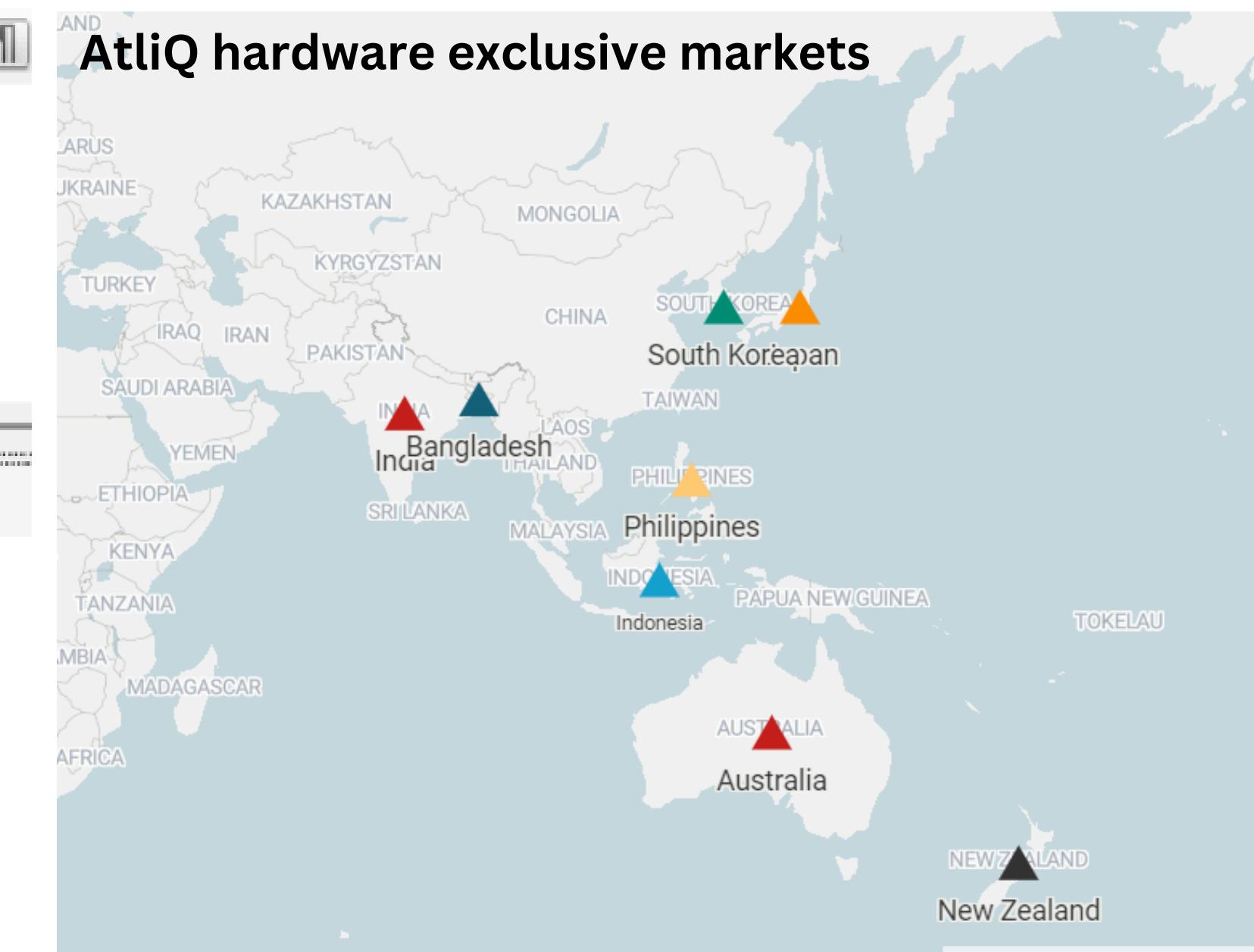
Query:

```
1 • SELECT distinct (market) as AtliQ_exclusive_markets
2   FROM gdb023.dim_customer
3   where customer="Atliq Exclusive" and region="APAC";
```

Result Grid:

AtliQ_exclusive_markets
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh

visual



Insight: - Atliq Exclusive has established a presence in eight key markets within the APAC region



