

CONSUMER GOODS AD_HOC INSIGHTS FOR ATLIQ_HARDWARES

BY POOJA S

INTRODUCTION

- ATLIQ HARDWARES (IMAGINARY COMPANY) IS ONE OF THE LEADING COMPUTER HARDWARE PRODUCERS IN INDIA AND WELL EXPANDED IN OTHER COUNTRIES TOO.
- HOWEVER, THE MANAGEMENT NOTICED THAT THEY DO NOT GET ENOUGH INSIGHTS TO MAKE QUICK AND SMART DATA-INFORMED DECISIONS. THEY WANT TO EXPAND THEIR DATA ANALYTICS TEAM BY ADDING SEVERAL JUNIOR DATA ANALYSTS. TONY SHARMA, THEIR DATA ANALYTICS DIRECTOR WANTED TO HIRE SOMEONE WHO IS GOOD AT BOTH TECH AND SOFT SKILLS. HENCE, HE DECIDED TO CONDUCT A SQL CHALLENGE WHICH WILL HELP HIM UNDERSTAND BOTH THE SKILLS.

DOMAIN: CONSUMER GOODS

FUNCTION: EXECUTIVE MANAGEMENT

REQUEST 1

PROVIDE THE LIST OF MARKETS IN WHICH CUSTOMER "ATLIQ EXCLUSIVE" OPERATES ITS BUSINESS IN THE "APAC" REGION:

```
1 •  SELECT DISTINCT MARKET  
2      FROM gdb023.dim_customer  
3      WHERE REGION='APAC' AND CUSTOMER="Atliq Exclusive"
```

<

Result Grid | Filter Rows: [] | Export: [] | Wrap Cell C

| MARKET |
|-------------|
| India |
| Indonesia |
| Japan |
| Philippines |
| South Korea |
| Australia |
| Newzealand |
| Bangladesh |



REQUEST 2

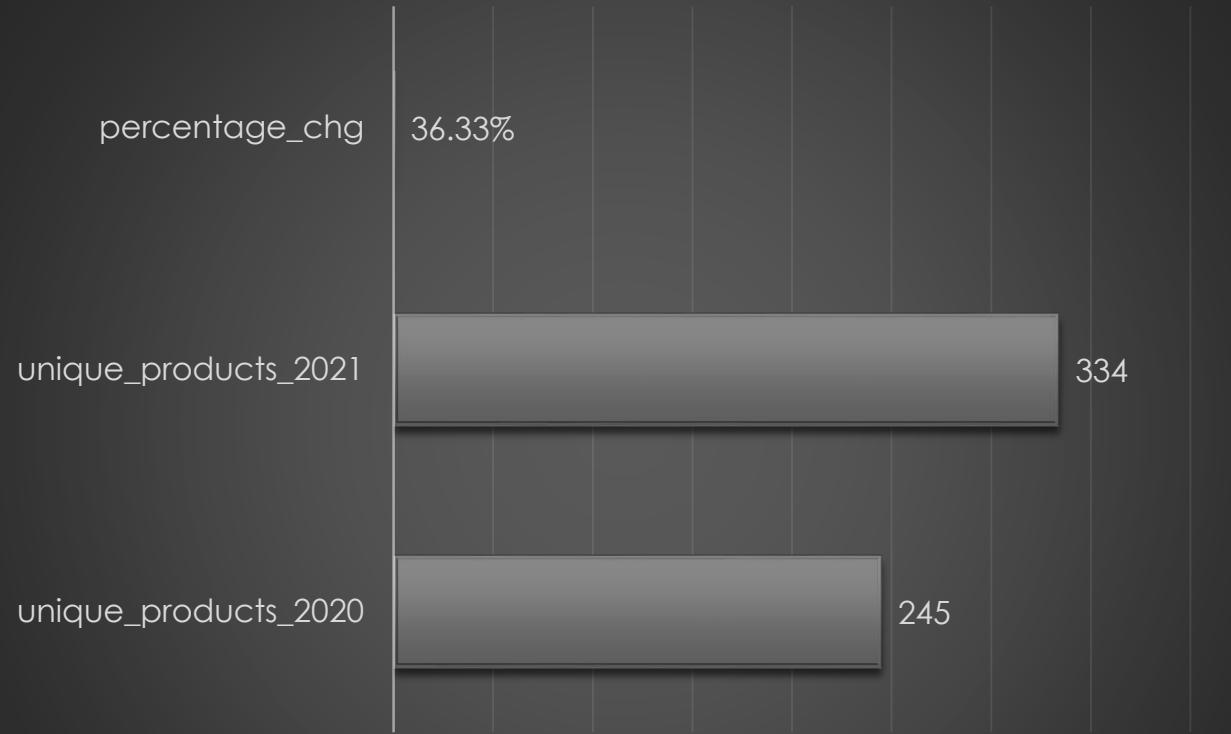
WHAT IS THE PERCENTAGE OF UNIQUE PRODUCT INCREASE IN 2021 VS. 2020? THE FINAL OUTPUT CONTAINS THESE FIELDS- UNIQUE_PRODUCTS_2020, UNIQUE_PRODUCTS_2021, PERCENTAGE_CHG

```
1 • WITH CTE_Unique_product_2020 AS
2   (SELECT count(DISTINCT product_code) AS unique_products_2020
3    FROM gdb023.fact_sales_monthly
4    WHERE fiscal_year=2020),
5   CTE_Unique_product_2021 AS
6   (SELECT COUNT(DISTINCT product_code) AS unique_products_2021
7    FROM gdb023.fact_sales_monthly
8    WHERE fiscal_year=2021)
9   SELECT unique_products_2020, unique_products_2021,
10  ROUND ((unique_products_2021-unique_products_2020)*100/unique_products_2020,2)
11  AS percentage_chg
12  FROM CTE_Unique_product_2020
13  CROSS JOIN CTE_Unique_product_2021
```

