Atliq Hardware

Domain – Consumer Goods

Atiiq Hardware's 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.

- 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.

Tasks

Question.1

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

Code

```
select Distinct(market) as list_of_markets from gdb023.dim_customer
 where region = 'APAC';
```

Output

list_of_markets
India
Indonesia
Japan
Pakistan
Philiphines
South Korea
Australia
Newzealand
Bangladesh
China

Question.2

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

Output

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

	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.3265

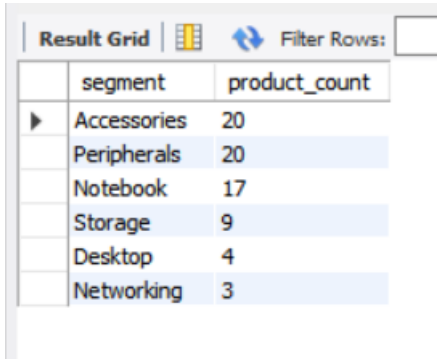
Code

```
select * from dim_product;
select * from fact_gross_price;
SELECT
  COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN d.product_code END) AS unique_products_2020,
  COUNT(DISTINCT CASE WHEN fiscal_year = 2021 THEN d.product_code END) AS unique_products_2021,
  100 * (COUNT(DISTINCT CASE WHEN fiscal_year = 2021 THEN d.product_code END) -
 COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN d.product_code END)) / COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN d.product_code END) AS percentage_chg
FROM
  dim_product d
  JOIN fact_gross_price fg ON d.product_code = fg.product_code
WHERE
  fiscal_year IN (2020, 2021)
```

Question.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

Output



Result Grid | Filter Rows:

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

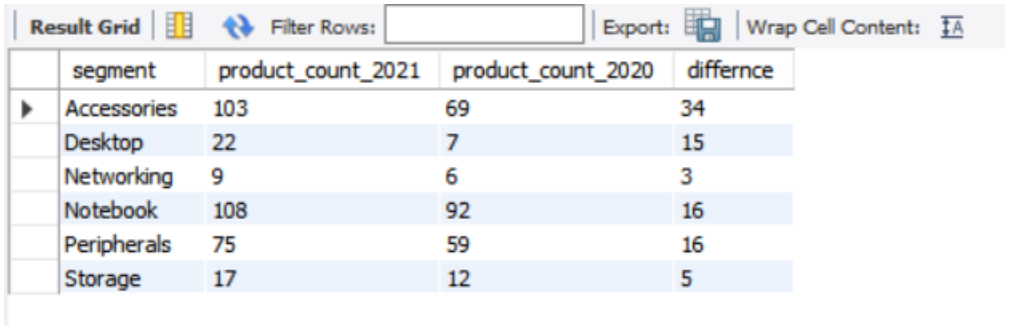
Code

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

Question.4

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

Output



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

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

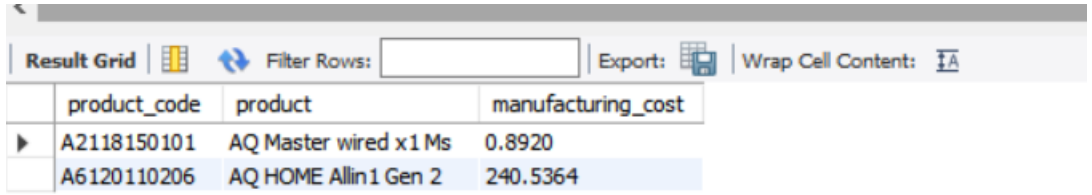
Code

```
select d.segment,
count(distinct case when f.fiscal_year = 2021 then d.product_code end) as product_count_2021,
count(distinct case when f.fiscal_year = 2020 then d.product_code end) as product_count_2020,
count(distinct case when f.fiscal_year = 2021 then d.product_code end)
 - count(distinct case when f.fiscal_year = 2020 then d.product_code end) as differnce
from dim_product d join fact_sales_monthly f on d.product_code = f.product_code
group by d.segment;
```

Question.5

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

Output



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

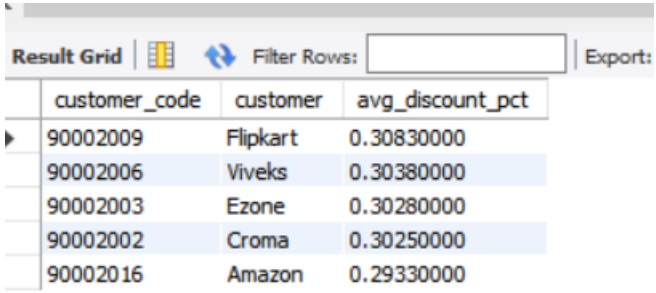
Code

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

Question.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

Output



Result Grid | Filter Rows: | Export:

customer_code	customer	avg_discount_pct
90002009	Flipkart	0.30830000
90002006	Viveks	0.30380000
90002003	Ezone	0.30280000
90002002	Croma	0.30250000
90002016	Amazon	0.29330000

Code

```
select d.customer_code,d.customer, avg(f.pre_invoice_discount_pct) as avg_discount_pct
from dim_customer d join fact_pre_invoice_deductions f
on d.customer_code = f.customer_code
where market = 'india' and f.fiscal_year=2021
group by d.customer_code, d.customer
order by avg_discount_pct desc
limit 5;
```

Question.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.