2 What is the percentage increase of unique product in 2021 vs. 2020?

Query and result

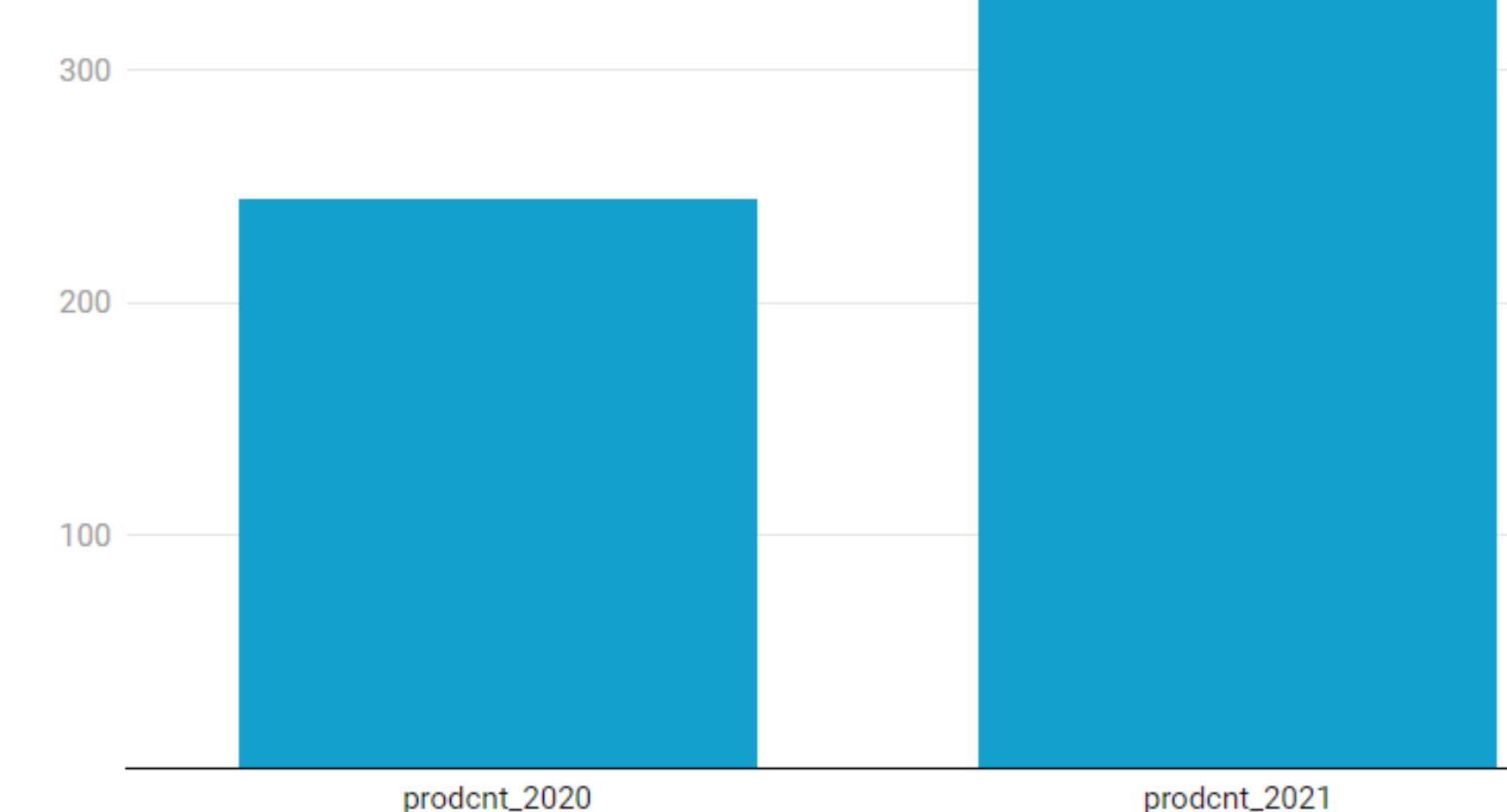
```
1 • ① with uniqprod_2020 as (
2     select count(distinct(product_code)) as prodcnt_2020
3     from fact_sales_monthly
4     where fiscal_year=2020
5 ),
6 ② uniqprod_2021 as (
7     select count(distinct(product_code)) as prodcnt_2021
8     from fact_sales_monthly
9     where fiscal_year=2021
10 )
11 select
12     prodcnt_2020,prodcnt_2021,
13     round(((prodcnt_2021-prodcnt_2020)/prodcnt_2020)*100,2) as prodcnt_inc_pct
14 from uniqprod_2020,uniqprod_2021
```

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

prodcnt_2020	prodcnt_2021	prodcnt_inc_pct
245	334	36.33

visual

[Unique Products]



Insight: - In FY 2020, we had a total of 245 products and in FY 2021, the number of products increased to 334, reflecting a 36.33 % growth



3 Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

Query and result

```
1 • select
2     segment ,
3     count(product_code) as prod_cnt
4   from dim_product
5   group by segment
6   order by prod_cnt desc
```

Result Grid | Filter Rows: Export: Wrap Cell Content

segment	prod_cnt
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9

visual

[unique product count by segments]



Insight: - Atliq Hardware presents an extensive array of products across the Notebook, Accessories and Peripherals segments. - There is a strategic need consider strategies to broaden the product portfolio by introducing trending products in lower-count segments like Desktop, Networking, and Storage segments.