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

| | unique_products_2020 | unique_products_2021 | percentage_chg |
|---|----------------------|----------------------|----------------|
| ▶ | 245 | 334 | 36.33 |

Unique_products_2020 VS 2021



| | unique_products_2020 | unique_products_2021 | percentage_chg |
|-----------|----------------------|----------------------|----------------|
| ■ Series1 | 245 | 334 | 36.33% |

REQUEST 3

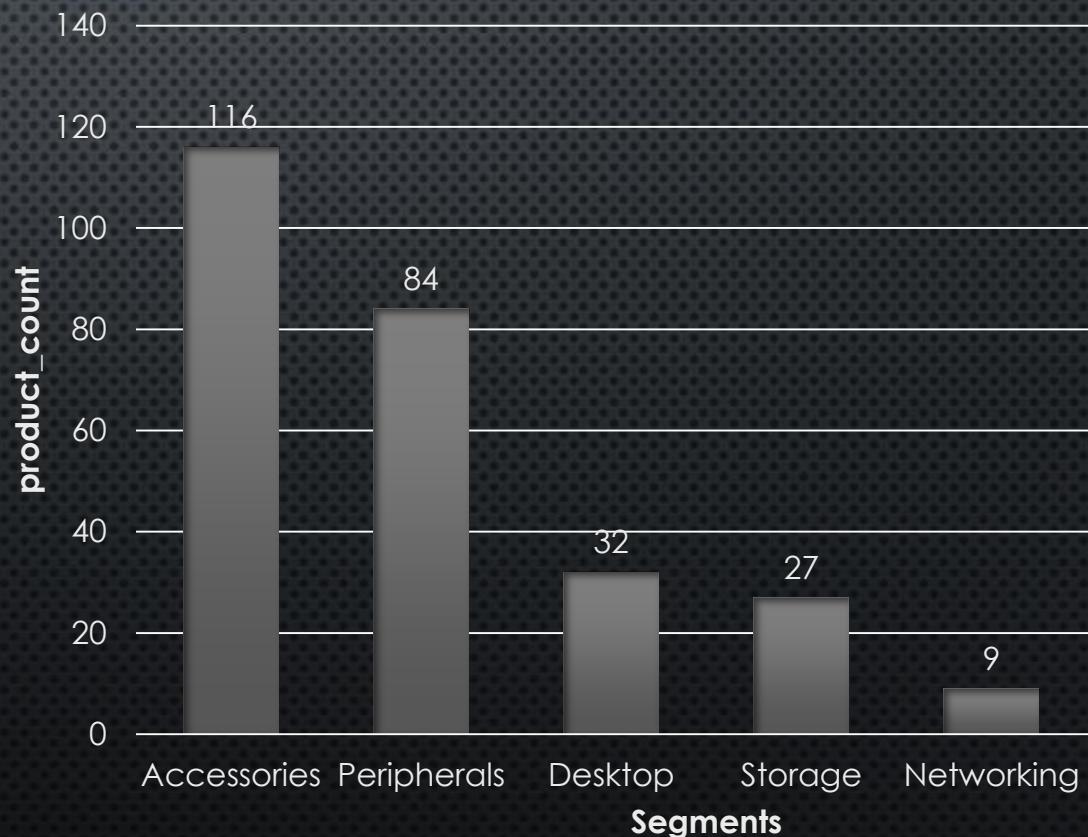
PROVIDE A REPORT WITH ALL THE UNIQUE PRODUCT COUNTS FOR EACH SEGMENT AND SORT THEM IN DESCENDING ORDER OF PRODUCT COUNTS.
THE FINAL OUTPUT CONTAINS 2 FIELDS- SEGMENT, PRODUCT_COUNT

```
1 •   SELECT segment,  
2     COUNT(DISTINCT product_code) AS 'product_count'  
3   FROM gdb023.dim_product  
4   GROUP BY segment  
5   ORDER BY 2 DESC;
```

Result Grid | Filter Rows: [] | Export: [] | Wrap C

| segment | product_count |
|-------------|---------------|
| Notebook | 129 |
| Accessories | 116 |
| Peripherals | 84 |
| Desktop | 32 |
| Storage | 27 |
| Networking | 9 |

