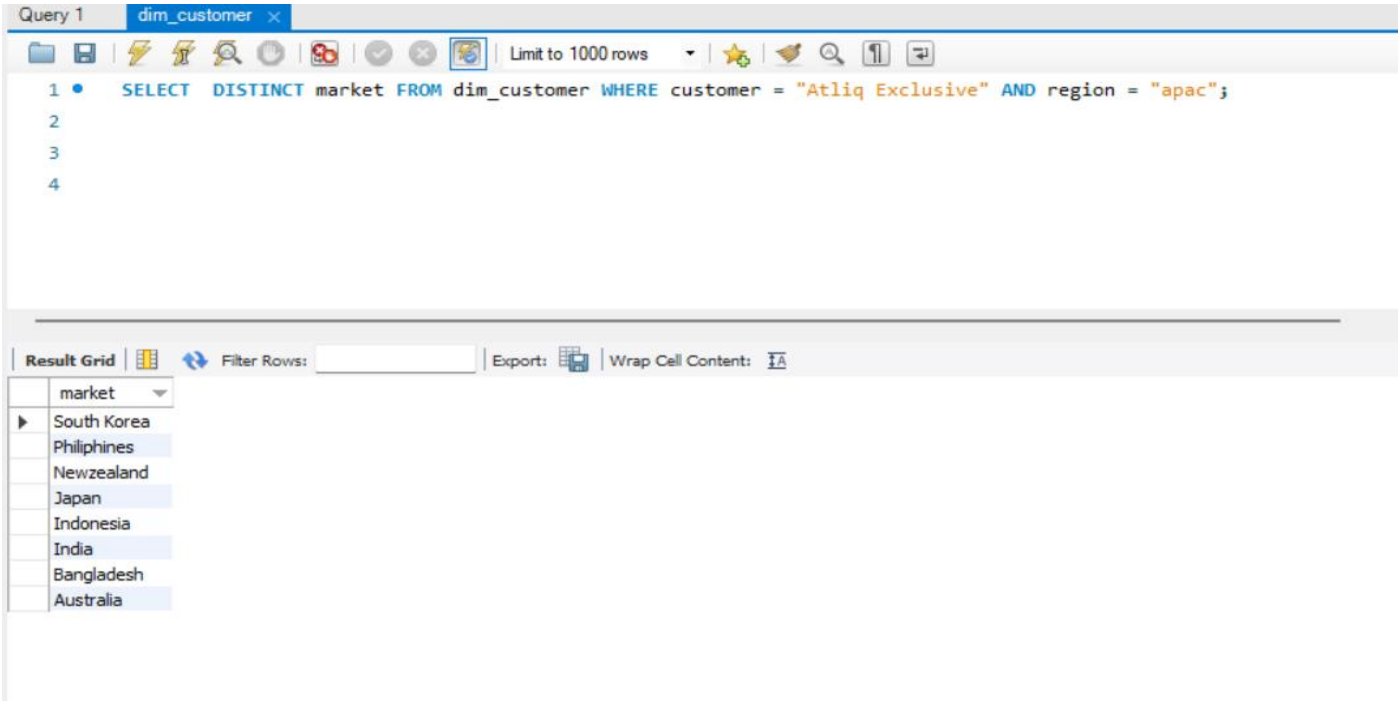
Consumer Goods Analysis

Codebasics Resume Project Challenge #4 [MySQL | Excel]

Presented insights on 10 ad-hoc business requests to the executive management team, querying a database with 1.4 million rows using SQL, showcasing collaboration, analytical thinking, and problem-solving skills.

