

ATLIQ HARDWARES



DOMAIN : CONSUMER GOODS
FUNCTION : EXECUTIVE
MANAGEMENT
SQL PROJECT CHALLENGE



About

- ▶ Atliq Hardware is one of the leading computer hardware producers in India. The management noticed that they couldn't get enough insight to make smart decisions, thereby, want to expand their data analytics team.
- ▶ In order to employ someone who is perfect for the job, the head of data analytics director(Tony Sharma) decided to put up an SQL challenge in order to hire someone who has both technical and soft skills .
- ▶ **APPROACH**
- ▶ To provide solutions/answers to ad-hoc request, the data was queried using SQL to generate insight and was visualized using Microsoft Excel to create a dashboard presentation to the management.

list of markets in which "Atliq Exclusive" operates its business in the APAC region.

► REQUEST 1

Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

OUTPUT

| <div><div><div>≡+</div><div>📄</div><div>▼</div><div>📋</div><div>🗑</div><div>🗄</div><div>⬇</div><div>📈</div></div></div> | |
|---|------------------------------------|
| | market character varying (45) 🔒 |
| 1 | Bangladesh |
| 2 | Indonesia |
| 3 | Australia |
| 4 | Newzealand |
| 5 | Japan |
| 6 | Philiphines |
| 7 | India |
| 8 | South Korea |

Atliq Exclusive operates in 8 countries in the APAC regions which are Bangladesh, Indonesia, Australia, Newzealand, Japan, Philiphines, India and South Korea.

percentage of unique product increase in 2021 vs. 2020

► REQUEST 2

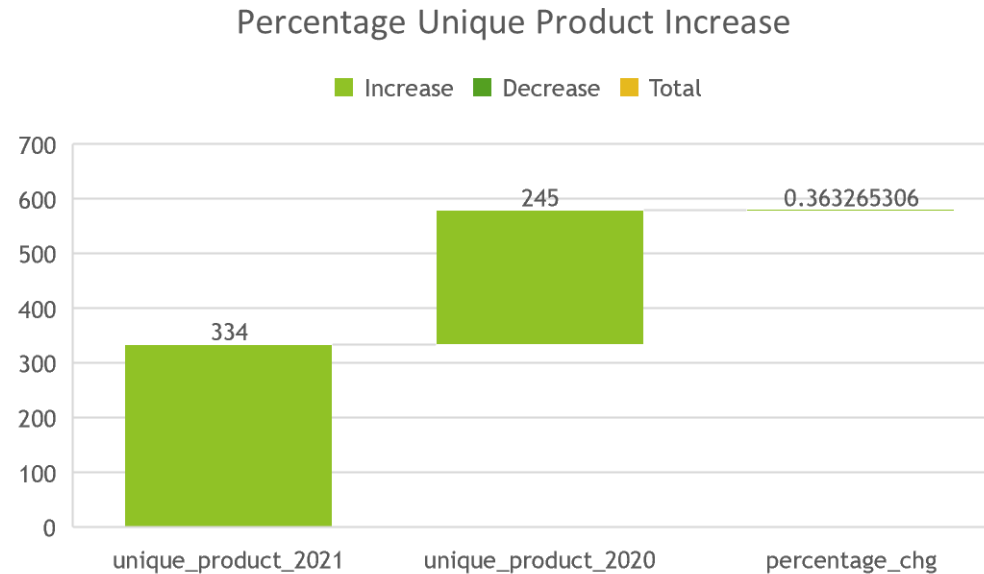
What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields, unique_products_2020 unique_products_2021 percentage_chg.

| Data Output Messages Notifications | | | | |
|------------------------------------|-------------------------------|-------------------------------|--------------------------|--|
| | unique_product_2021 bigint | unique_product_2020 bigint | percentage_chg bigint | |
| 1 | 334 | 245 | 36 | |

Conversion of Output to Visual

► INSIGHT

Result indicates that there was an increase of 89 newly added product from 2020 -2021 and a percentage increase of 36% . This indicates Atliq Hardwares should focused on increasing revenue by improving product strengths and creating in-demand products to achieve continuous growth.



unique product counts for each “segment”

