CONSUMER GOODS AD-HOC INSIGHTS

ATLIQ COMPUTER HARDWARE PRODUCERS

“ATLIQ HARDWARES
IS ONE OF THE LEADING COMPUTER HARDWARE PRODUCERS IN INDIA AND WELL EXPANDED IN OTHER COUNTRIES TOO.”

CONSUMER GOOD | A CODE BASICS PROJECT

DATA PROVIDED

fact_gross_price

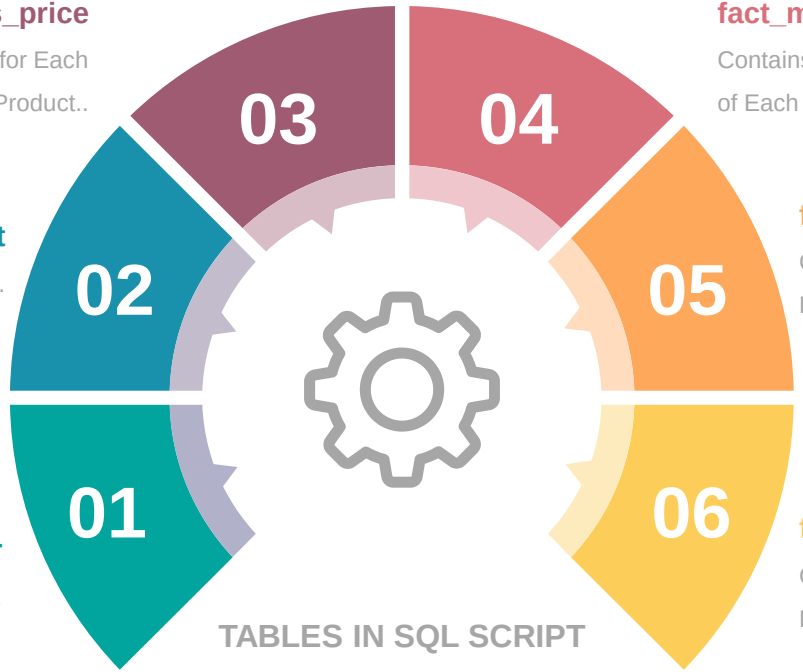
Contains Gross Price Information for Each Product..

dim_product

Contains Product Related Data.

dim_customer

Contains Customer Related Data.



fact_manufacturing_cost

Contains The Cost Incurred in Production of Each Product.

fact_pre_invoice_deductions

Contains Pre Invoice-Deductions for Each Product

fact_sales_monthly

Contains Monthly Sales Data For Each Product.

TABLES IN SQL SCRIPT

atliq_hardware_db

AD-HOC-REQUESTS

1

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

For this request we will be using dim_customer table.

COLUMNS PRESENT IN dim_customer :

1.customer_code.

2.customer.

3.platform.

4.channel

5.market

6. sub_zone

7.region

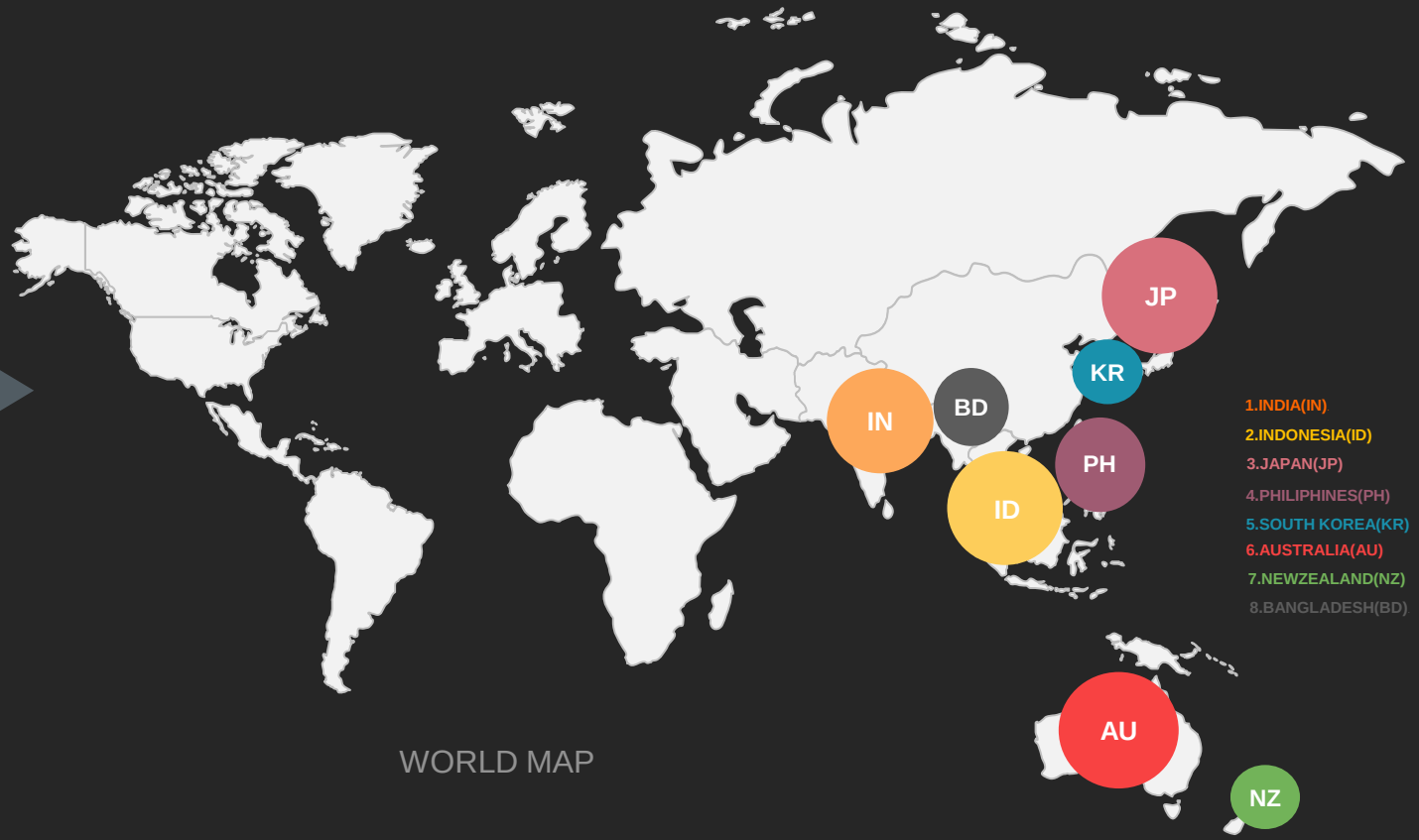
SQL QUERY :

```
select distinct(market) from dim_customer
where customer = "Atliq Exclusive" and region="APAC";
```