1. SELECT DISTINCT market FROM dim_customer WHERE customer = "Atliq Exclusive" AND region = "apac";



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

```sql
WITH X AS
(Select count(distinct product_code) As unquie_Products_2020
From fact_sales_monthly WHERE fiscal_year=2020),
Y AS
(Select count(distinct product_code) As unquie_Products_2021
From fact_sales_monthly WHERE fiscal_year=2021)
SELECT
x.unquie_Products_2020,
y.unquie_Products_2021,
round(((y.unquie_Products_2021-x.unquie_Products_2020)/x.unquie_Products_2020)*100,2)
as  percentage_chg from x,y;
```

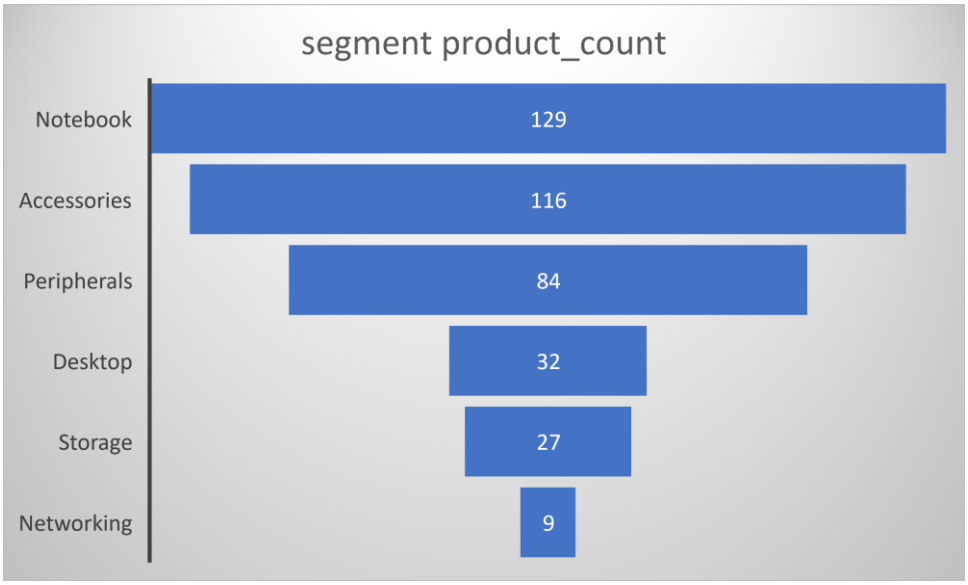
Unquie_Products_2020:	245
Unquie_Products_2021:	334
Percentage_chg:	36.33

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

```sql
SELECT segment,
Count(distinct product_code) as product_Count
from dim_product
group by segment
order by product_count desc;
```

