Ad Hoc Insights

Consumer Goods

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AGENDA

OBJECTIVES

COMPANY'S DETAIL AND MARKET

DATA, REQUESTS, AND TOOLS

Objectives

- Atliq Hardwares is a top computer hardware producer in India, with a significant presence in other countries.
- Management identified a need for better data-informed decision-making.
- To address this, they plan to expand the data analytics team by hiring junior data analysts.
- Tony Sharma, the Director of Data Analytics, aims to evaluate candidates' technical and soft skills through a SQL challenge.
- This initiative will help ensure that the new hires are well-rounded and capable of contributing effectively to the team.

ATLIQ HARDWARE'S MARKET IN 27 COUNTRIES

DATA
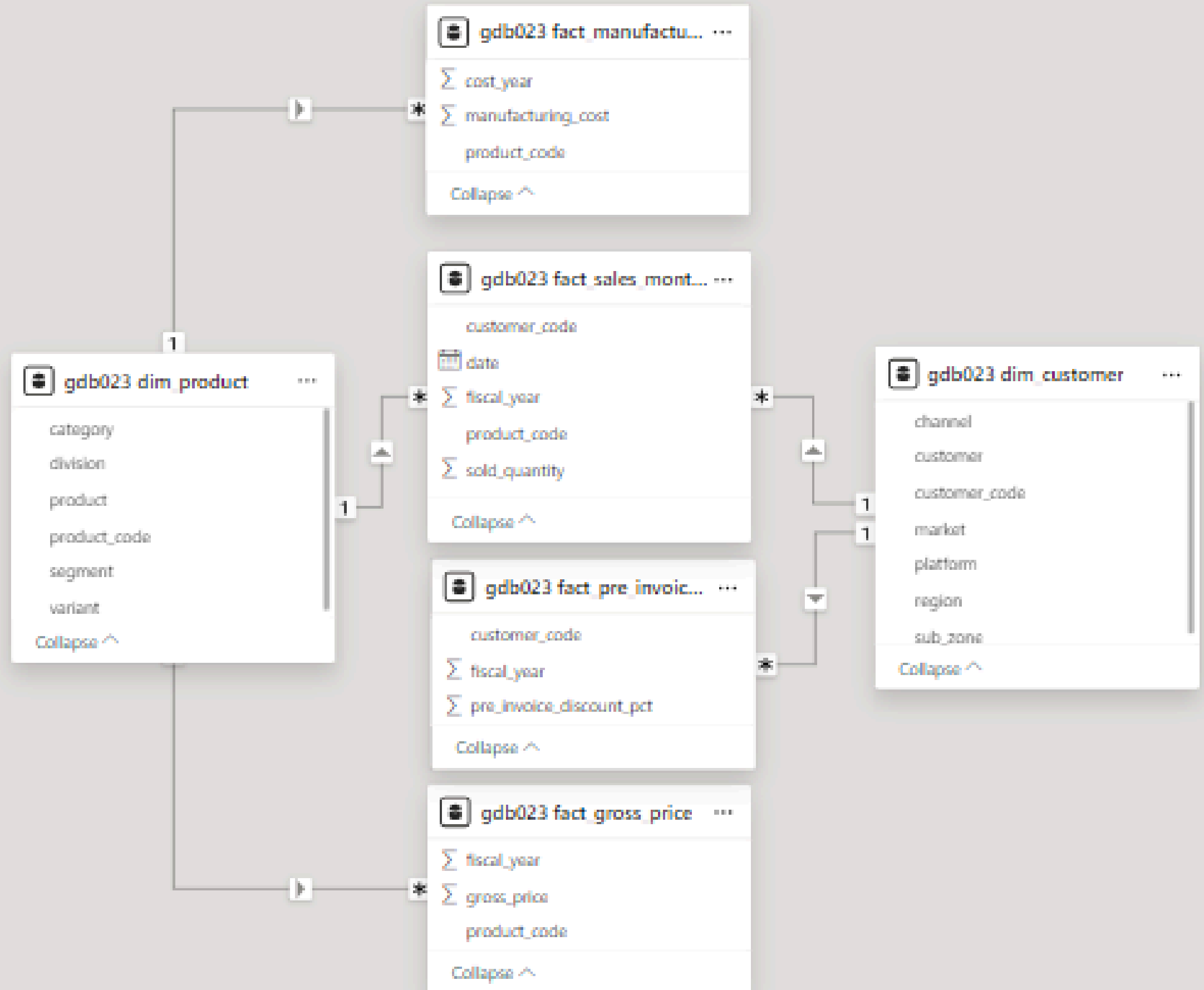
REQUESTS

Codebasics SQL Challenge

Requests:

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

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

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

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

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

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

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

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

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

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

codebasics.io

MySQL

Power BI

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

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

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

unique_products_2020
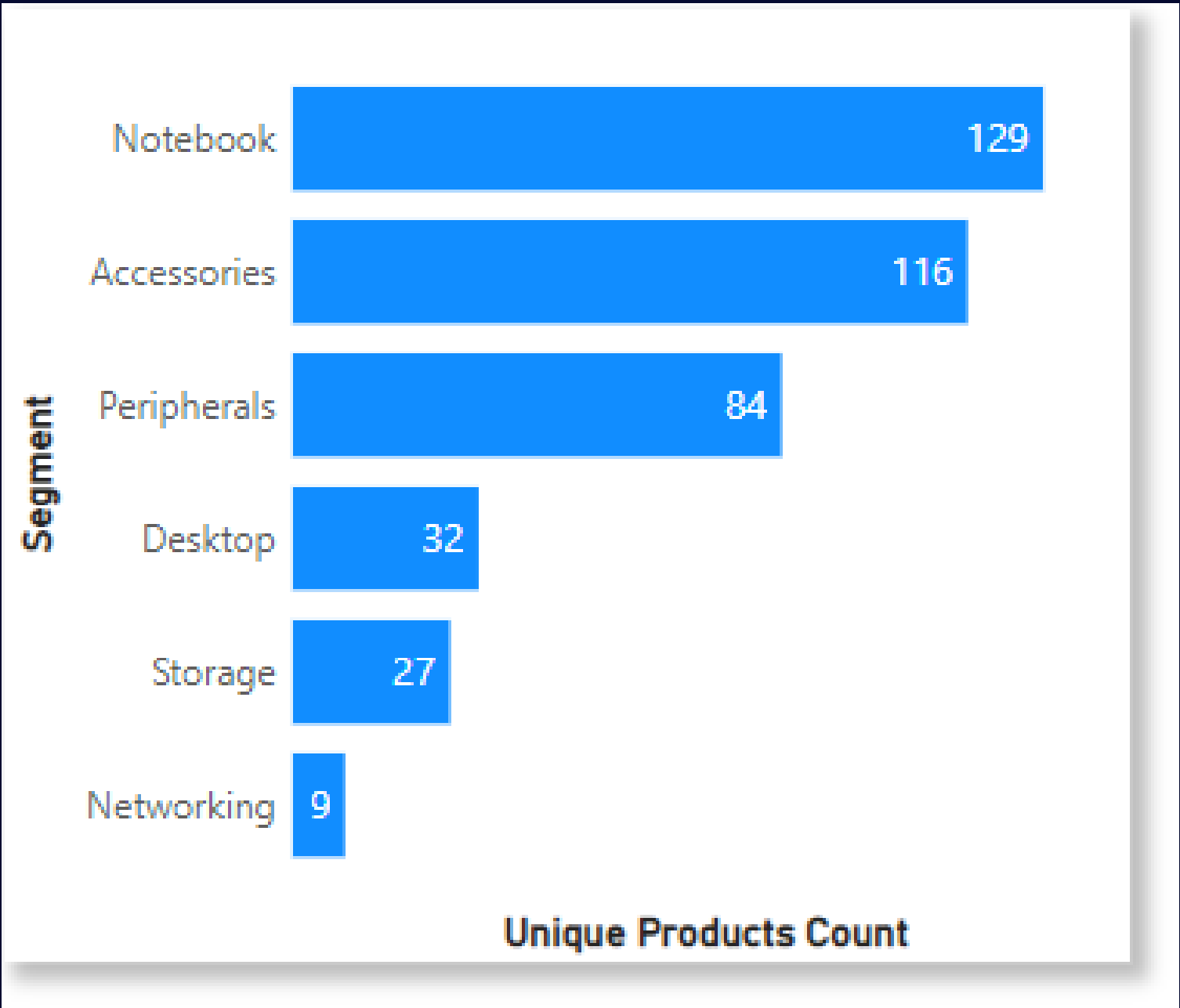unique_products_2021
percentage_chg