4 Which segment had the most percentage increase in unique products in 2021 vs 2020?

Query

```
1 •  with uniqsegprod_2020 as
2   (
3     select segment as seg_2020,
4       count(distinct(s.product_code)) as prodcnt_2020
5     from dim_product
6     join fact_sales_monthly as s using (product_code)
7     where s.fiscal_year=2020
8     group by segment
9   ),
10  uniqsegprod_2021 as(
11    select segment as seg_2021,
12      count(distinct(s.product_code)) as prodcnt_2021
13    from dim_product
14    join fact_sales_monthly as s using (product_code)
15    where s.fiscal_year=2021
16    group by segment)
17
18  select seg_2020 as segment,
19        prodcnt_2020,prodcnt_2021,
20        round(((prodcnt_2021-prodcnt_2020)/prodcnt_2020)*100,2) as segprodcnt_inc_pct
21  from uniqsegprod_2020 as u20,uniqsegprod_2021 as u21
22  where u20(seg_2020)=u21(seg_2021)
23  order by segprodcnt_inc_pct desc
```

Result and visual

[product portfolio growth by segments]

segment	prodcnt_2020	prodcnt_2021	segprodcnt_inc_pct
Desktop	7	22	214
Networking	6	9	50
Accessories	69	103	49
Storage	12	17	42
Peripherals	59	75	27
Notebook	92	108	17

Insight: - In FY 2021, Atliq Hardware primarily focused on expanding its presence in the Desktop segment, introducing a total of 15 new products (214.9 % growth from FY 2020) to the market. - While Notebook segment had the highest product count of 108 in FY 2021, it experienced the slowest growth of just 17.39 % from FY 2020.