REQUEST 1 OUTPUT

OUTPUT TABLE

	market
▶	India
	Indonesia
	Japan
	Philiphines
	South Korea
	Australia
	Newzealand
	Bangladesh



WORLD MAP

AD-HOC-REQUESTS

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

For this request we will be using dim_customer table and fact_sales_monthly table.

dim_customer

1.customer_code.
2.customer.
3.platform.
4.channel
5.market
6. sub_zone
7.region

fact_sales_monthly

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

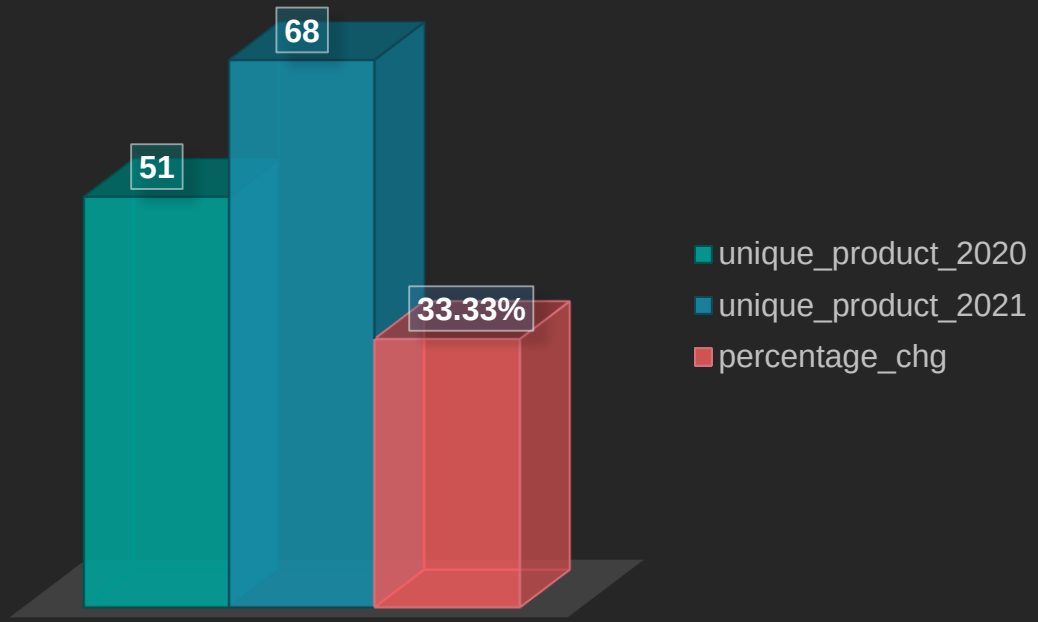
SQL QUERY

```
with CTE1 as
(select a.product_code,a.product,b.fiscal_year
from dim_product a join fact_sales_monthly b
on a.product_code=b.product_code),
CTE2 as
(select count(distinct case when CTE1.fiscal_year=2020 then CTE1.product
end ) as unique_product_2020 ,
count(distinct case when CTE1.fiscal_year=2021 then CTE1.product end )
as unique_product_2021
from CTE1)
select unique_product_2020,unique_product_2021,
round(((unique_product_2021-
unique_product_2020)/unique_product_2020) * 100,2) as percentage_chg
from CTE2;
```

REQUEST 2 OUTPUT

OUTPUT TABLE

	unique_product_2020	unique_product_2021	percentage_chg
▶	51	68	33.33



AD-HOC-REQUESTS

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

For this request we will be using dim_product table.