unique_products_2020	unique_products_2021	percentage_change
245	334	36.33
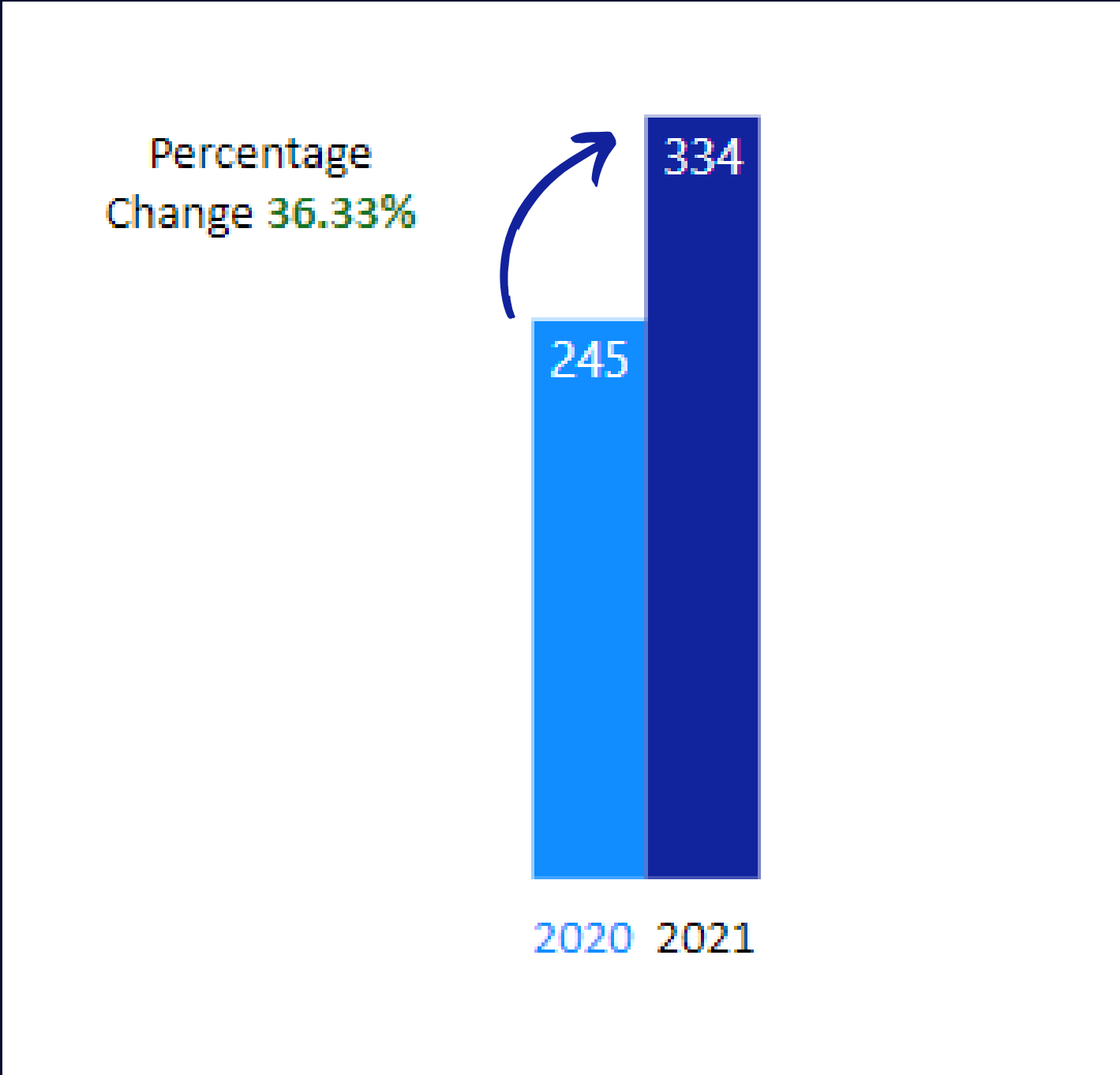
Percentage
Change **36.33%**