5 List the products with the highest and lowest manufacturing costs

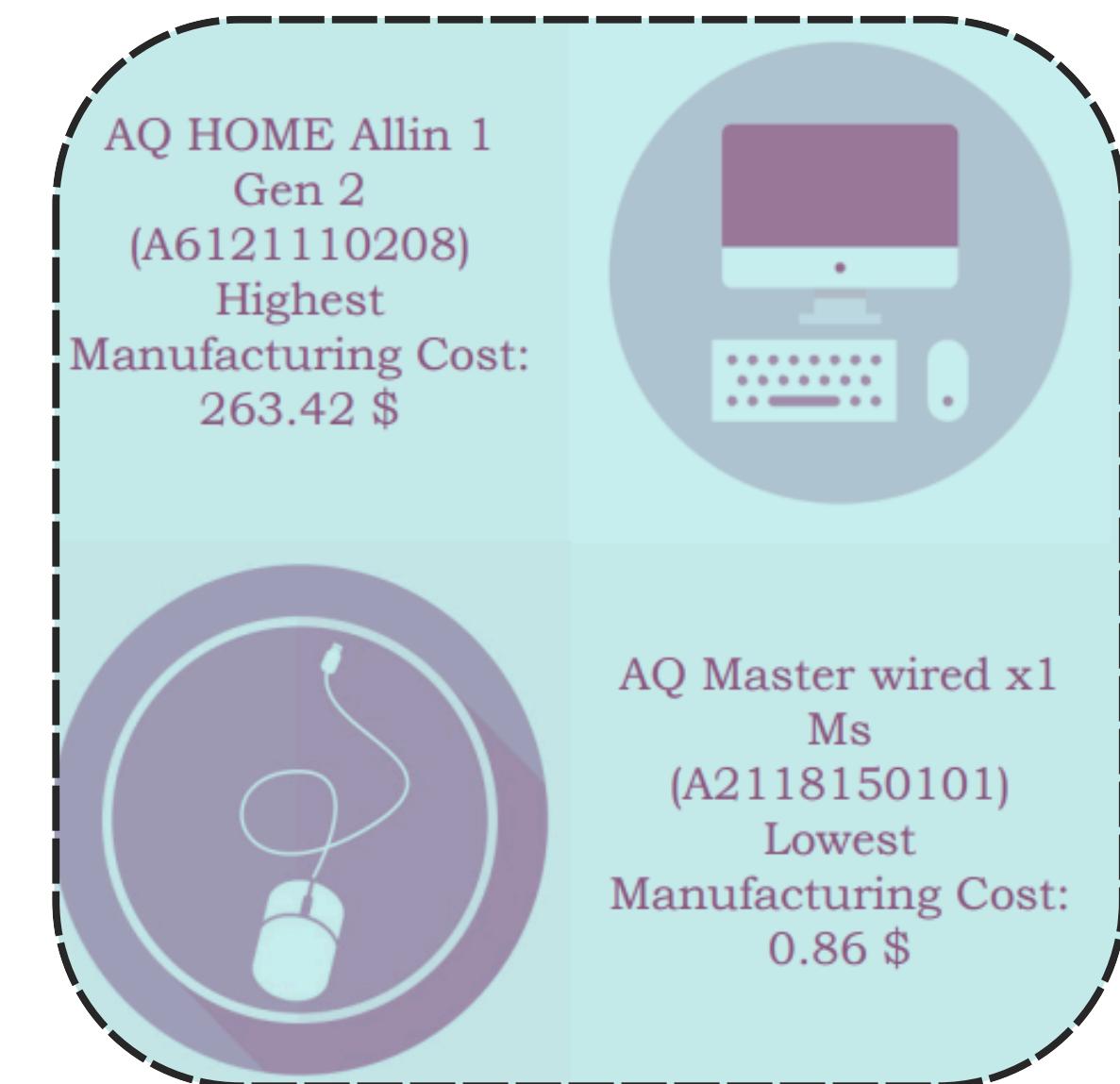
Query and result

```
1 •  with prod_mfcost as
2   (
3     select product_code,product,category,manufacturing_cost
4       from dim_product
5      join fact_manufacturing_cost using (product_code)
6   )
7   (select *,"max" as result
8    from prod_mfcost
9   order by manufacturing_cost desc
10  limit 1)
11 union
12 (select *,"min" as result
13  from prod_mfcost
14  order by manufacturing_cost asc
15  limit 1)
```

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

product_code	product	category	manufacturing_cost	result
A6120110206	AQ HOME Allin1 Gen 2	Personal Desktop	240.5364	max
A2118150101	AQ Master wired x1 Ms	Mouse	0.8920	min

visual



Insight: -

Review production processes for high-cost products in PC segment to identify potential cost-saving measures. - Review production methods of low-cost products in P&A segment to replicate efficient practices across other product lines



6

Generate a report which contains the top 5 customers who received a higher than average pre-invoice discount % for the fiscal year 2021 in the Indian market.

Query and result

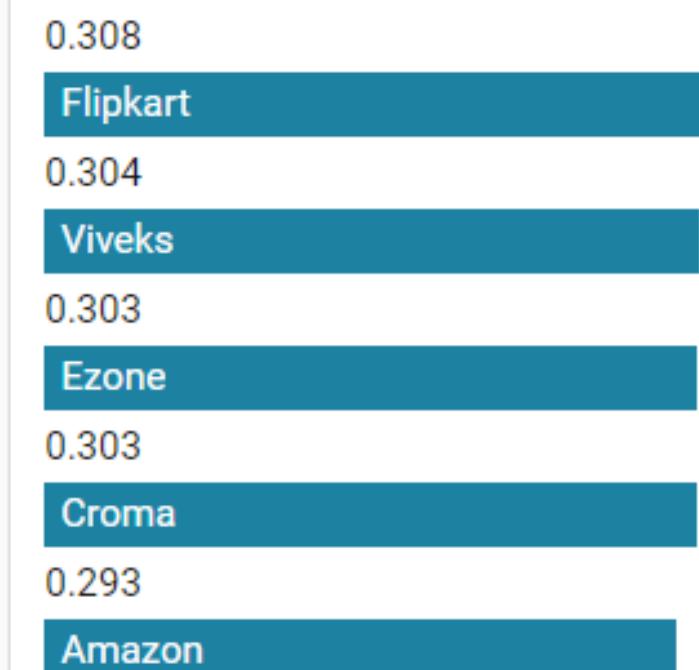
```
1 • select d.customer_code,d.customer,
2     f. pre_invoice_discount_pct as higher_PID
3     from dim_customer as d
4     join fact_pre_invoice_deductions as f using (customer_code)
5     where f.fiscal_year=2021
6     and d.market="India"
7     and pre_invoice_discount_pct > (select avg(pre_invoice_discount_pct) from fact_pre_invoice_deductions
8     where fiscal_year=2021)
9     order by higher_PID desc
10    limit 5
```