Columns in dim_product

1.product_code.
2.division.
3.segment.
4.category
5.product
6. variant

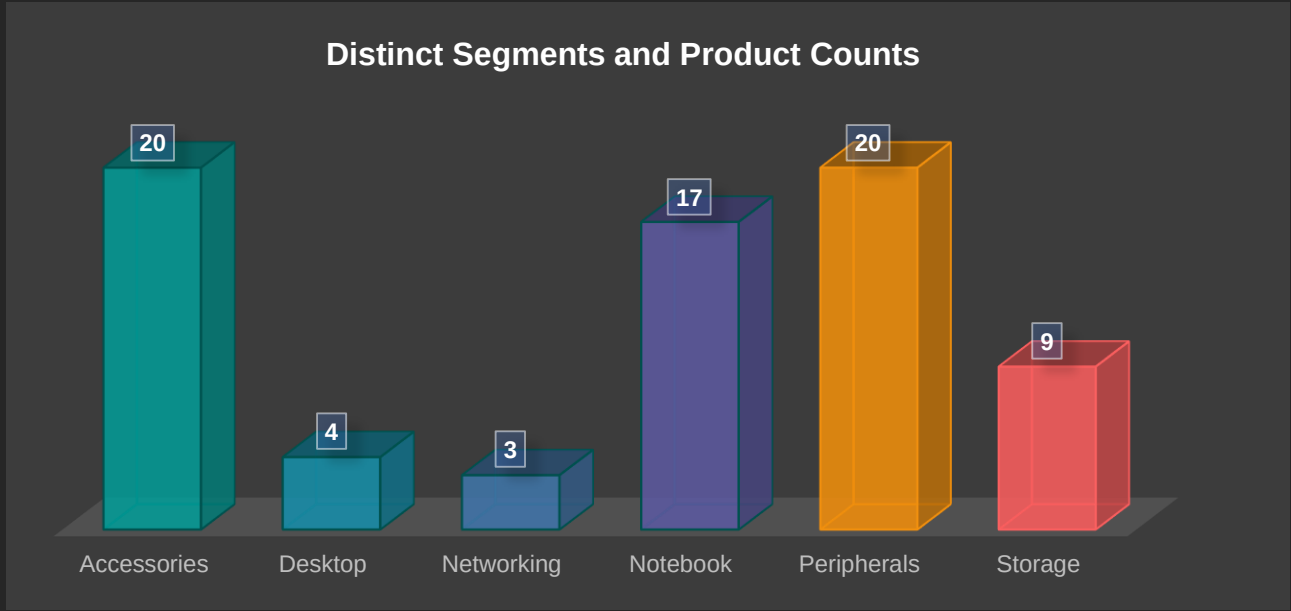
SQL QUERY :

```
select segment, count(distinct(product)) as product_count
from dim_product
group by segment
order by product_count desc;
```

REQUEST 3 OUTPUT

OUTPUT TABLE

segment	product_count
Accessories	20
Peripherals	20
Notebook	17
Storage	9
Desktop	4
Networking	3



AD-HOC-REQUESTS

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

For this request we will be using dim_product table and fact_sales_monthly table.

dim_product

1.product_code.
2.division.
3.segment.
4.category
5.product
6. variant

fact_sales_monthly

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

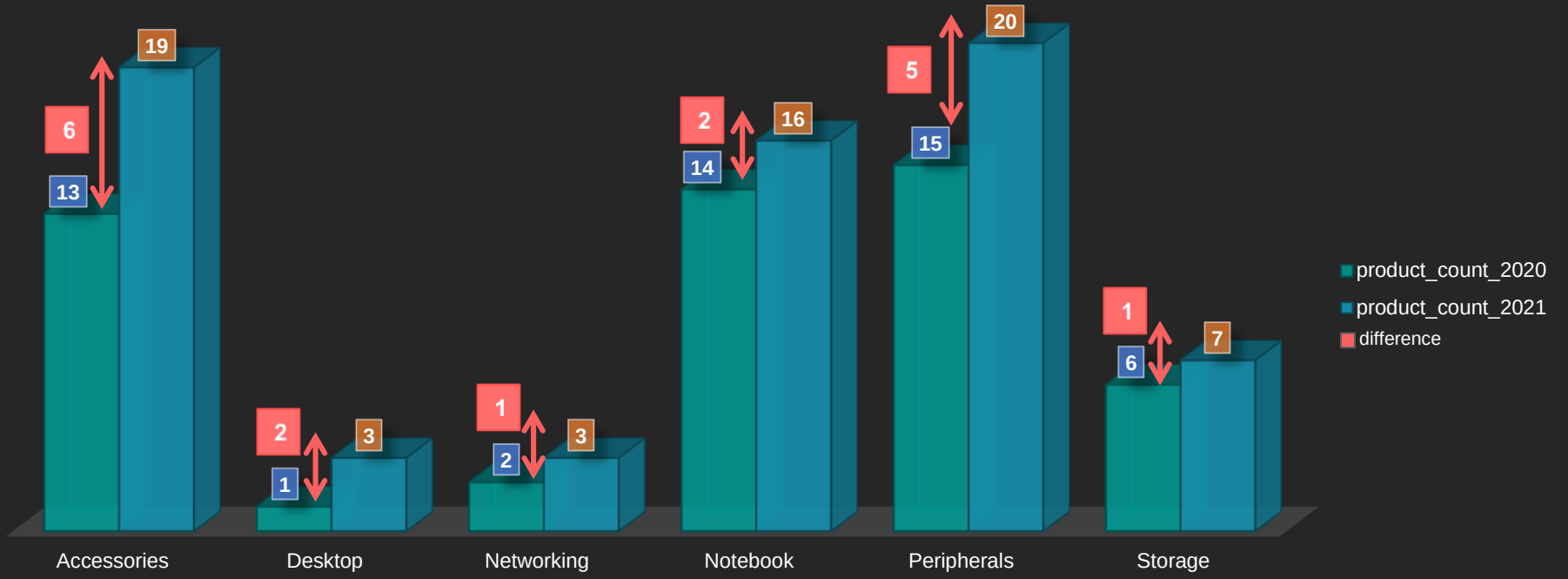
SQL QUERY :

```
with req4 as
(select a.product_code, a.segment, a.product, b.fiscal_year
from dim_product a join fact_sales_monthly b
on a.product_code = b.product_code),
req41 as
(select segment,
count(distinct case when req4.fiscal_year=2020 then req4.product end) as
product_count_2020,
count(distinct case when req4.fiscal_year=2021 then req4.product end) as
product_count_2021
from req4 group by segment order by product_count_2020 desc )
select segment,product_count_2020,product_count_2021,
product_count_2021-product_count_2020 as difference
from req41 order by difference desc;
```