► REQUEST 3

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

OUTPUT

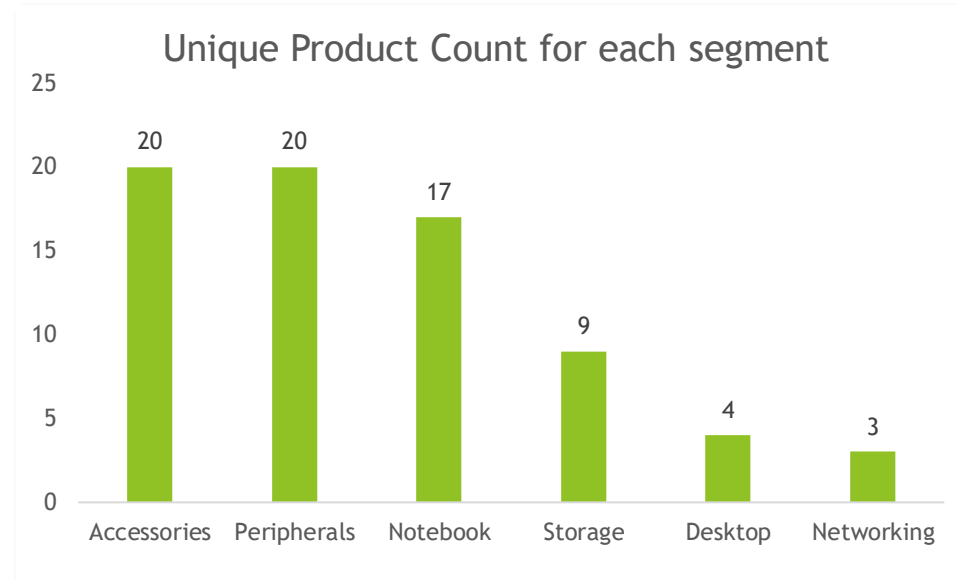
| Data Output Messages Notifications | | |
|---|--|----------------------------------|
| <div><div><div>≡+</div><div>📄</div><div>▼</div><div>📋</div><div>🗑</div><div>🗄</div><div>⬇</div><div>📈</div></div></div> | | |
| | segment character varying (45) 🔒 | product_count bigint 🔒 |
| 1 | Accessories | 20 |
| 2 | Peripherals | 20 |
| 3 | Notebook | 17 |
| 4 | Storage | 9 |
| 5 | Desktop | 4 |
| 6 | Networking | 3 |

Conversion of Output to Visual

► Insight

Results indicates Accessories and Peripherals has the highest product count amidst other segment in Atliq-Hardware.

Atliq Hardwares are focused improving Other segment by increasing the target Lower segment.



segment most increase in unique products in 2021 vs 2020?

► REQUEST 4

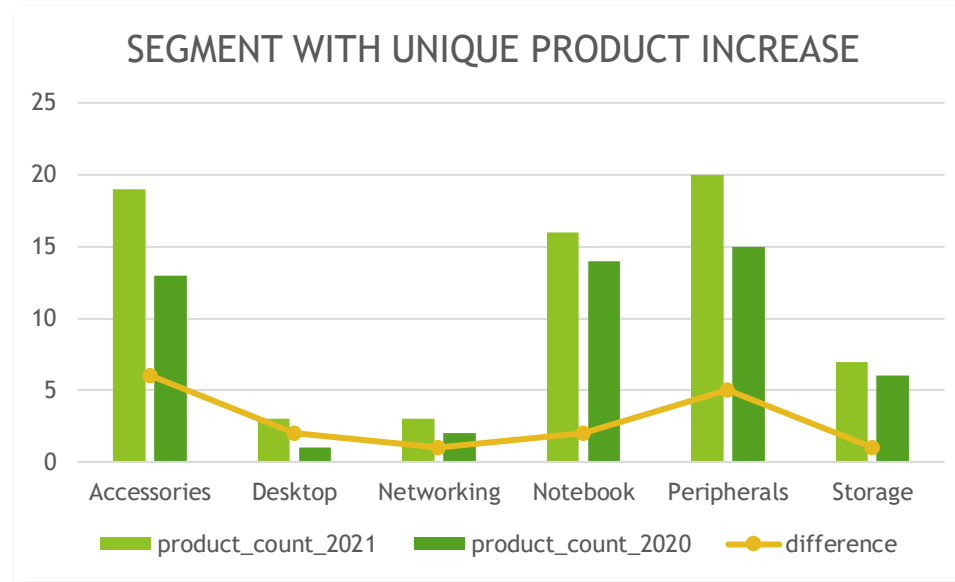
Which segment had the most increase in unique products in 2021 vs 2020. The final output contains these fields, segment product_count_2020 product_count_2021 difference