Result Grid | Filter Rows: _____ | Export: _____ | Wrap Cell Content: _____ | Fetch rows: _____

customer_code	customer	higher_PID
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

visual

[high pre_invoice discount customers]



Insight: - Flipkart (90002009) holds the position of the most heavily discounted customer in the Indian market, with a pre-invoice discount percentage of 30.83 % in FY 2021 as compared to the overall average of 23.4 %. - Atliq extended approximately similar pre-invoice discount percentages (~ 30 %) to each of its top 4 customers in FY 2021. AtliQ should engage in negotiations to secure more favorable terms with these high-discount customers by implementing loyalty programs or volume-based incentives to maintain customer satisfaction while reducing the average discount rate thereby improving profit margins



7

Get the complete report of the Gross Sales amount for the customer “Atliq Exclusive” for each month.

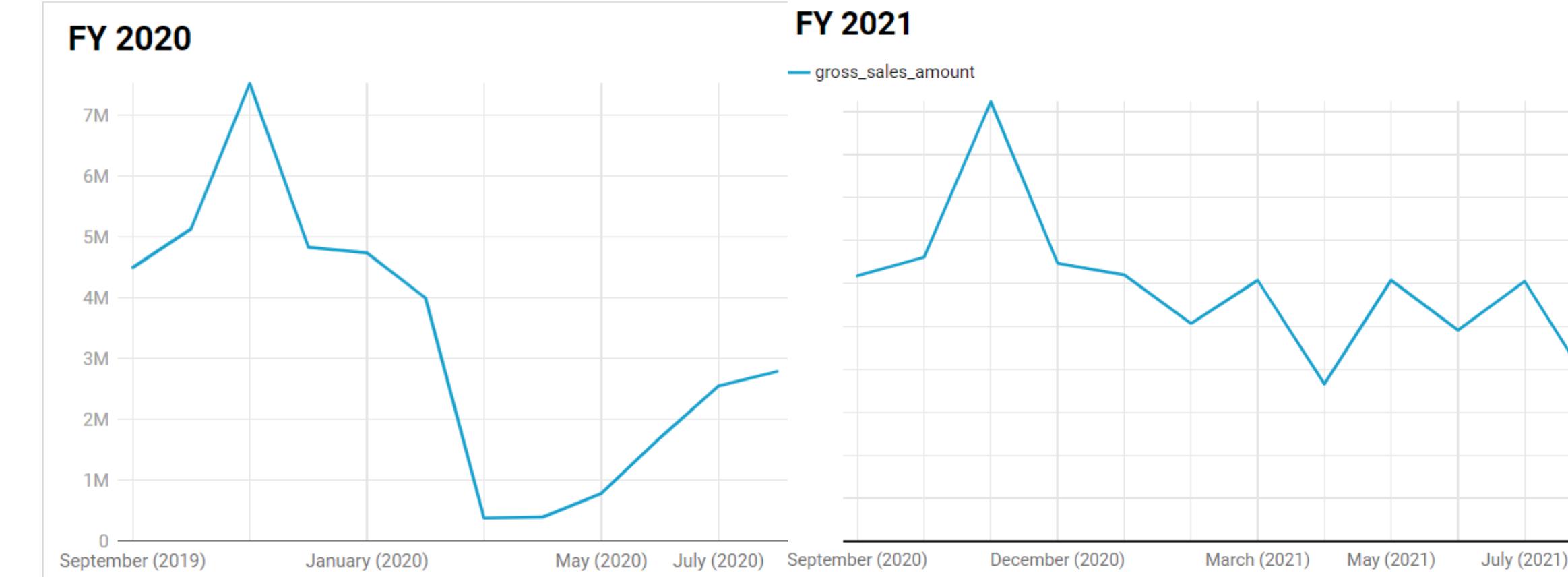
Query and result

```
1 • select
2   date_format(f.date, '%M (%Y)') AS month,
3   f.fiscal_year AS fiscal_year,
4   round(sum(f.sold_quantity*g.gross_price),2) AS gross_sales_amount
5   from fact_sales_monthly f
6   join dim_customer as d
7   on f.customer_code=d.customer_code
8   join fact_gross_price as g
9   on f.product_code=g.product_code and f.fiscal_year=g.fiscal_year
10  where d.customer= "Atliq Exclusive"
```