OUTPUT TABLE

	segment	product_count_2020	product_count_2021	difference
▶	Accessories	13	19	6
	Peripherals	15	20	5
	Notebook	14	16	2
	Desktop	1	3	2
	Storage	6	7	1
	Networking	2	3	1

REQUEST 4 OUTPUT



AD-HOC-REQUESTS

5

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

For this request we will be using dim_product table and fact_sales_monthly table.

dim_product

1.product_code.
2.division.
3.segment.
4.category
5.product
6. variant

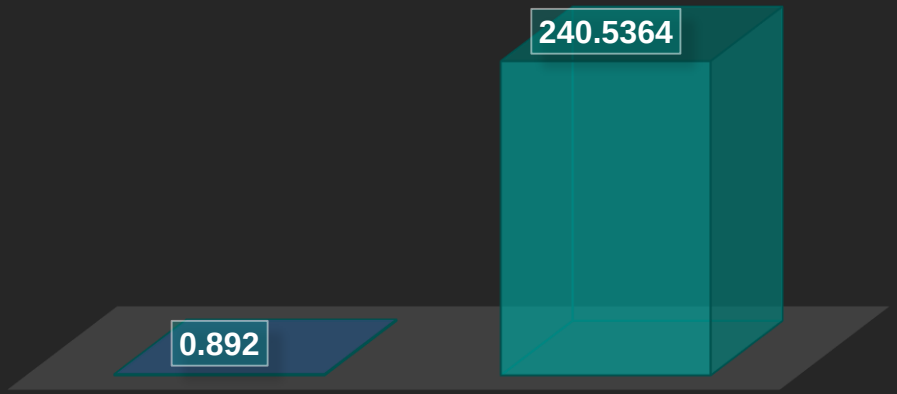
fact_sales_monthly

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

SQL QUERY :

```
select a.product_code, a.product , b.manufacturing_cost
from dim_product a join fact_manufacturing_cost b
on a.product_code = b.product_code
where manufacturing_cost=(select min(manufacturing_cost)
from fact_manufacturing_cost )
or
manufacturing_cost=(select max(manufacturing_cost)
from fact_manufacturing_cost ) ;
```

REQUEST 5 OUTPUT



OUTPUT TABLE

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

AD-HOC-REQUESTS

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

For this request we will be using dim_customer table and fact_pre_invoice_deductions table.

dim_customer :

1.customer_code.
2.customer.
3.platform.
4.channel
5.market
6. sub_zone
7.region

fact_pre_invoice_deductions :

1.customer_code.
2.fiscal_year.
3.pre_invoice_discount_pct

We can perform this activity using 2 approaches :

REQUEST 6 QUERY

Approach 1 : Grouping by with Customer Column

```
with req6 as
(select a.customer_code , a.customer, a.market,
b.fiscal_year , b.pre_invoice_discount_pct
from dim_customer a join fact_pre_invoice_deductions b
on a.customer_code = b.customer_code ),
req61 as
(select customer ,
Round(avg(pre_invoice_discount_pct),2) as
ave,market,fiscal_year
from req6
where fiscal_year = 2021 and market='India'
group by customer order by ave desc limit 0,5)
select req6.customer,req6.customer_code,
req61.ave as average_discount_percentage
from req61 join req6
on req6.customer=req61.customer
and req6.fiscal_year = 2021
and req6.market='India'
order by req61.ave desc ;
```

Approach 2 : Grouping by with Customer Column and Customer_Code Column

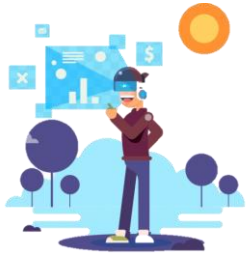
```
with req6 as
(select a.customer_code , a.customer, a.market,
b.fiscal_year , b.pre_invoice_discount_pct
from dim_customer a join fact_pre_invoice_deductions b
on a.customer_code = b.customer_code)
select customer,customer_code,
round(avg(pre_invoice_discount_pct),2)
as average_discount_percentage
from req6
where fiscal_year = 2021 and market='India'
group by customer,customer_code
order by average_discount_percentage desc limit 0,5;
```

REQUEST 6 OUTPUT TABLES

BELOW ARE THE OUTPUT TABLES BASED ON ABOVE TWO APPROACHES

Approach 1 : Grouping by with Customer Column

customer	customer_code	average_discount_percentage
Flipkart	90002009	0.31
Croma	90002002	0.30
Ezone	90002003	0.30
Viveks	90002006	0.30
Vijay Sales	90002004	0.28