| Data Output Messages Notifications | | | | |
|------------------------------------|-------------------------------------|--------------------------------|--------------------------------|------------------------|
| | | | | |
| | segment character varying (45) 🔒 | product_count_2021 bigint 🔒 | product_count_2020 bigint 🔒 | difference bigint 🔒 |
| 1 | Accessories | 19 | 13 | 6 |
| 2 | Desktop | 3 | 1 | 2 |
| 3 | Networking | 3 | 2 | 1 |
| 4 | Notebook | 16 | 14 | 2 |
| 5 | Peripherals | 20 | 15 | 5 |
| 6 | Storage | 7 | 6 | 1 |
| | | | | |
| Total rows: 6 of 6 | | Query complete 00:00:07.638 | | |

Conversion of Output to Visual

► INSIGHT

Result indicates that Accessories has the highest Unique product increase and Networking and storage recorded Least product increase. Both least segment needs target increase to increase sales.



products that have the highest and lowest manufacturing costs

► Request 5

Get the products that have the highest and lowest manufacturing costs.

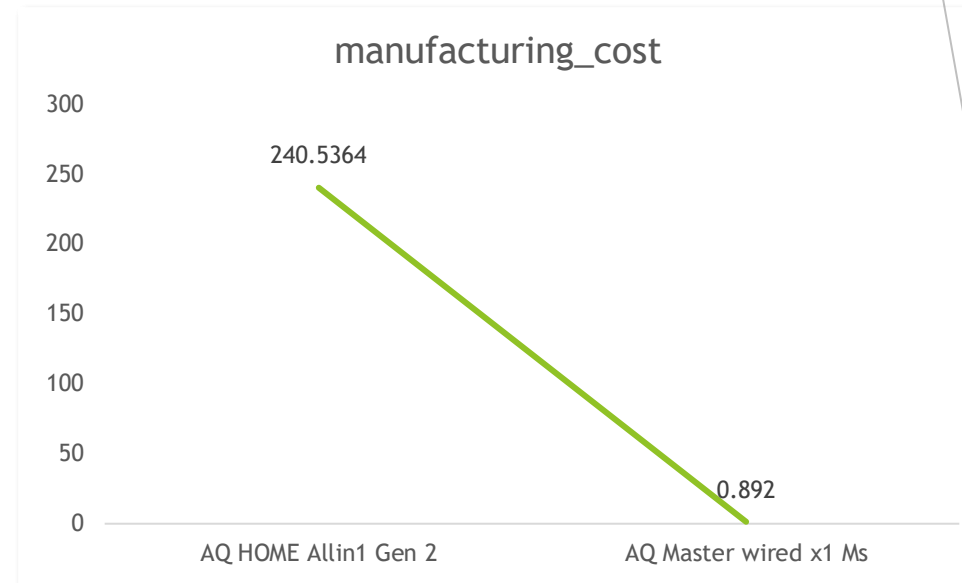
OUTPUT

| Data Output Messages Notifications | | |
|--|---|---|
| <div><div>≡+</div><div></div><div>▼</div><div></div><div></div><div></div><div></div><div></div></div> | | |
| | product character varying (200) | manufacturing_cost numeric (15,4) |
| 1 | AQ HOME Allin1 Gen 2 | 240.5364 |
| 2 | AQ Master wired x1 Ms | 0.892 |

Conversion of Output to Visual

► INSIGHT

Result indicate that AQ HOME Allin 1 Gen 2 Has the highest manufacturing cost While AQ Master wired x1 Ms has the lowest(0.892). Revenue generated From both product needs to examined to Know if manufacturing cost needs to be Increased or decreased.



Top 5 customers who received an average high pre invoice discount pct for year 2021

▶ 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.