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

month	fiscal_year	gross_sales_amount
September (2019)	2020	4496259.67
October (2019)	2020	5135902.35
November (2019)	2020	7522892.56
December (2019)	2020	4830404.73
January (2020)	2020	4740600.16
February (2020)	2020	3996227.77
March (2020)	2020	378770.97
April (2020)	2020	395035.35
May (2020)	2020	783813.42
June (2020)	2020	1695216.60
July (2020)	2020	2551159.16

visual



Insight: - Atliq Exclusive experienced its highest sales of 20.46M \$ in November 2020, whereas March 2020 recorded the lowest sales of 0.38M \$. - Monthly Gross Sales for Atliq Exclusive peaked in November and tanked in April for both 2019 and 2020. - Decline in Monthly Gross Sales between March and August 2020 can be attributed to the impact of Covid-19. Post Covid-19 sales have optimistically rebounded in August remaining robust and surpassing the levels seen in FY 2020.



8 Which Quarter of 2020, got the maximum Total Sold Quantity?

Query and result

```
1 •   SELECT
2     CASE
3       when date between '2019-09-01' and '2019-11-01' then 'Q1'
4       when date between '2019-12-01' and '2020-02-01' then 'Q2'
5       when date between '2020-03-01' and '2020-05-01' then 'Q3'
6       when date between '2020-06-01' and '2020-08-01' then 'Q4'
7     END AS Q,
8     round(sum(sold_quantity)/1000000,2) as total_sold_qty_mln
9   from fact_sales_monthly
10  where fiscal_year=2020
```

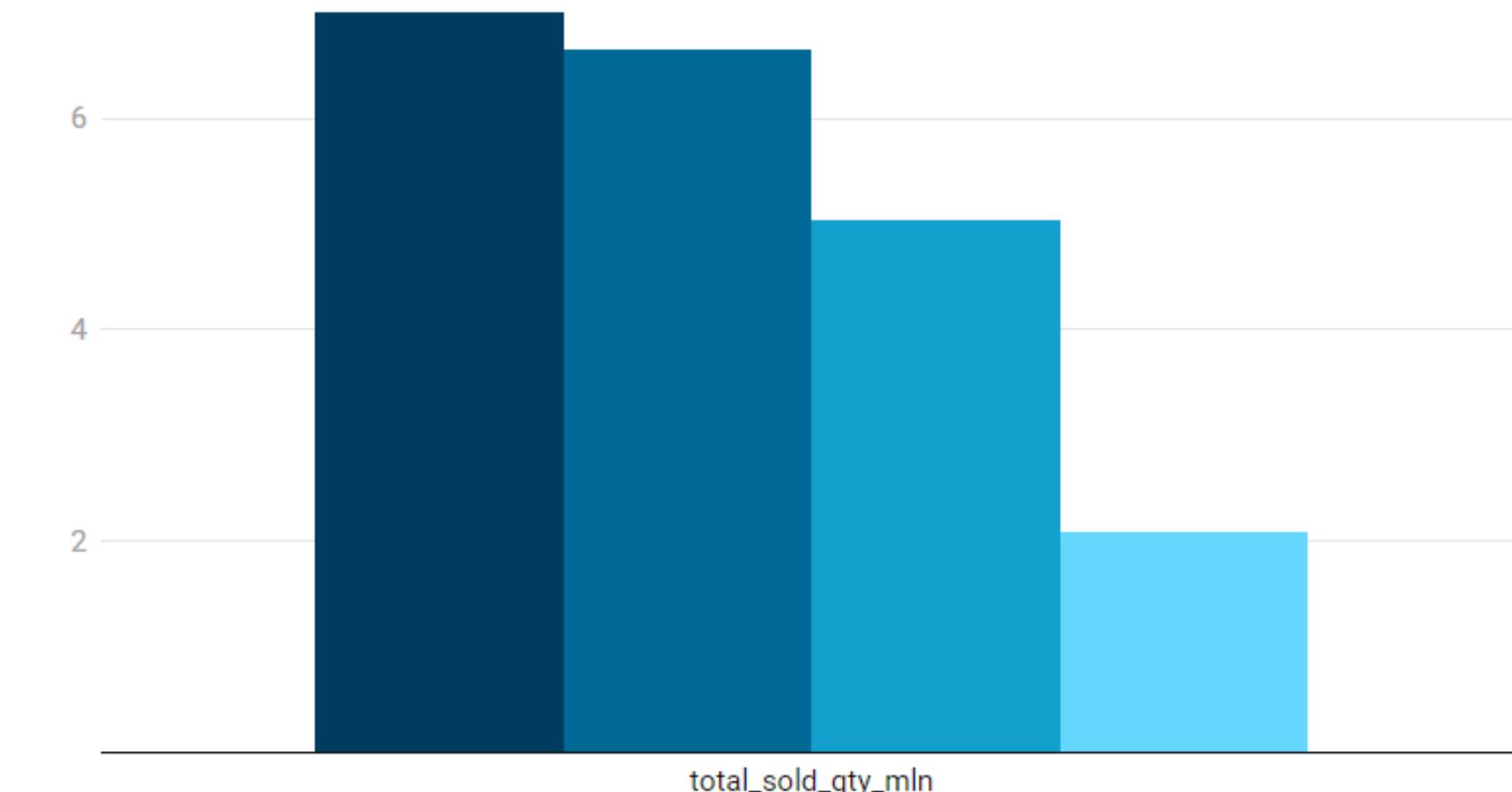
Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Q	total_sold_qty_mln
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