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

Presented by Karthick P

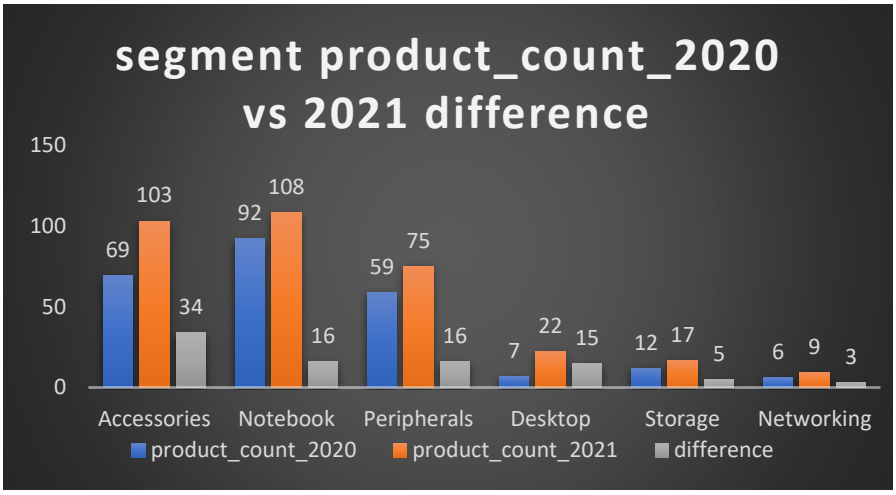


4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment product_count_2020 product_count_2021 difference

```
with x as ( select p.segment,
count(distinct s.product_code) as product_count_2020 from dim_product p
join fact_sales_monthly s on p.product_code = s.product_code where s.fiscal_year=2020 group by
p.segment) ,
y as ( select p.segment,
count(distinct s.product_code) as product_count_2021 from dim_product p
join fact_sales_monthly s on p.product_code = s.product_code where s.fiscal_year=2021 group by
p.segment)
select x.segment , product_count_2020 ,product_count_2021,abs(x.product_count_2020-
y.product_count_2021) as difference
from x join y on x.segment=y.segment order by difference desc;
```

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

Presented by Karthick P



5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, product_code product manufacturing_cost

```
Limit to 1000 rows

1  select m.product_code, p.product, m.manufacturing_cost
2  from fact_manufacturing_cost m join dim_product p
3  using (product_code)
4  where m.manufacturing_cost =
5  (select max(manufacturing_cost)
6  from fact_manufacturing_cost)
7  or m.manufacturing_cost = (select min(manufacturing_cost)
8  from fact_manufacturing_cost)
9  order by m.manufacturing_cost desc;
```

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

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

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

```
Limit to 1000 rows
1  select i.customer_code, c.customer, round(avg(i.pre_invoice_discount_pct)*100,2) as avg_dis_pct
2  from
3  fact_pre_invoice_deductions i join dim_customer c using (customer_code)
4  where fiscal_year =2021 and c.market="india" group by i.customer_code, c.customer order by
5  avg_dis_pct desc limit 5;
```

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

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

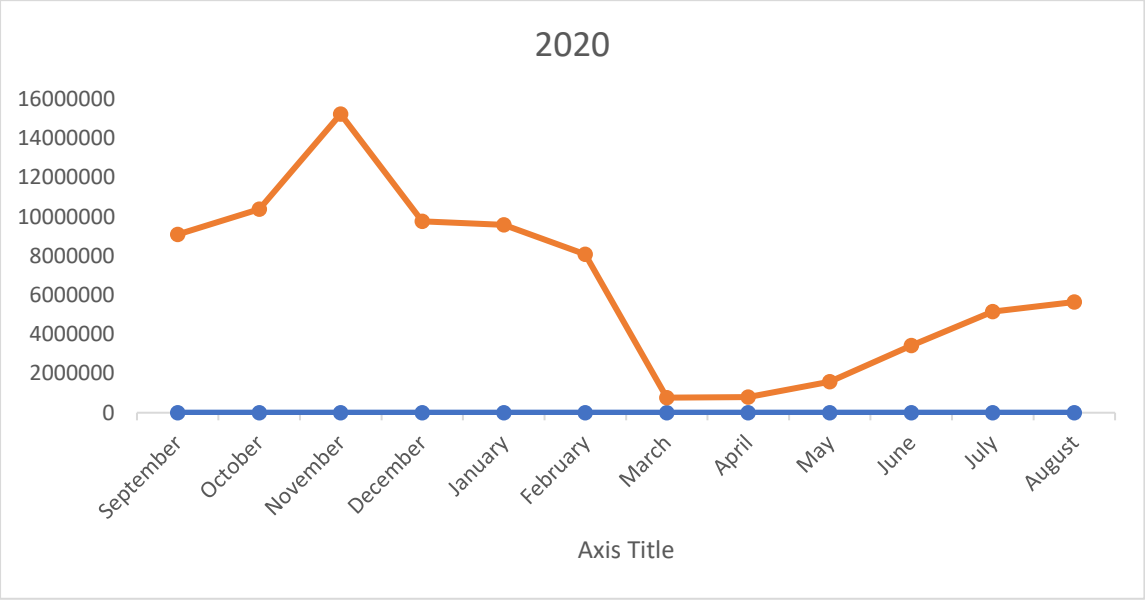
customer_cod	custome	avg_dis_pc
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33