Unique_product_count for each segment



REQUEST 4

WHICH SEGMENT HAD THE MOST INCREASE IN UNIQUE PRODUCTS IN 2021 VS 2020? THE FINAL OUTPUT CONTAINS THESE FIELDS- SEGMENT, PRODUCT_COUNT_2020, PRODUCT_COUNT_2021, DIFFERENCE

```

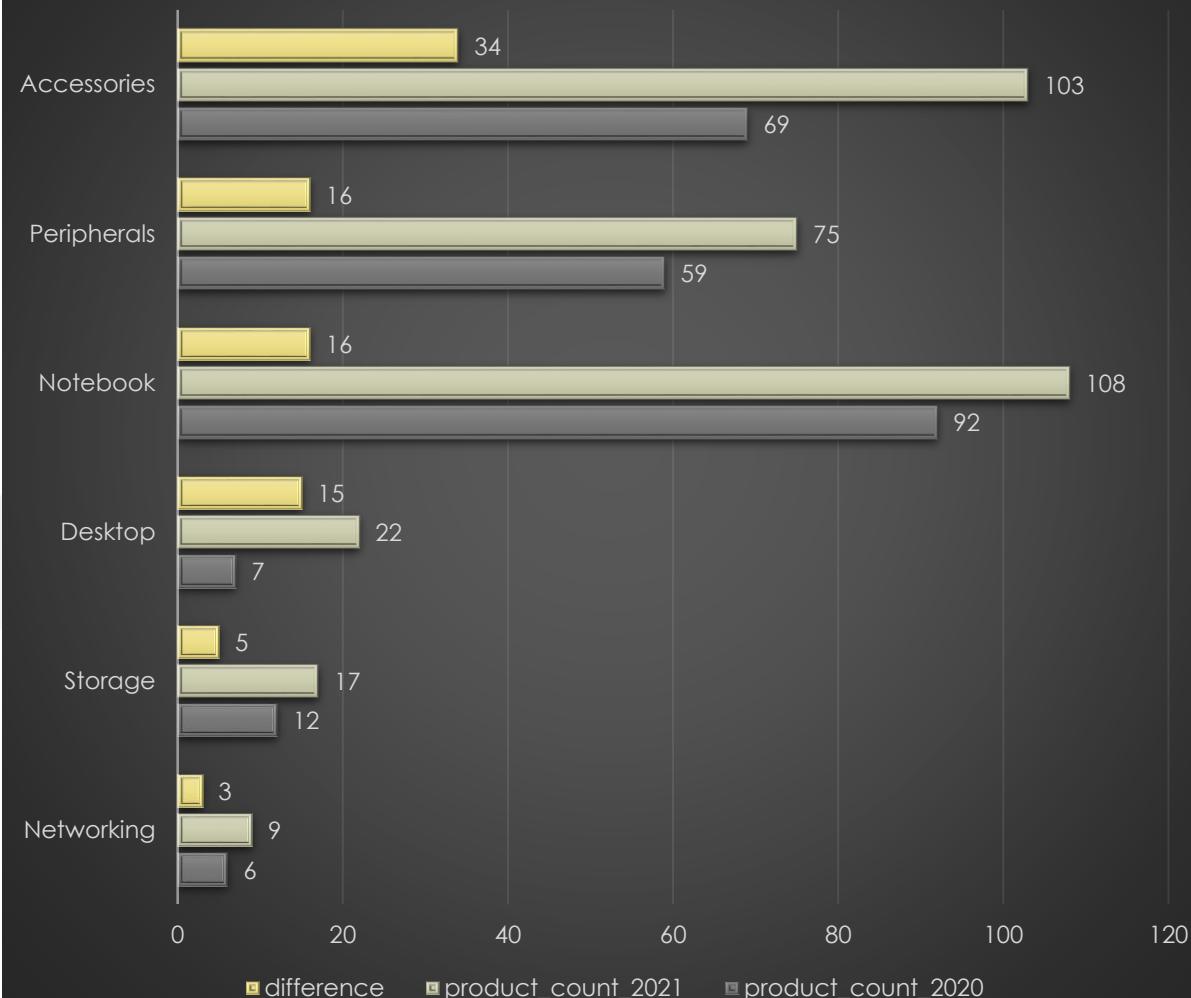
1 WITH cte_2020 AS (SELECT pr.segment, COUNT(DISTINCT pr.product_code) AS 'product_count_2020'
2   FROM gdb023.dim_product pr JOIN gdb023.fact_sales_monthly sales
3     ON pr.product_code=sales.product_code WHERE sales.fiscal_year=2020 GROUP BY pr.segment),
4 cte_2021 AS (SELECT pr.segment, COUNT(DISTINCT pr.product_code) AS 'product_count_2021'
5   FROM gdb023.dim_product pr JOIN gdb023.fact_sales_monthly sales
6     ON pr.product_code=sales.product_code WHERE sales.fiscal_year=2021 GROUP BY pr.segment)
7   SELECT c1.segment, c1.product_count_2020, c2.product_count_2021, c2.product_count_2021-c1.product_count_2020
8   AS difference
9   FROM cte_2020 c1 INNER JOIN cte_2021 c2 ON c1.segment=c2.segment
10  ORDER BY difference ASC;