visual

Total Sold qty by FY 2020 quarters

■ Q1 ■ Q2 ■ Q4 ■ Q3



Insight: -

In FY 2020 Q1 had the highest Total Sold Quantity at around 7.01 Million units. - In FY 2020 Q3 (March, April and May), the Total Sold Quantity plummeted to its lowest at around 2.08 Million units during the peak of Covid-19 due to widespread lockdowns impacting all businesses.



9 Which channel helped to bring more Gross Sales in the fiscal year 2021 and the Contribution %?

Query and result

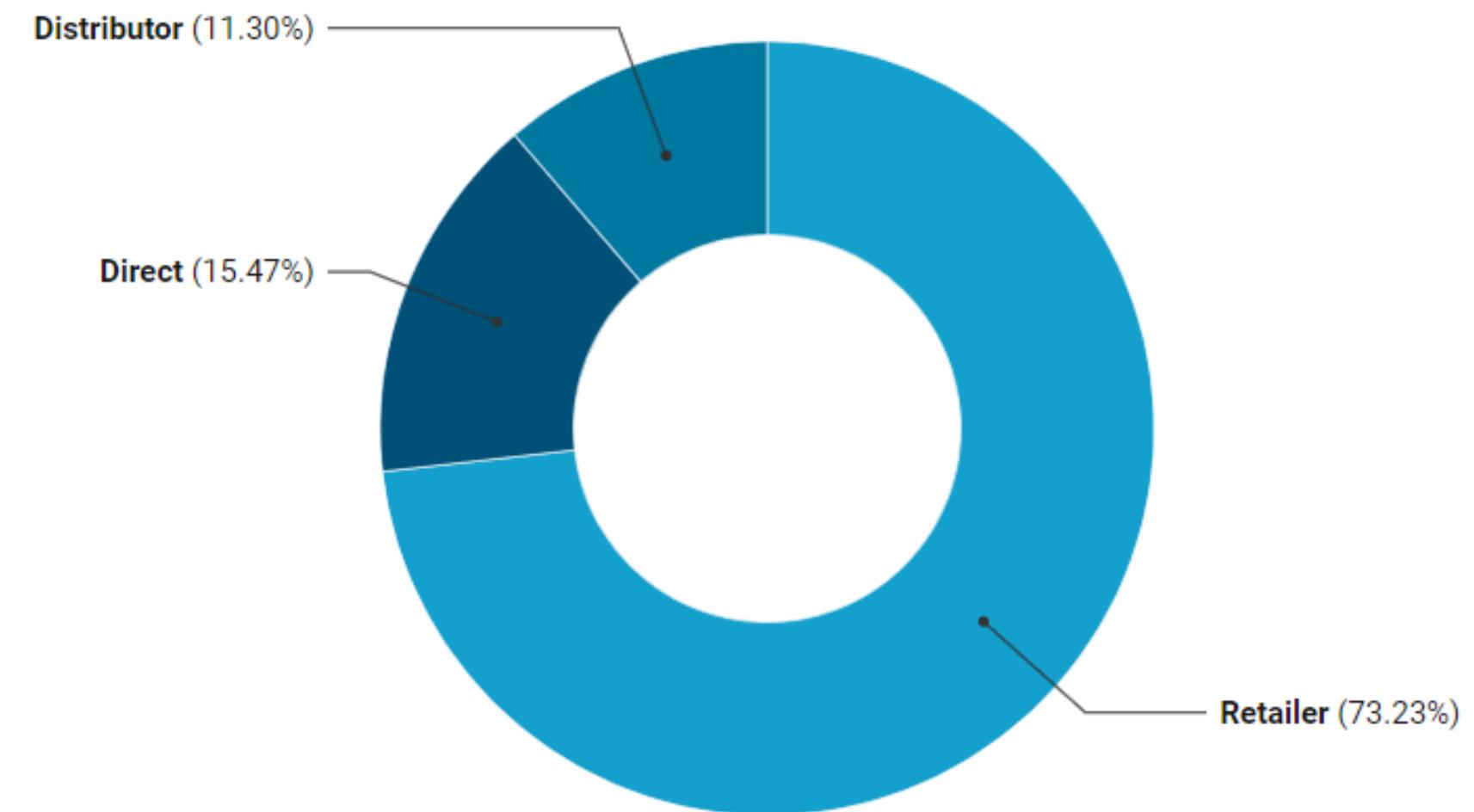
```
1 •  with channel_gs as
2   (
3     select c.channel,
4       round(sum(s.sold_quantity*g.gross_price)/1000000,2) as channel_gross_sales
5     from fact_sales_monthly as s
6     join dim_customer c using (customer_code)
7     join fact_gross_price g
8     on s.product_code=g.product_code and
9     s.fiscal_year=g.fiscal_year
10    where s.fiscal_year=2021
11    group by c.channel
12  )
13  select
14    channel,channel_gross_sales,
15    round(channel_gross_sales/sum(channel_gross_sales) over() *100 ,2) as percentage
16  from channel_gs
17  order by channel_gross_sales desc
```