334

245

2020 2021

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

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

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

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
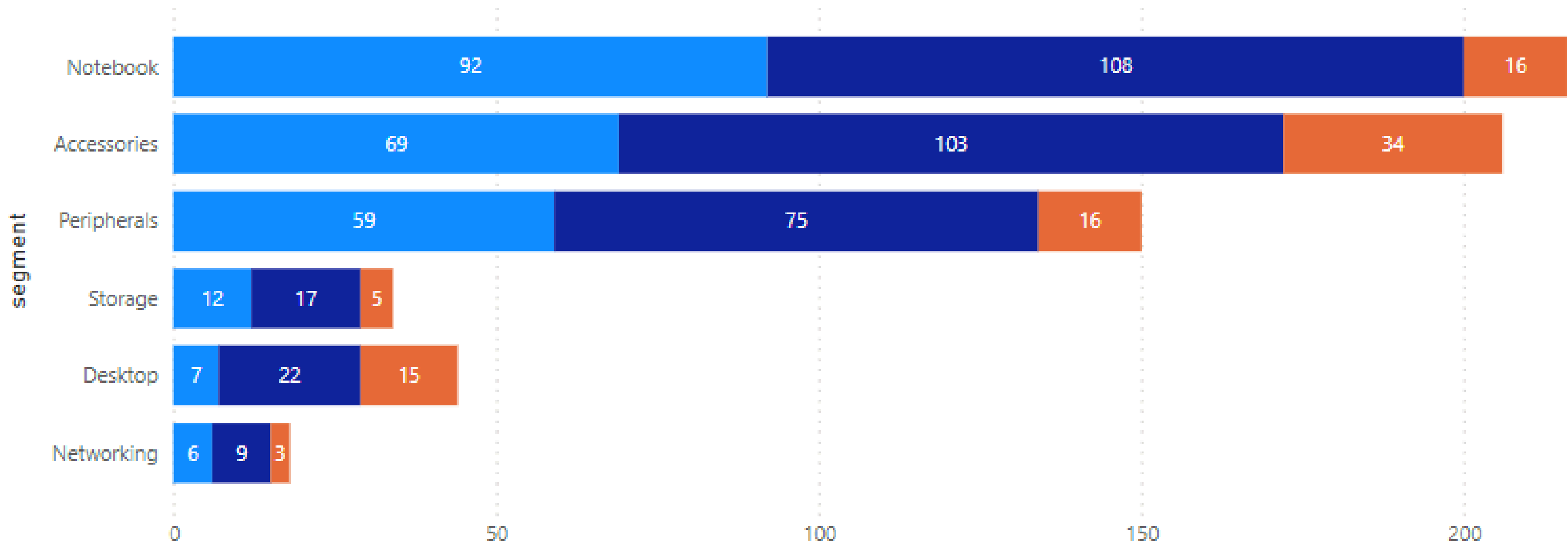
Legend: ● unique product 2020 ● unique product 2021 ● difference

segment	unique product 2020	unique product 2021	difference
Notebook	92	108	16
Accessories	69	103	34
Peripherals	59	75	16
Storage	12	17	5
Desktop	7	22	15
Networking	6	9	3

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

<div align="center">

product_code

product

manufacturing_cost

</div>

description	product_code	product	manufacturing_cost
Highest Manufacturing Cost	A6120110206	AQ HOME Allin1 Gen 2	240.5364
Lowest Manufacturing Cost	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

customer_code	customer	average_discount_percentage
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933

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

Months	Year	Gross_sales_amount
September	2019	9.09M
October	2019	10.38M
November	2019	15.23M
December	2019	9.76M
January	2020	9.58M
February	2020	8.08M
March	2020	0.77M
April	2020	0.80M
May	2020	1.59M
June	2020	3.43M
July	2020	5.15M
August	2020	5.64M
September	2020	19.53M
October	2020	21.02M
November	2020	32.25M
December	2020	20.41M
January	2021	19.57M
February	2021	15.99M
March	2021	19.15M
April	2021	11.48M
May	2021	19.20M
June	2021	15.46M
July	2021	19.04M
August	2021	11.32M

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

QUARTER	total_sold_quantity_millions
Q1	6.50M
Q2	6.16M
Q4	4.52M
Q3	1.65M

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,

<div align="center">

channel
gross_sales_mln
percentage

</div>

channel	gross_sales_in_millions	percentage
Retailer	1924.17	73.22
Direct	406.69	15.47
Distributor	297.18	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
product
total_sold_quantity
rank_order

rank_order	division	product_code	product	total_sold_quantity
1	N & S	A6720160103	AQ Pen Drive 2 IN 1 (Premium)	701373
2	N & S	A6818160202	AQ Pen Drive DRC (Plus)	688003
3	N & S	A6819160203	AQ Pen Drive DRC (Premium)	676245
1	P & A	A2319150302	AQ Gamers Ms (Standard 2)	428498
2	P & A	A2520150501	AQ Maxima Ms (Standard 1)	419865
3	P & A	A2520150504	AQ Maxima Ms (Plus 2)	419471
1	PC	A4218110202	AQ Digit (Standard Blue)	17434
2	PC	A4319110306	AQ Velocity (Plus Red)	17280
3	PC	A4218110208	AQ Digit (Premium Misty Green)	17275

Link to the Project