OUTPUT

Data Output

Messages

Notifications

| | <div>customer_code</div> <div>integer</div> <div></div> | <div>customer</div> <div>character varying (150)</div> <div></div> | <div>average_discount_percentage</div> <div>numeric</div> <div></div> |
|---|---|--|---|
| 1 | 90002009 | Flipkart | 0.3083 |
| 2 | 90002006 | Viveks | 0.3038 |
| 3 | 90002003 | Ezone | 0.3028 |
| 4 | 90002002 | Croma | 0.3025 |
| 5 | 90002016 | Amazon | 0.2933 |

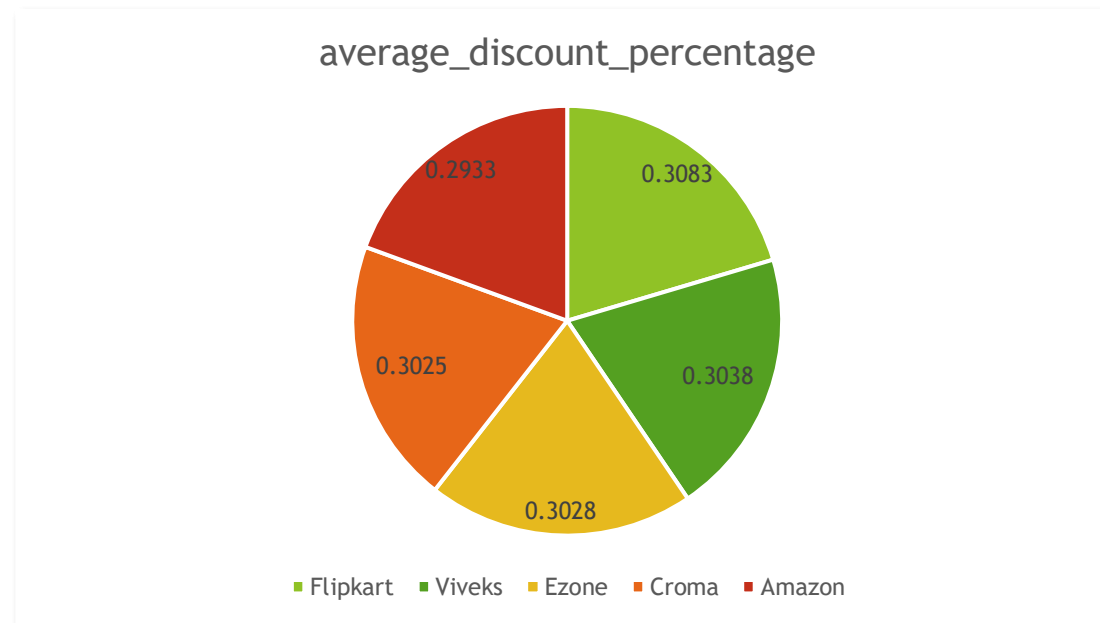
Total rows: 5 of 5

Query complete 00:00:00.178

Conversion of Output to Visual

► INSIGHT

The Top 5 customers that earned an Average pre invoice discount in the year 2021 in the India market include Flipkart, Viveks, Ezone, Croma and Amazon.



Gross sales amount “Atliq Exclusive” for each month

► 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.

| | months numeric | years numeric | gross_sales_amount numeric |
|----|-------------------|------------------|-------------------------------|
| 1 | 9 | 2019 | 9092670.3392 |
| 2 | 10 | 2019 | 10378637.5961 |
| 3 | 11 | 2019 | 15231894.9669 |
| 4 | 12 | 2019 | 9755795.0577 |
| 5 | 1 | 2020 | 9584951.9393 |
| 6 | 2 | 2020 | 8083995.5479 |
| 7 | 3 | 2020 | 766976.4531 |
| 8 | 4 | 2020 | 800071.9543 |
| 9 | 5 | 2020 | 1586964.4768 |
| 10 | 6 | 2020 | 3429736.5712 |
| 11 | 7 | 2020 | 5151815.402 |
| 12 | 8 | 2020 | 5638281.8287 |
| 13 | 9 | 2020 | 19530271.3028 |
| 14 | 10 | 2020 | 21016218.2095 |
| 15 | 11 | 2020 | 32247289.7946 |
| 16 | 12 | 2020 | 20409063.1769 |

| | | | |
|----------------------|----|------|-----------------------------|
| 16 | 12 | 2020 | 20409063.1769 |
| 17 | 1 | 2021 | 19570701.7102 |
| 18 | 2 | 2021 | 15986603.8883 |
| 19 | 3 | 2021 | 19149624.9239 |
| 20 | 4 | 2021 | 11483530.3032 |
| 21 | 5 | 2021 | 19204309.4095 |
| 22 | 6 | 2021 | 15457579.6626 |
| 23 | 7 | 2021 | 19044968.8164 |
| 24 | 8 | 2021 | 11324548.3409 |
| Total rows: 24 of 24 | | | Query complete 00:00:00.446 |

Conversion of Output to Visual

► INSIGHT

Result indicates that Atliq Exclusive had lowest sales from March to August 2020 and this might be due to the effect of the pandemic. The month of November in the year 2020 recorded the highest sales which might be as a result of accumulated demands or unprocessed order from customers.