```

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

| segment | product_count_2020 | product_count_2021 | difference |
|-------------|--------------------|--------------------|------------|
| Networking | 6 | 9 | 3 |
| Storage | 12 | 17 | 5 |
| Desktop | 7 | 22 | 15 |
| Notebook | 92 | 108 | 16 |
| Peripherals | 59 | 75 | 16 |
| Accessories | 69 | 103 | 34 |

Difference of Product_Count 2020 vs 2021



REQUEST 5

GET THE PRODUCTS THAT HAVE THE HIGHEST AND LOWEST MANUFACTURING COSTS. THE FINAL OUTPUT SHOULD CONTAIN THESE FIELDS- PRODUCT_CODE, PRODUCT, MANUFACTURING_COST

```
1 •  SELECT pr.product_code, pr.product, mn.manufacturing_cost  
2      FROM gdb023.fact_manufacturing_cost mn  
3      INNER JOIN gdb023.dim_product pr  
4      ON mn.product_code=pr.product_code  
5      WHERE mn.manufacturing_cost=(SELECT max(manufacturing_cost)  
6          FROM gdb023.fact_manufacturing_cost)  
7      OR mn.manufacturing_cost=(SELECT min(manufacturing_cost)  
8          FROM gdb023.fact_manufacturing_cost)
```

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

| product_code | product | manufacturing_cost |
|--------------|-----------------------|--------------------|
| A2118150101 | AQ Master wired x1 Ms | 0.8920 |
| A6120110206 | AQ HOME Allin1 Gen 2 | 240.5364 |