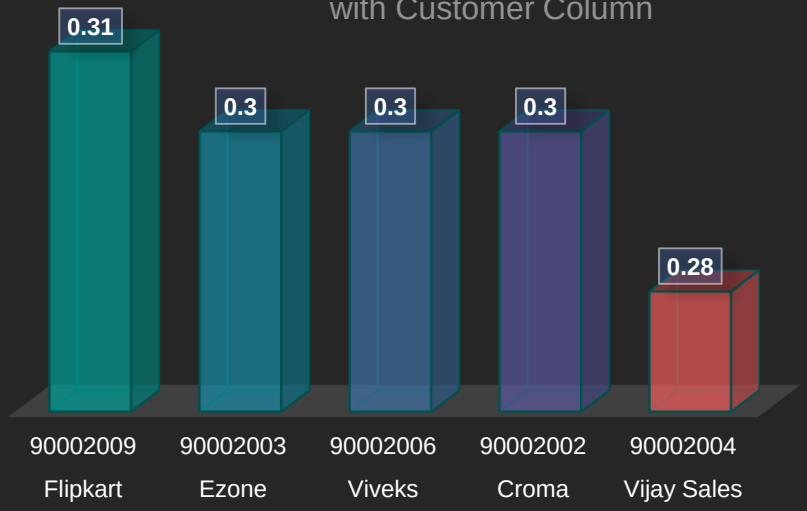


Approach 2 : Grouping by with Customer Column and Customer_Code Column

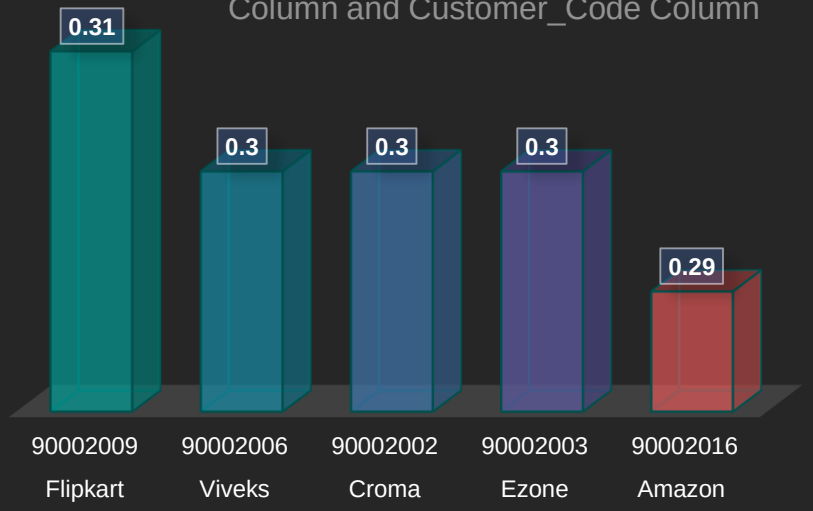
customer	customer_code	average_discount_percentage
Flipkart	90002009	0.31
Viveks	90002006	0.30
Croma	90002002	0.30
Ezone	90002003	0.30
Amazon	90002016	0.29

REQUEST 6 OUTPUT

Approach 1 : Grouping by with Customer Column



Approach 2 : Grouping by with Customer Column and Customer_Code Column



AD-HOC-REQUESTS

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

For this request we will be using dim_customer table, fact_sales_monthly , fact_gross_price.

dim_customer :

1.customer_code.
2.customer.
3.platform.
4.channel
5.market
6. sub_zone
7.region

fact_sales_monthly:

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

fact_gross_price:

1.product_code
2.fiscal_year.
3.gross_price

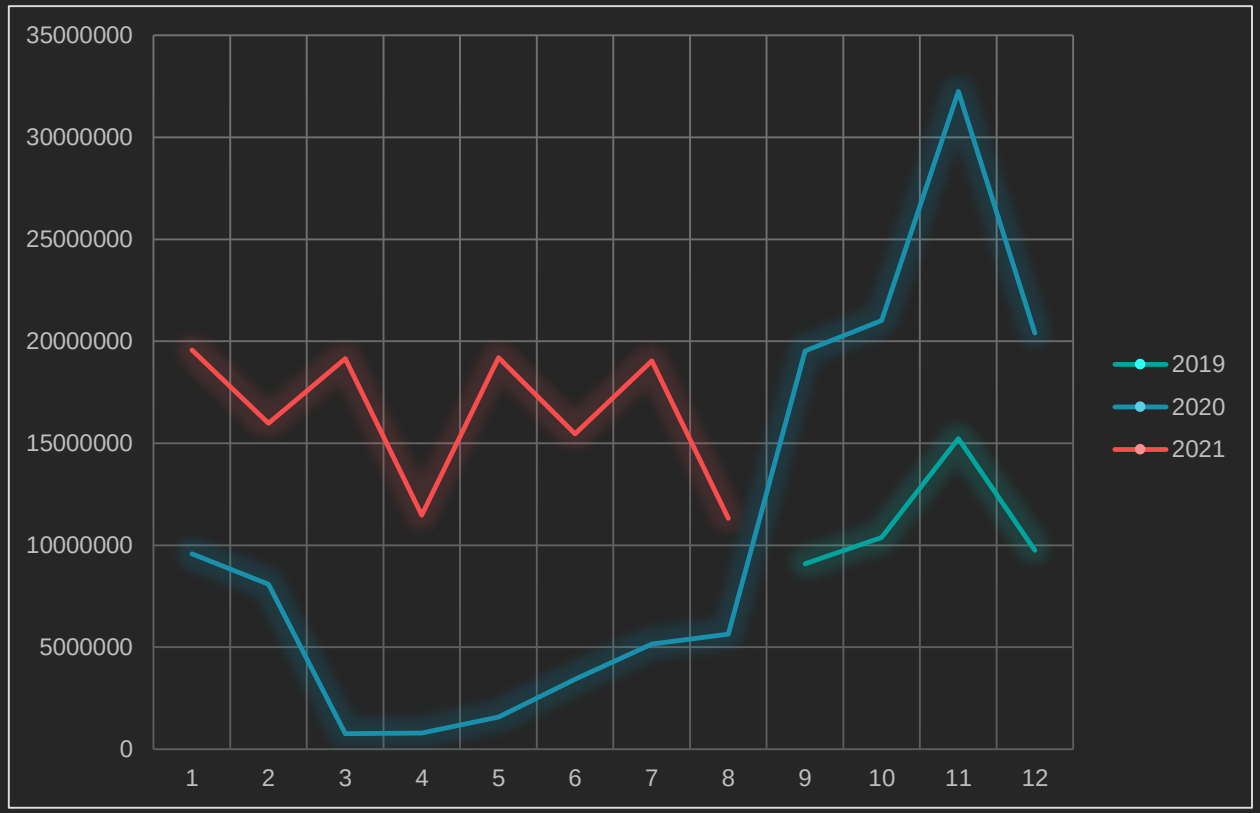
SQL QUERY :

```
select month(b.date) as Month, Year(b.date) as Year,
sum(c.gross_price*b.sold_quantity) as Gross_Sales_Amount
from dim_customer a join fact_Sales_monthly b
on a.customer_code = b.customer_code
join fact_gross_price c
on c.product_code=b.product_code
where a.customer = 'Atliq Exclusive'
group by Month,Year order by Month;
```

OUTPUT TABLE

	Month	Year	Gross_Sales_Amount
▶	1	2020	9584951.9393
	1	2021	19570701.7102
	2	2020	8083995.5479
	2	2021	15986603.8883
	3	2020	766976.4531
	3	2021	19149624.9239
	4	2020	800071.9543
	4	2021	11483530.3032
	5	2020	1586964.4768
	5	2021	19204309.4095
	6	2020	3429736.5712
	6	2021	15457579.6626
	7	2020	5151815.4020
	7	2021	19044968.8164
	8	2020	5638281.8287
	8	2021	11324548.3409
	9	2019	9092670.3392
	9	2020	19530271.3028
	10	2019	10378637.5961
	10	2020	21016218.2095
	11	2019	15231894.9669
	11	2020	32247289.7946
	12	2019	9755795.0577
	12	2020	20409063.1769

REQUEST 7 OUTPUT



AD-HOC-REQUESTS

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

For this request we will be using fact_sales_monthly table.

Columns in fact_sales_monthly:

1. **date**
2. **product_code**
3. **customer_code**
4. **sold_quantity**
5. **fiscal_year**

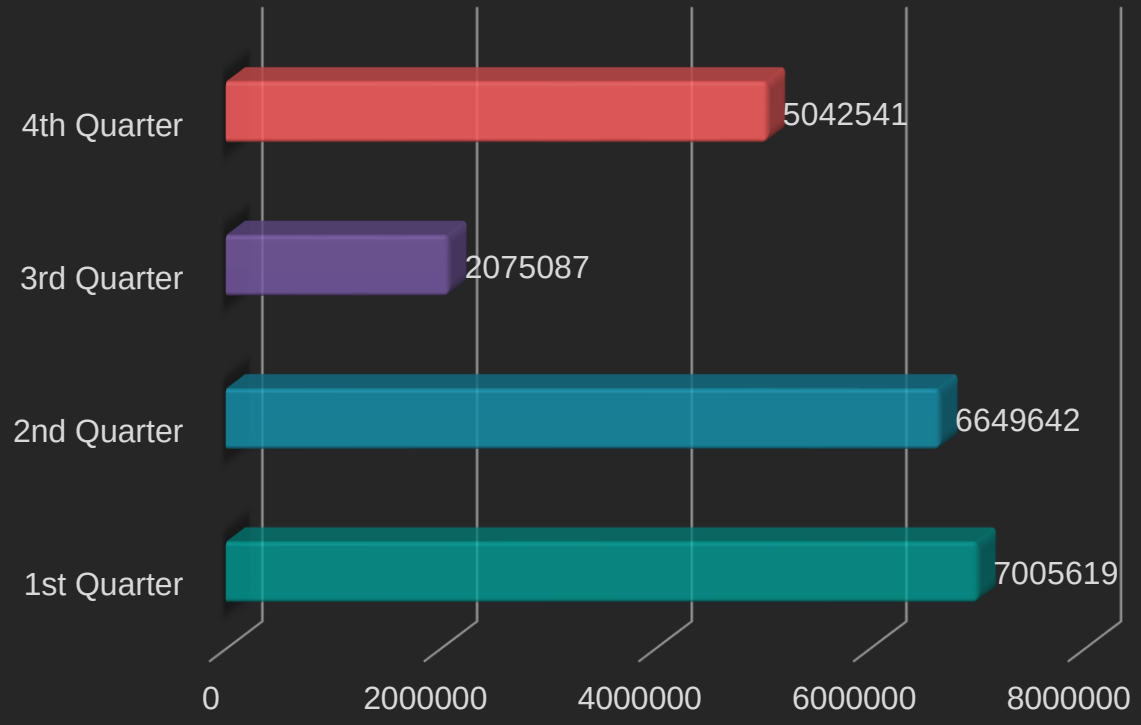
SQL QUERY :

```
select
case
when month(date) in (9,10,11) then '1st Quarter'
when month(date) in (12,1,2) then '2nd Quarter'
when month(date) in (3,4,5) then '3rd Quarter'
when month(date) in (6,7,8) then '4th Quarter' end
as Quarter,
sum(sold_quantity) as total_sold_quantity
from fact_Sales_monthly
where fiscal_year=2020
group by Quarter
order by total_sold_quantity desc ;
```