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

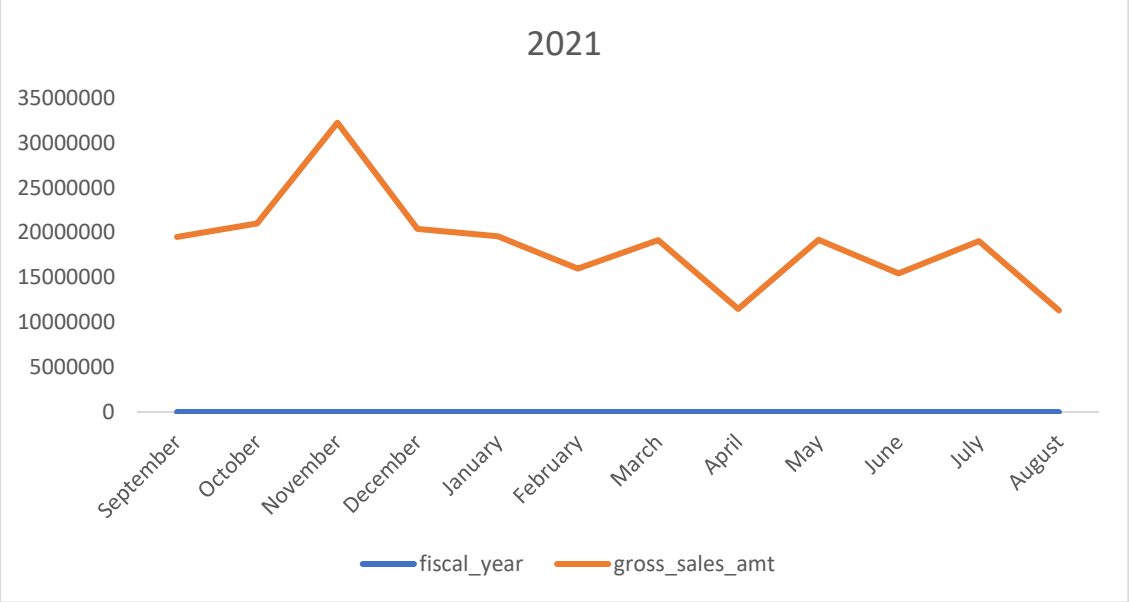
```sql
select monthname(s.date) as month,s.fiscal_year,
round(sum(g.gross_price*sold_quantity),2)
as gross_sales_amt from fact_sales_monthly s
join dim_customer c using(customer_code)
join fact_gross_price g using(product_code)
where customer="atliq exclusive"
group by monthname(s.date) ,s.fiscal_year
order by fiscal_year ;
```

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

month	fiscal_year	gross_sales_amt
September	2020	9092670.34
October	2020	10378637.60
November	2020	15231894.97
December	2020	9755795.06
January	2020	9584951.94
February	2020	8083995.55
March	2020	766976.45