Total sales quantity for quarter for 2020

► REQUEST 8

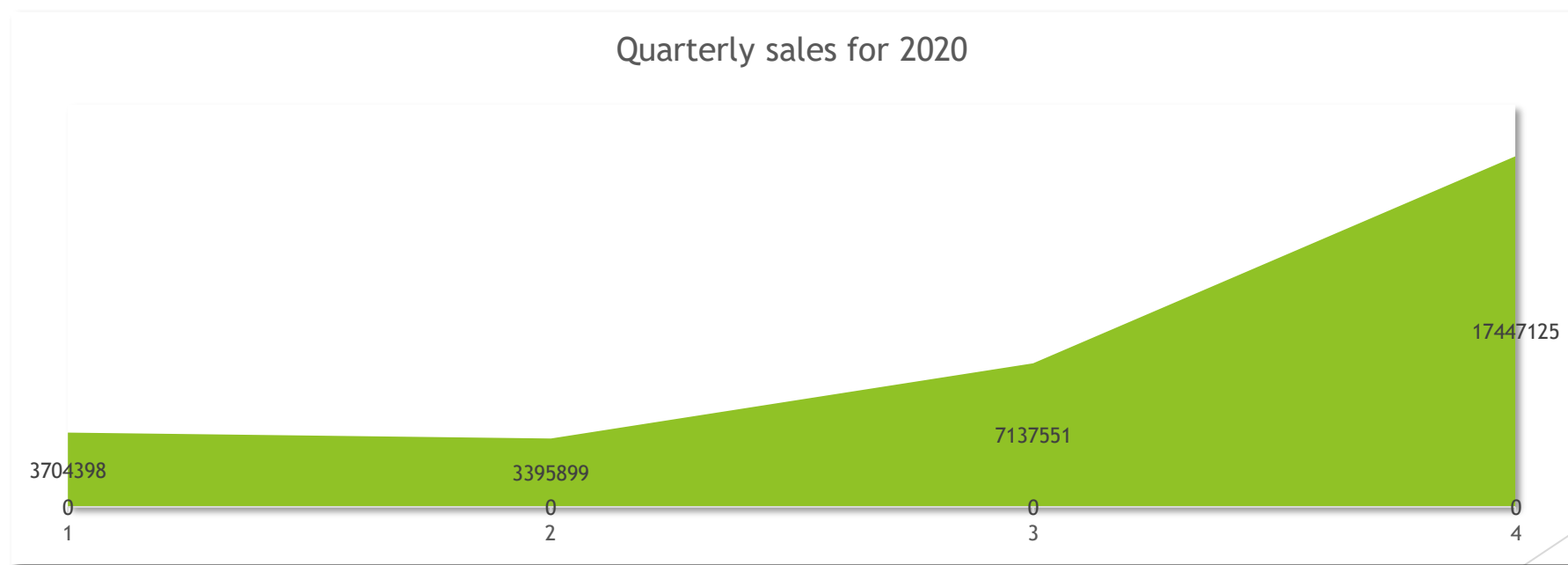
In which quarter of 2020, got the maximum total sold quantity ? The final output contains these fields sorted by the total sold quantity, Quarter total sold quantity

| Data Output | | Messages | Notifications | | | | |
|-------------|---------------------------------------|----------|------------------------|--|--|--|--|
| | | | | | | | |
| | total_quantity_sold numeric | | quarter text | | | | |
| 1 | 3704398 | | Q1 | | | | |
| 2 | 3395899 | | Q2 | | | | |
| 3 | 7137551 | | Q3 | | | | |
| 4 | 17447125 | | Q4 | | | | |

Conversion of Output to Visual

► INSIGHT

- The result of the visuals shows the last quarter(Oct, Nov and Dec) of the year 2020 recorded the highest total sold quantity.