REQUEST 8 OUTPUT

OUTPUT TABLE

	Quarter	total_sold_quantity
▶	1st Quarter	7005619
	2nd Quarter	6649642
	4th Quarter	5042541
	3rd Quarter	2075087



AD-HOC-REQUESTS

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

For this request we will be using dim_customer table, fact_sales_monthly , fact_gross_price.

dim_customer :

1.customer_code.
2.customer.
3.platform.
4.channel
5.market
6. sub_zone
7.region

fact_sales_monthly:

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

fact_gross_price:

1.product_code
2.fiscal_year.
3.gross_price

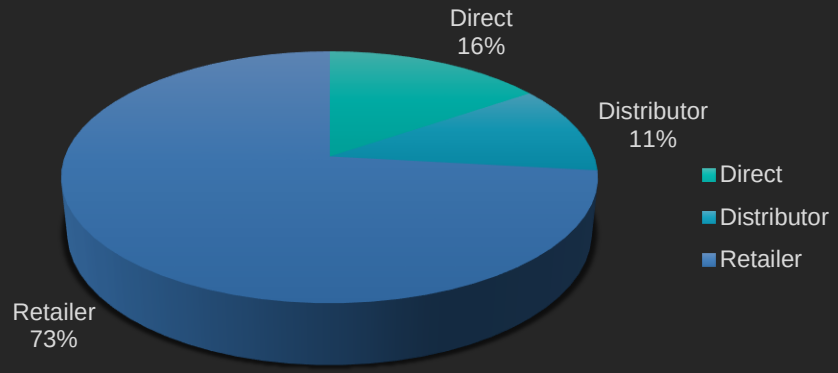
SQL QUERY :

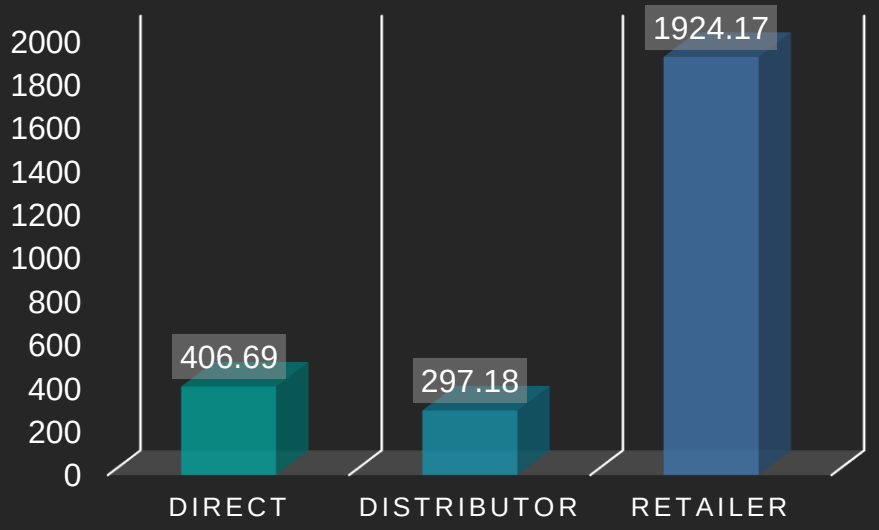
```
with req9 as
(select channel,
round(sum(c.gross_price*b.sold_quantity)/1000000,2)
as Gross_Sales_mln
from dim_customer a join fact_Sales_monthly b
on a.customer_code = b.customer_code
join fact_gross_price c
on c.product_code=b.product_code
where b.fiscal_year = 2021
group by channel order by Gross_Sales_mln)
select *, (Gross_Sales_mln*100)/sum(Gross_Sales_mln)
over() as Percentage
from req9;
```

REQUEST 9 OUTPUT

OUTPUT TABLE

	channel	Gross_Sales_mln	Percentage
▶	Distributor	297.18	11.308047
	Direct	406.69	15.475031
	Retailer	1924.17	73.216922





AD-HOC-REQUESTS

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

For this request we will be using dim_product table and fact_sales_monthly table.