Presented by Karthick P

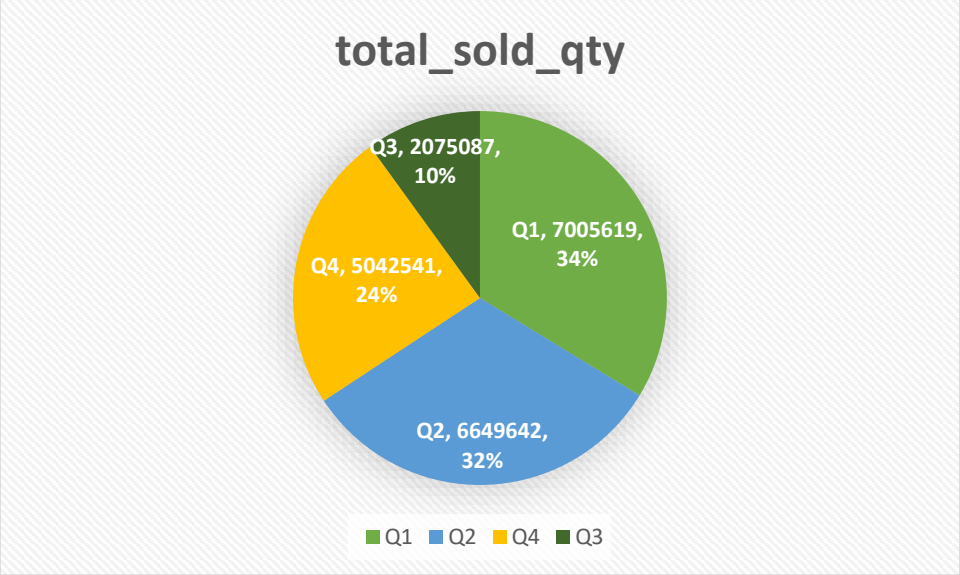


8. In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the total_sold_quantity, Quarter total_sold_quantity

```
Limit to 1000 rows
1   SELECT
2   CASE
3   WHEN month(date) in (9,10,11) then 'Q1'
4   WHEN month(date) in (12,01,02) then 'Q2'
5   WHEN month(date) in (03,04,05) then 'Q3'
6   ELSE 'Q4'
7   END AS Quarters,
8   SUM(sold_quantity) AS total_sold_qty
9   FROM fact_sales_monthly
10  WHERE fiscal_year = 2020
11  GROUP BY Quarters
12  ORDER BY total_sold_qty DESC;
```

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

Quarters	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

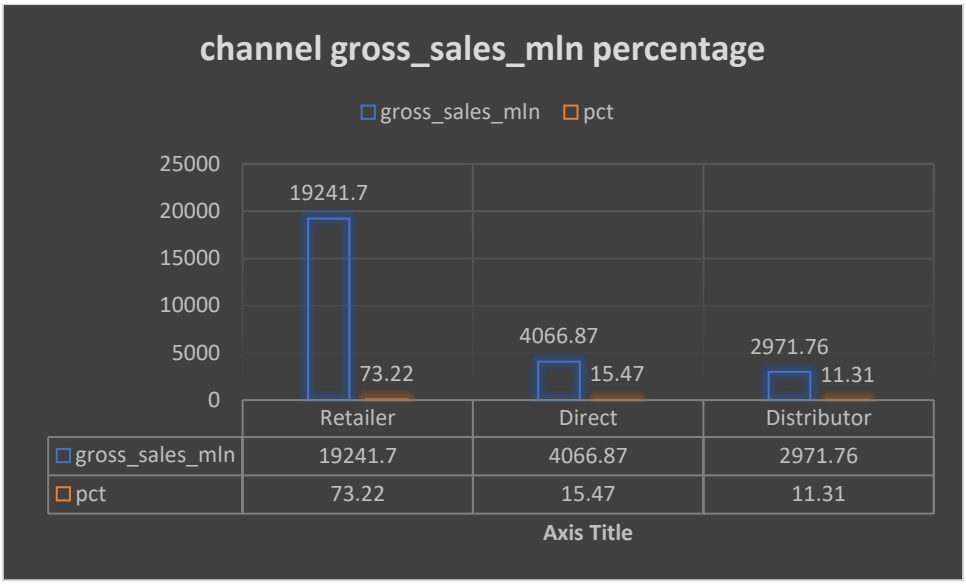


9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields, channel gross_sales_mln percentage

