

## Case Details

Atliq Hardwares (imaginary company) 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. Hence, they want to expand their data analytics team by adding several junior data analysts. In order to recruit suitable candidate. Company's Analytics head has decided to conduct a SQL challenge which will help him understand skills of applicants.

We have access to following data files and need to provide data on below mentioned 10 ad hoc requests.

1. dim\_customer: contains customer-related data
2. dim\_product: contains product-related data
3. fact\_gross\_price: contains gross price information for each product
4. fact\_manufacturing\_cost: contains the cost incurred in the production of each product
5. fact\_pre\_invoice\_deductions: contains pre-invoice deductions information for each product
6. fact\_sales\_monthly: contains monthly sales data for each product.

### Requests:

1. Provide the list of markets in which customer "AtliqExclusive" 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, product, total\_sold\_quantity, rank\_order