Total gross sales and percentage contribution of each channel in 2021

► REQUEST 9

Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

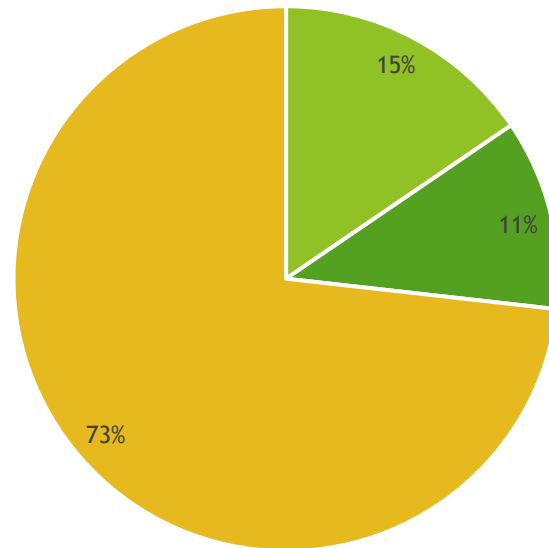
| | channel character varying (45) 🔒 | gross_sales_min numeric 🔒 | percentage numeric 🔒 |
|---|-------------------------------------|------------------------------|-------------------------|
| 1 | Retailer | 1924170397.9096 | 73.21712805594302 |
| 2 | Direct | 406686873.9033 | 15.474952196332461 |
| 3 | Distributor | 297175879.7188 | 11.307919747724513 |

Conversion of Output to Visual

► INSIGHT

Result reveals that retailers contributed more to the gross sales of Atliq Hardware with a total contribution of 72.2% for 2021.

Percentage contribution of each channel



■ Direct ■ Distributor ■ Retailer

Top 3 products in each division that have a high total sold quantity in 2021

- ▶ REQUEST 10
- ▶ Get the Top 3 products in each division that have a high total sold quantity in the fiscal year 2021?

| Data Output Messages Notifications | | | | | |
|------------------------------------|--------------------------------------|--|--------------------------------------|---------------------------------|------------------------|
| | | | | | |
| | division character varying (45) 🔒 | product_code character varying (45) 🔒 | product character varying (200) 🔒 | total_sold_quantity bigint 🔒 | rank_order bigint 🔒 |
| | 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 |

Conversion of Output to Visual

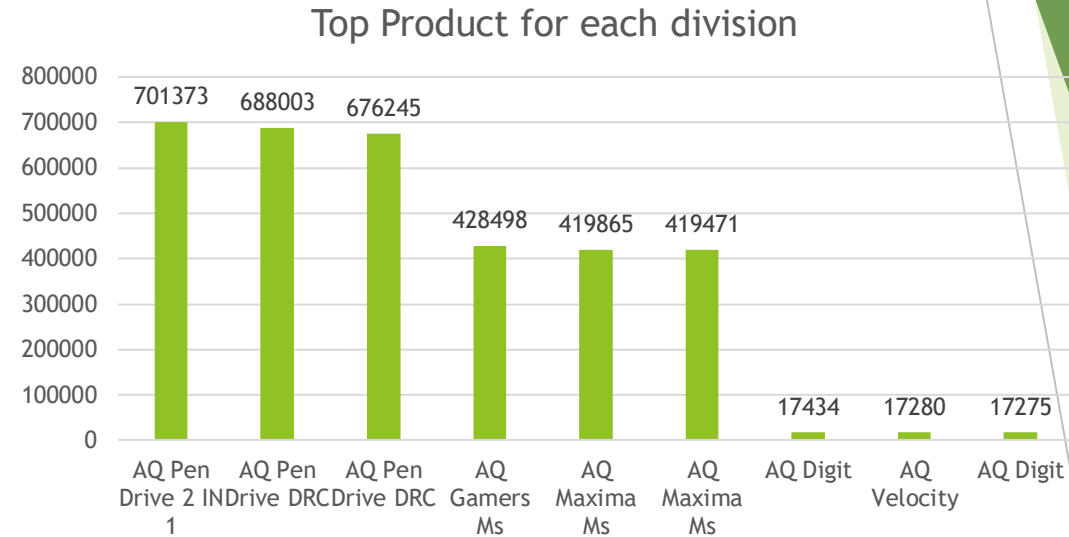
► INSIGHT

Result indicates the product
In each category with the top
Sales. The product in each division
Include

N & S (AQ Pen Drive DRC with
different product code)

P & A (AQ Maxima MS, AQ Gamers MS)

PC (AQ Digit , AQ Aspiron)



**THANK YOU CODEBASICS AND
THANK YOU FOR READING**