A2118150101 AQMaster wired x1 Ms
 A6120110206 AQ HOME Allin1 Gen 2

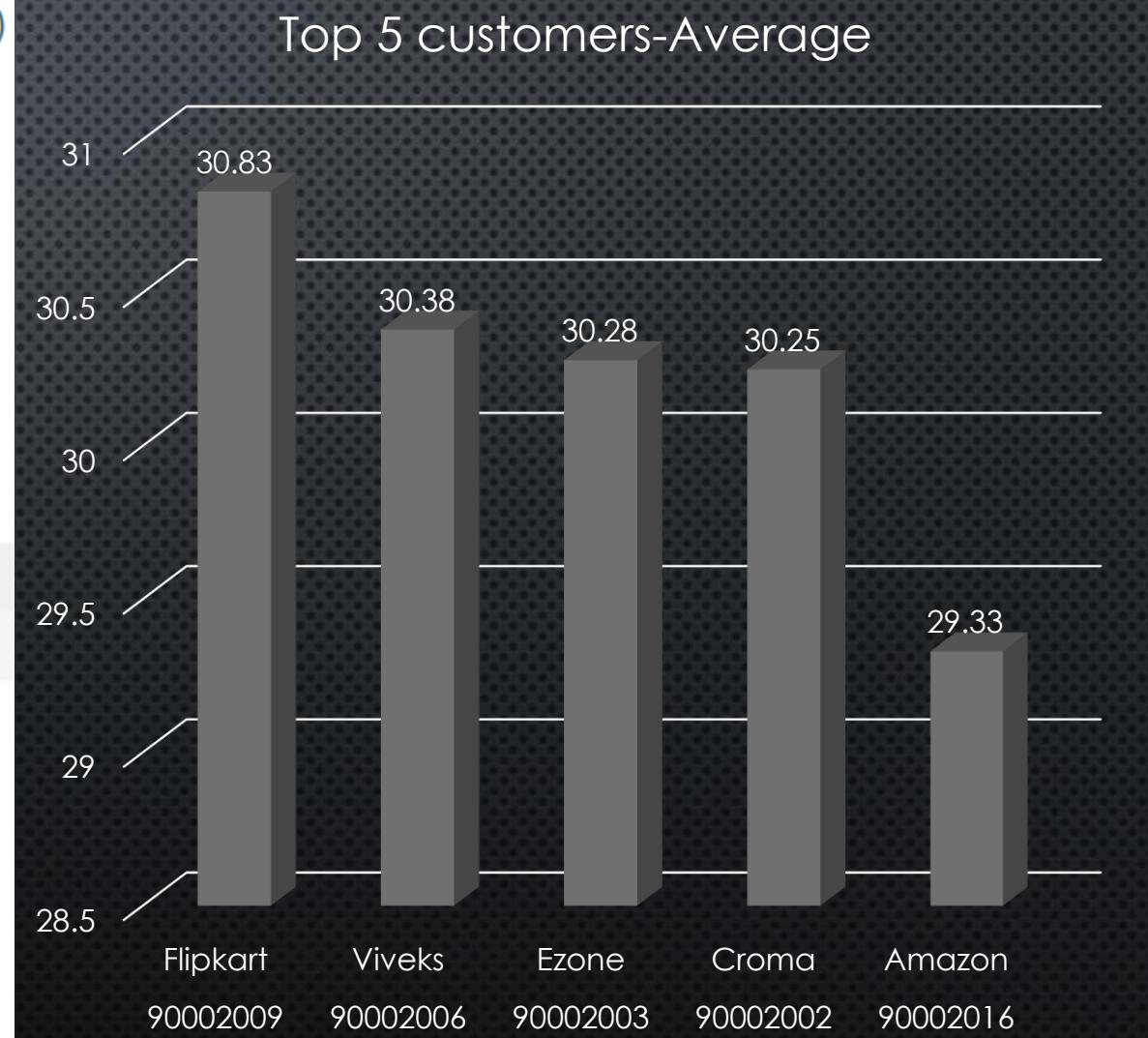
REQUEST 6

GENERATE A REPORT WHICH CONTAINS THE TOP 5 CUSTOMERS WHO RECEIVED AN AVERAGE HIGH PRE_INVOICE_DISCOUNT_PCT FOR THE FISCAL YEAR 2021 AND IN THE INDIAN MARKET. THE FINAL OUTPUT CONTAINS THESE FIELDS-CUSTOMER_CODE, CUSTOMER, AVERAGE_DISCOUNT_PERCENTAGE

```
1 • SELECT ds.customer_code, cs.customer, ROUND(100.0*avg(ds.pre_invoice_discount_pct),2)
2   AS 'average_discount_percentage'
3   FROM gdb023.fact_pre_invoice_deductions ds
4   INNER JOIN gdb023.dim_customer cs
5   ON ds.customer_code=cs.customer_code
6   WHERE ds.fiscal_year=2021 and cs.market='India'
7   GROUP BY ds.customer_code, cs.customer
8   ORDER BY 3 DESC LIMIT 5
```

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

| customer_code | customer | average_discount_percentage |
|---------------|----------|-----------------------------|
| 90002009 | Flipkart | 30.83 |
| 90002006 | Viveks | 30.38 |
| 90002003 | Ezone | 30.28 |
| 90002002 | Croma | 30.25 |
| 90002016 | Amazon | 29.33 |



REQUEST 7

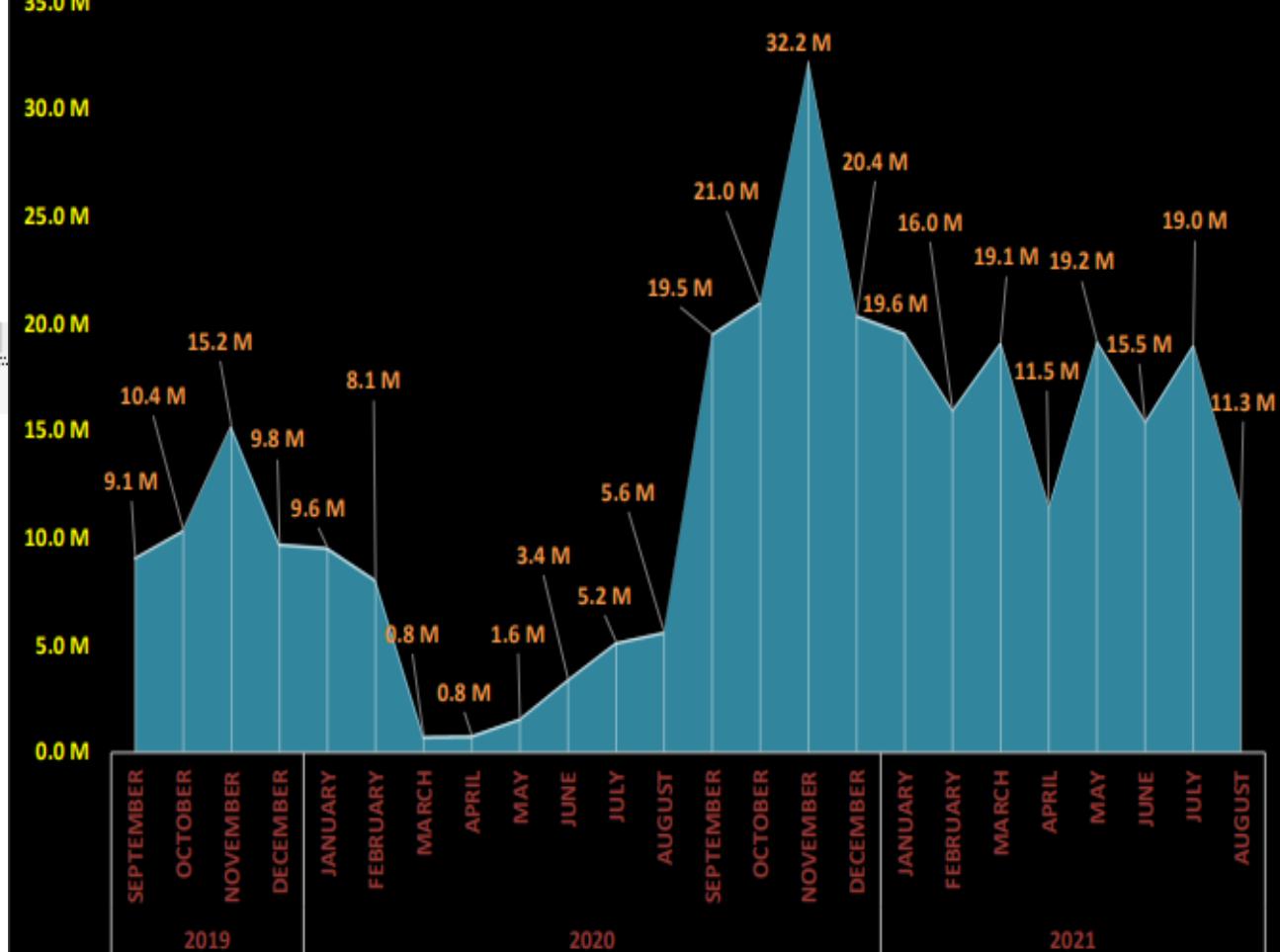
GET THE COMPLETE REPORT OF THE GROSS SALES AMOUNT FOR THE CUSTOMER “ATLIQ EXCLUSIVE” FOR EACH MONTH. THIS ANALYSIS HELPS TO GET AN IDEA OF LOW AND HIGH-PERFORMING MONTHS AND TAKE STRATEGIC DECISIONS. THE FINAL REPORT CONTAINS THESE COLUMNS: MONTH, YEAR, GROSS SALES AMOUNT

```
1 •  SELECT monthname(date) AS 'month', year(date) AS 'Year',
2    ROUND(sum(sales.sold_quantity*gross.gross_price),2) AS 'Gross sales Amount'
3    FROM gdb023.fact_sales_monthly sales
4    INNER JOIN gdb023.fact_gross_price gross
5    ON sales.product_code=gross.product_code
6    INNER JOIN gdb023.dim_customer cs
7    ON sales.customer_code=cs.customer_code
8    WHERE cs.customer="Atliq Exclusive"
9    GROUP BY 1,2
10   ORDER BY 2
```