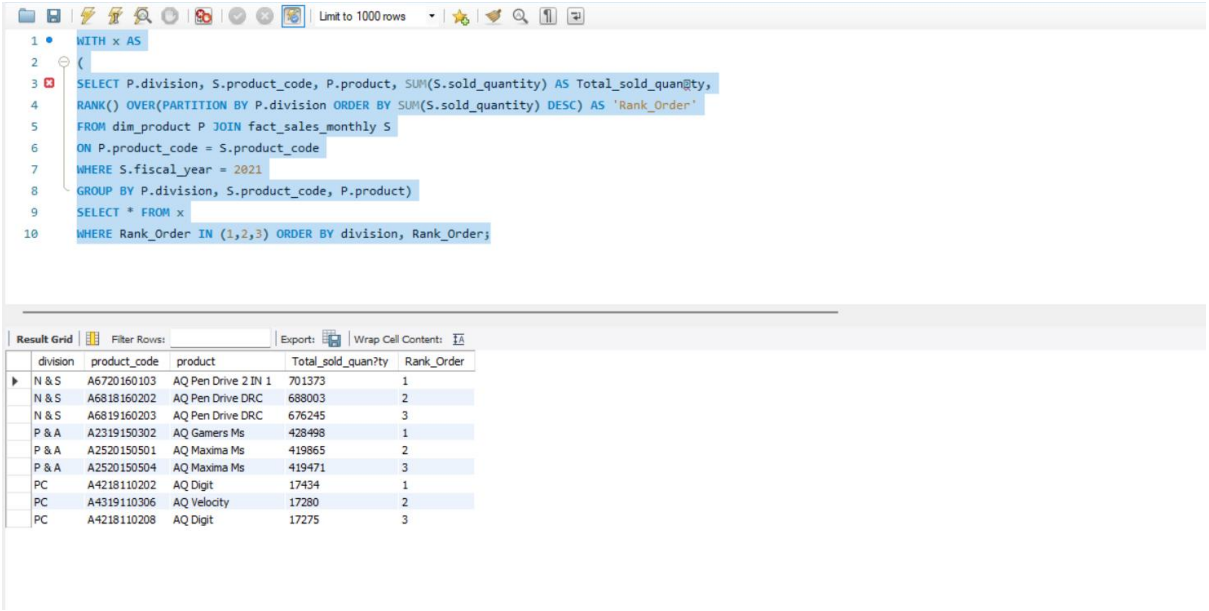
```
1  with x as (select c.channel,
2  round(sum(g.gross_price*s.sold_quantity)/100000,2) as gross_sales_mln
3  from fact_sales_monthly s
4  join dim_customer c using(customer_code)
5  join fact_gross_price g using(product_code)
6  where s.fiscal_year=2021
7  group by c.channel)
8  select channel, gross_sales_mln,
9  round((gross_sales_mln/(select sum(gross_sales_mln) from x))*100,2)
10 as pct from x
11 order by gross_sales_mln desc;
```

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

channel	gross_sales_mln	pct
Retailer	19241.70	73.22
Direct	4066.87	15.47
Distributor	2971.76	11.31



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



```
WITH x AS
(
SELECT P.division, S.product_code, P.product, SUM(S.sold_quantity) AS Total_sold_quan?ty,
RANK() OVER(PARTITION BY P.division ORDER BY SUM(S.sold_quantity) DESC) AS 'Rank_Order'
FROM dim_product P JOIN fact_sales_monthly S
ON P.product_code = S.product_code
WHERE S.fiscal_year = 2021
GROUP BY P.division, S.product_code, P.product)
SELECT * FROM x
WHERE Rank_Order IN (1,2,3) ORDER BY division, Rank_Order;
```

Result Grid

division	product_code	product	Total_sold_quan?ty	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

divisio	product_cod	product	Total_sold_quan?ty	Rank_Orde
N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
P & A	A2319150302	AQ Gamers Ms	428498	1
PC	A4218110202	AQ Digit	17434	1
N & S	A6818160202	AQ Pen Drive DRC	688003	2
P & A	A2520150501	AQ Maxima Ms	419865	2
PC	A4319110306	AQ Velocity	17280	2
N & S	A6819160203	AQ Pen Drive DRC	676245	3
P & A	A2520150504	AQ Maxima Ms	419471	3
PC	A4218110208	AQ Digit	17275	3

Presented by Karthick P

Thank You

AtliQ Hardwares

Presented by Karthick P