Result Grid		
	channel	channel_gross_sales
▶	Retailer	1219.08
	Direct	257.53
	Distributor	188.03

Filter Rows: Export: Wrap Cell Content:

visual

channel wise gross sales contribution % - 2021



Insight: - Overall 73.23 % of AtliQ's majority Gross Sales were conducted through their Retailer channel. In contrast, sales through Direct channel (15.47 %) and Distributor channels (11.30 %) together make up around a quarter of the total revenue.



10 Get the Top 3 products in each division that have a high Total Sold Quantity in FY 2021?

Query and result

```

1 • with prod_sold_qty as
2   (select
3     p.product_code,p.product,p.division,
4     sum(s.sold_quantity) as total_sold_qty
5     from fact_sales_monthly s
6     join dim_product p
7     on s.product_code=p.product_code
8     where s.fiscal_year=2021
9     group by p.product_code,p.product,p.division
10   ),
11   div_sold_qty_ranks as
12   (
13     select
14       product_code,product,division,
15       total_sold_qty,
16       dense_rank () over (partition by division order by total_sold_qty desc) as sold_qty_div_rank
17     from prod_sold_qty
18     order by division,sold_qty_div_rank
19   )
20   select *
21   from div_sold_qty_ranks
22   where sold_qty_div_rank <4

```

product_code	product	division	total_sold_qty	sold_qty_div_rank
A6720160103	AQ Pen Drive 2 IN 1	N & S	701373	1
A6818160202	AQ Pen Drive DRC	N & S	688003	2
A6819160203	AQ Pen Drive DRC	N & S	676245	3
A2319150302	AQ Gamers Ms	P & A	428498	1
A2520150501	AQ Maxima Ms	P & A	419865	2
A2520150504	AQ Maxima Ms	P & A	419471	3
A4218110202	AQ Digit	PC	17434	1
A4319110306	AQ Velocity	PC	17280	2
A4218110208	AQ Digit	PC	17275	3

visual

division wise top 3 products by qty sold

N & S P & A PC

A6720160103

N & S 701373.0



A6818160202

N & S 688003.0



A6819160203

N & S 676245.0



A2319150302

P & A 428498.0



A2520150501

P & A 419865.0



A2520150504

P & A 419471.0



A4218110202

PC 17434.0



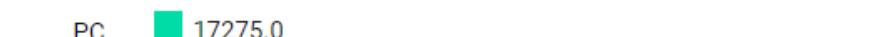
A4319110306

PC 17280.0



A4218110208

PC 17275.0



- **Insight:** -
- **Top 3 best-selling products in the N & S division were Pen drives. -**
- **Top 3 best-selling products in the P & A division were Mouse.**
- **Top 3 best-selling products in the PC division were Laptops.**

APPENDIX



Email

jsjnmalik@gmail.com



project on github

<https://github.com/Nitin-Malik27/Consumer-Goods-Domain-using-mySQL-by-nitin->