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

| month | Year | Gross sales Amount |
|-----------|------|--------------------|
| September | 2019 | 9092670.34 |
| October | 2019 | 10378637.60 |
| November | 2019 | 15231894.97 |
| December | 2019 | 9755795.06 |
| January | 2020 | 9584951.94 |
| February | 2020 | 8083995.55 |
| March | 2020 | 766976.45 |
| April | 2020 | 800071.95 |
| May | 2020 | 1586964.48 |
| June | 2020 | 3429736.57 |
| July | 2020 | 5151815.40 |
| August | 2020 | 5638281.83 |
| September | 2020 | 19530271.30 |
| October | 2020 | 21016218.21 |

Monthwise Gross sales Amount for Atliq Exclusive



REQUEST 8

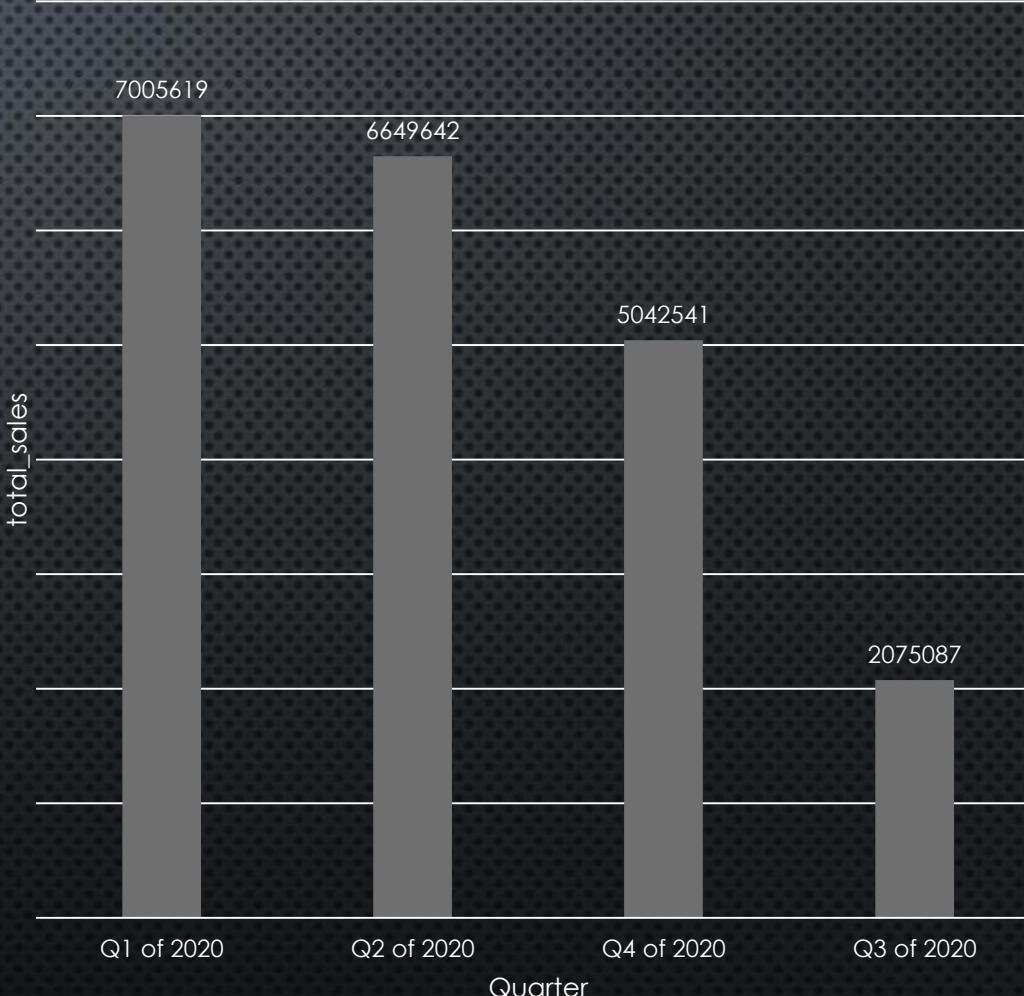
IN WHICH QUARTER OF 2020, GOT THE MAXIMUM TOTAL_SOLD_QUANTITY? THE FINAL OUTPUT CONTAINS THESE FIELDS SORTED BY THE TOTAL_SOLD_QUANTITY, QUARTER, TOTAL_SOLD_QUANTITY

```
1 •  SELECT
2   CASE
3     WHEN monthname(date) in ('September','October','November') THEN "Q1 of 2020"
4     WHEN monthname(date) in ('December','January','February') THEN "Q2 of 2020"
5     WHEN monthname(date) in ('March','April','May') THEN "Q3 of 2020"
6     WHEN monthname(date) in ('June','July','August') THEN "Q4 of 2020"
7   END as Quarter,
8   sum(sold_quantity) as total_sales
9   FROM fact_sales_monthly
10  WHERE fiscal_year="2020"
11  GROUP BY Quarter
12  ORDER BY total_sales DESC;
```