Code

```
select month(f.date) as month, year(f.date) as year, sum((fg.gross_price * f.sold_quantity) )as gross_sales_amount
from fact_sales_monthly f
join fact_gross_price fg on f.product_code = fg.product_code
join dim_customer d on d.customer_code = f.customer_code
where d.customer = 'Atliq Exclusive'
group by year(f.date), month(f.date)
order by month(f.date) asc,year(f.date);
```

Output

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

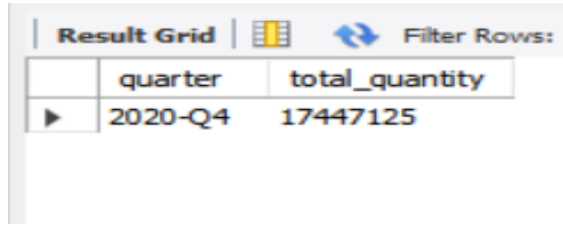
Question.8

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

Output

Code

```
select CONCAT(year(date),'-Q',QUARTER(date)) as quarter, sum(sold_quantity) as total_quantity
from fact_sales_monthly
where year(date)= 2020
group by quarter
order by total_quantity desc
limit 1;
```

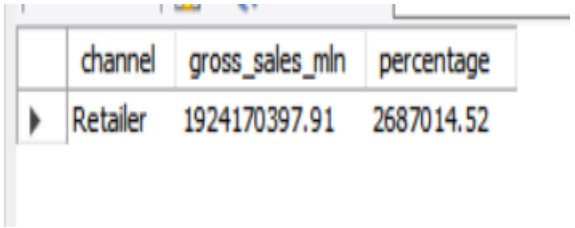

Result Grid | Filter Rows:

	quarter	total_quantity
▶	2020-Q4	17447125

Question.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

Output



channel	gross_sales_mln	percentage
Retailer	1924170397.91	2687014.52

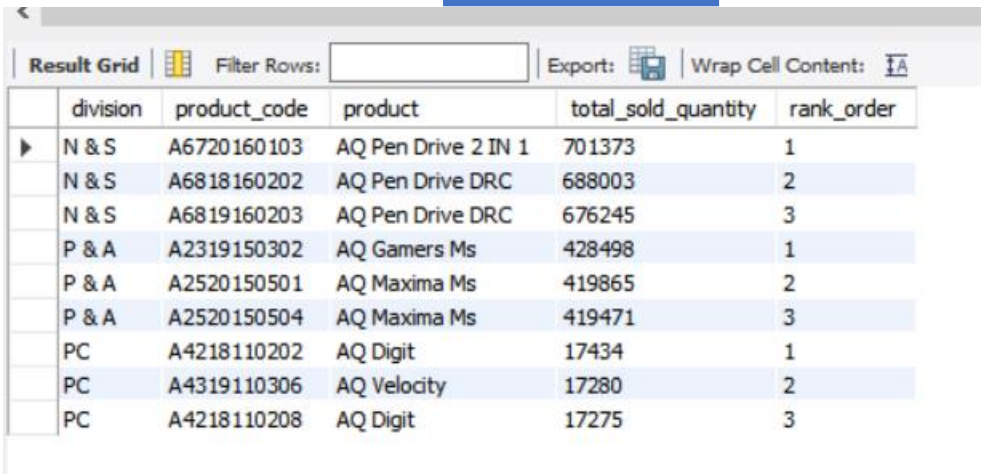
Code

```
select d.channel,
        round(sum((fg.gross_price * f.sold_quantity)),2)as gross_sales_mln,
        round(sum((fg.gross_price * f.sold_quantity) / (select sum(gross_price) from fact_gross_price where fiscal_year = 2021)*100),2) as percentage
from fact_sales_monthly f join fact_gross_price fg on f.product_code = fg.product_code
 join dim_customer d  on d.customer_code = f.customer_code
 where f.fiscal_year = 2021
 group by d.channel
 order by gross_sales_mln desc
 limit 1;
```

Question.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

Output



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

Code

```
with solution as(
select d.division,d.product,f.product_code,sum(f.sold_quantity) as total_sold_quantity,
rank() over (partition by d.division order by sum(f.sold_quantity) desc) as rank_order
from dim_product d join fact_sales_monthly f on d.product_code = f.product_code
where fiscal_year = 2021
group by d.division,d.product,f.product_code
)
SELECT division, product_code, product, total_sold_quantity, rank_order
FROM solution
WHERE rank_order <= 3
ORDER BY division, rank_order
```