dim_product

1.product_code.
2.division.
3.segment.
4.category
5.product
6. variant

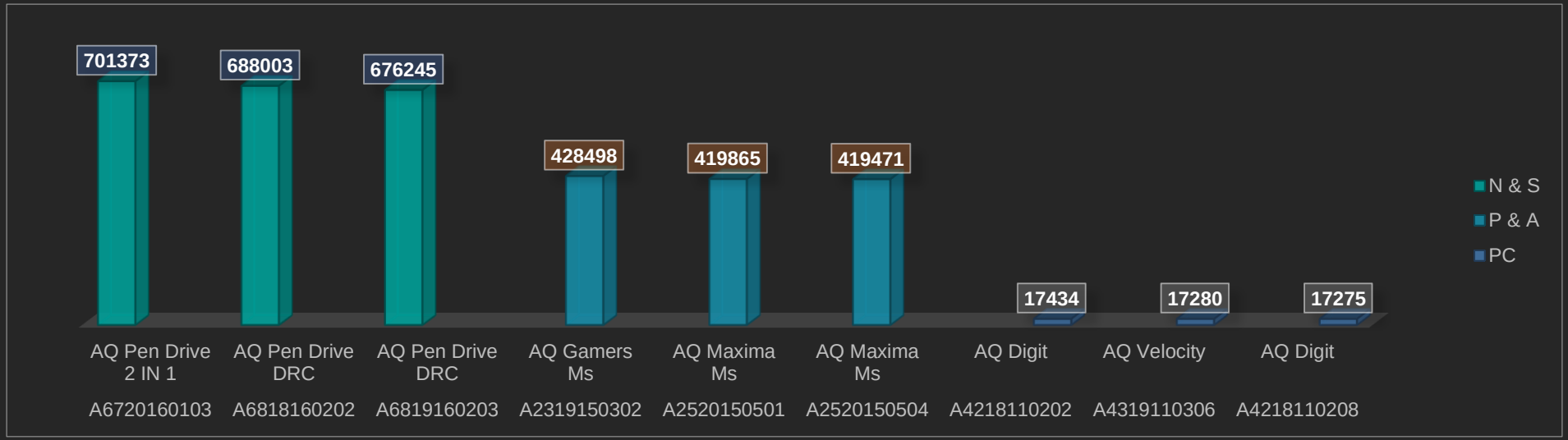
fact_sales_monthly

1.date
2.product_code.
3.customer_code
4.sold_quantity
5.fiscal_year

SQL QUERY :

```
with req10 as
(select a.division, a.product, a.product_code,
sum(b.sold_quantity) as total_sold_quantity
from dim_product a join fact_sales_monthly b
on a.product_code = b.product_code
where fiscal_year = 2021
group by a.division, a.product, a.product_code ),
req101 as
(select *,
rank() over(partition by division order by total_sold_quantity desc)
as Rank_Order
from req10 )
select *
from req101
where Rank_Order<=3;
```

REQUEST 10 OUTPUT



OUTPUT TABLE

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

CONCLUSION

INSIGHTS WE GOT AFTER EXECUTIONS

REQUEST 1

LIST OF MARKETS IN WHICH CUSTOMER "ATLIQ EXCLUSIVE" OPERATES ITS BUSINESS IN THE APAC REGION : INDIA , INDONESIA , JAPAN , PHILIPHINES , SOUTH KOREA , AUSTRALIA , NEWZEALAND , BANGLADESH

REQUEST 2

TOTAL UNIQUE PRODUCTS ARE 73, UNIQUE PRODUCTS IN 2020 51 , UNIQUE PRODUCTS IN 2021 68 , PERCENTAGE CHANGE IS 33.33

REQUEST 3

IN TOTAL WE HAVE 6 SEGMENTS. ACCESSORIES AND PERIPHERALS HOLD THE HIGHEST PRODUCT COUNT.

REQUEST 4

ACCESSORIES HAVE THE MOST INCEREASE IN UNIQUE PRODUCT FROM 2020 TO 2021

REQUEST 5

AQ MASTER WIRED X1 MS HAS THE LOWEST MANUFACTURING COST AND AQ HOME ALLIN 1 GEN 2 HAS THE HIGHEST MANUFACTURING COST.

REQUEST 6

TOP 5 CUSTOMERS WHO RECEIVED AN AVERAGE HIGH PRE_INVOICE_DISCOUNT_PCT :WHEN GROUPED BY CUSTOMER COLUMN:FLIPKART,VIVEK,CROMA,EZONE, VIJAY SALES. WHEN GROUPED BY CUSTOMER AND CUSTOMER CODE TOP 4 ARE SAME ONLY 5TH ONE IS AMAZON

CONCLUSION

INSIGHTS WE GOT AFTER EXECUTIONS

REQUEST 7

HIGHEST GROSS SALES ARE OCCURES IN THE MONTH OF NOVEMBER IN 2020 AND GROSS SALES AMOUNT VALUE 32.24 MILLIONS AND LOWEST GROSS SALES ARE OCCURES IN THE MONTH OF MARCH IN 2020 AND GROSS SALES AMOUNT VALUE 0.76 MILLIONS

REQUEST 8

QUARTER 1 HAVE THE HIGHEST TOTAL SOLD QUANTITY VALUE 7.01 MILLIONS

REQUEST 9

RETAILERS HAVE THE HIGHEST GROSS SALES WITH PERCENTAGE OF 73.22%

REQUEST 10

WE HAVE GENERATED TOP 3 PRODUCTS FROM EACH DIVISIONS AND RANKED THEM ON THE BASIS OF HIGHEST SOLD QUANTITIES . THE DIVISIONS ARE : N&S , P&S AND PC

WRAPPING UP!!!