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

| Quarter | total_sales |
|------------|-------------|
| Q1 of 2020 | 7005619 |
| Q2 of 2020 | 6649642 |
| Q4 of 2020 | 5042541 |
| Q3 of 2020 | 2075087 |

Total quarter sales for 2020

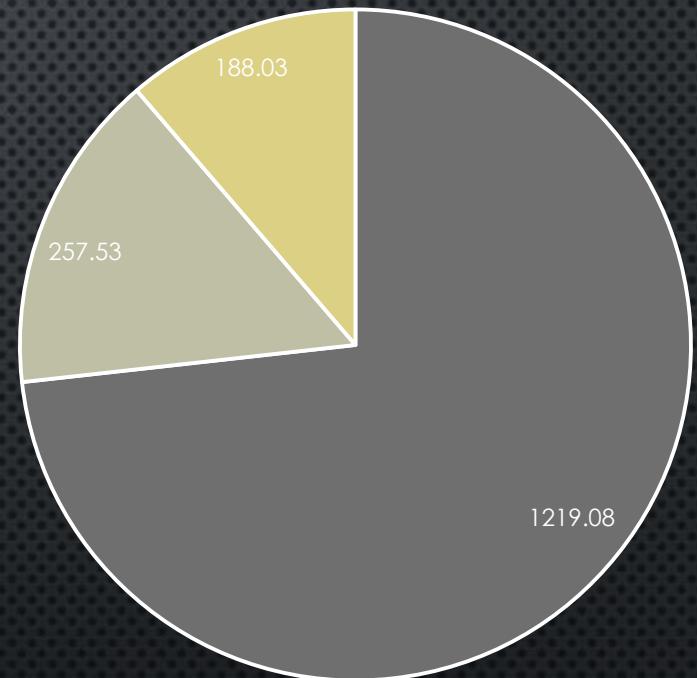


REQUEST 9

WHICH CHANNEL HELPED TO BRING MORE GROSS SALES IN THE FISCAL YEAR 2021 AND THE PERCENTAGE OF CONTRIBUTION? THE FINAL OUTPUT CONTAINS THESE FIELDS- CHANNEL, GROSS_SALES_MLN, PERCENTAGE

```
1 • WITH total_sales_f2021 AS (SELECT cs.channel, ROUND(sum(sales.sold_quantity*gross.gross_price)/1000000,2)
2     AS 'gross_sales_mln'
3     FROM gdb023.fact_sales_monthly sales
4     INNER JOIN gdb023.fact_gross_price gross
5     ON sales.product_code=gross.product_code
6     INNER JOIN gdb023.dim_customer cs
7     ON sales.customer_code=cs.customer_code
8     WHERE sales.fiscal_year=2021 and gross.fiscal_year=2021
9     GROUP BY 1
10    ORDER BY 2 DESC)
11    SELECT total_sales_f2021.channel, total_sales_f2021.gross_sales_mln,
12    ROUND(100.0*total_sales_f2021.gross_sales_mln/sum(total_sales_f2021.gross_sales_mln)
13    OVER(),2) AS percentage
```

gross_sales_mln



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

| channel | gross_sales_mln | percentage |
|-------------|-----------------|------------|
| Retailer | 1219.08 | 73.23 |
| Direct | 257.53 | 15.47 |
| Distributor | 188.03 | 11.30 |

■ Retailer ■ Direct ■ Distributor

REQUEST 10

GET THE TOP 3 PRODUCTS IN EACH DIVISION THAT HAVE A HIGH TOTAL_SOLD_QUANTITY IN THE FISCAL_YEAR 2021? THE FINAL OUTPUT CONTAINS THESE FIELDS-DIVISION, PRODUCT_CODE, PRODUCT, TOTAL_SOLD_QUANTITY, RANK_ORDER

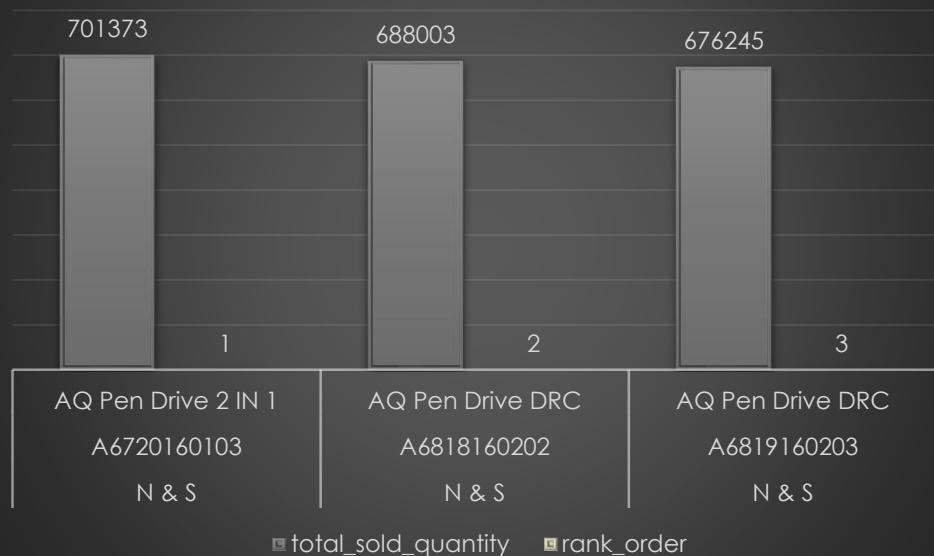
```
1 • WITH cte_total_sales AS (SELECT pr.division, pr.product_code, pr.product,
2     sum(sales.sold_quantity) AS total_sold_quantity
3     FROM gdb023.dim_product pr
4     INNER JOIN gdb023.fact_sales_monthly sales
5     ON pr.product_code=sales.product_code
6     WHERE sales.fiscal_year=2021
7     GROUP BY 1,2,3),
8     cte_top3 AS (SELECT cte_total_sales.division, cte_total_sales.product_code, cte_total_sales.product, cte_total_sales.total_sold_quantity,
9     RANK()
10    OVER(partition by cte_total_sales.division
11        ORDER BY cte_total_sales.total_sold_quantity DESC) AS rank_order
12    FROM cte_total_sales)
13    SELECT * FROM cte_top3
14    WHERE rank_order<=3
```

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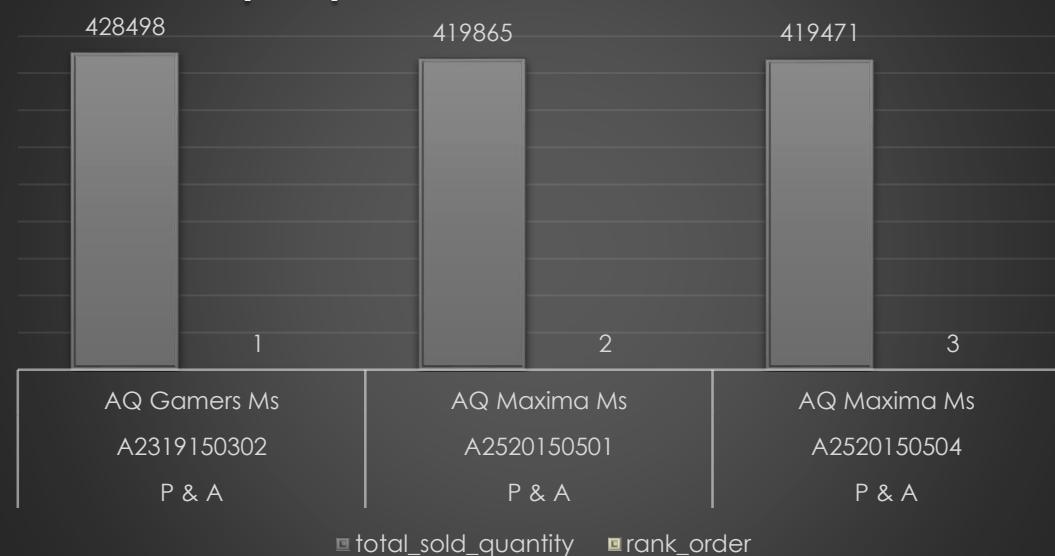
Result Grid | Filter Rows: Export: Wrap Cell Content:

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

Top 3 products in N&S division



Top 3 products in P&A Division



Top 3 products in PC division



THANK YOU