Consumer Goods: Provide Insights – Adhoc Request Analyze

Created & Presented by Puranjoy Patra

Agenda

01 **Project Overview**

Explain company overview, Business Model & Problem Statement

02 **Purpose & Responsibility**

Discuss the goal of this proect, what is the Role & Tasks are given

03 **Data Processing**

Describe the Data Overview and show Data Model, implemented for this project

04 **Result & Insights**

Present the Query output as Results and highlight the Insights for decesion-making

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01

Project Overview

About Company

Atliq Hardware is a leading computer hardware company in India with operations in other countries. They focus on making high-quality products but want to improve their use of data to make faster, smarter decisions.
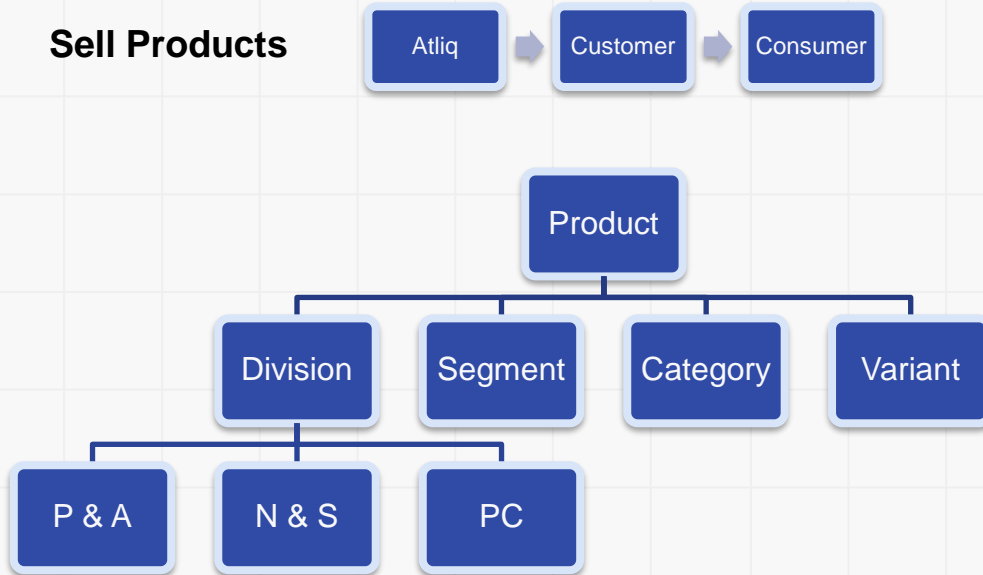
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Business Model

Sell Products

Atliq → Customer → Consumer

Platform
- Brick & Mortar
- E-Commerce

Channel
- Retailer
- Direct
- Distributor

Product
- Division
  - P & A
  - N & S
  - PC
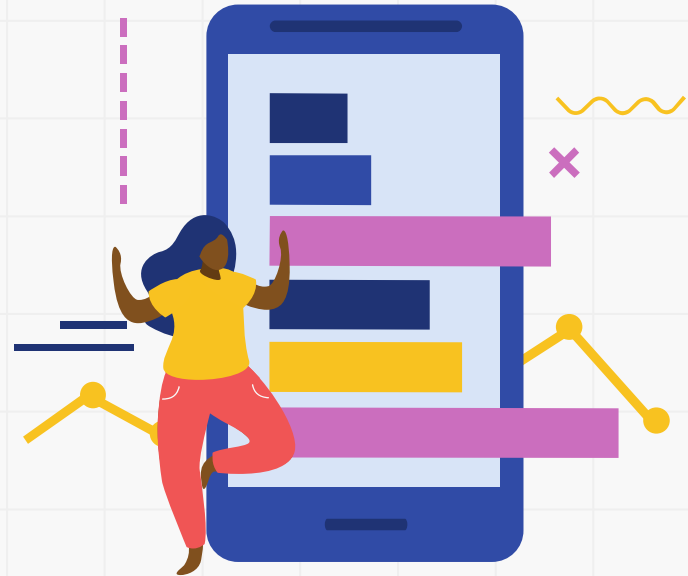- Segment
- Category
- Variant

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Problem Statement

Atliq's management noticed they lack the insights needed for quick decision-making. To fix this, they plan to hire junior data analysts who are skilled in both technology and communication.

Tony Sharma, the Data Analytics Director, has set up a SQL challenge to find the right candidates.
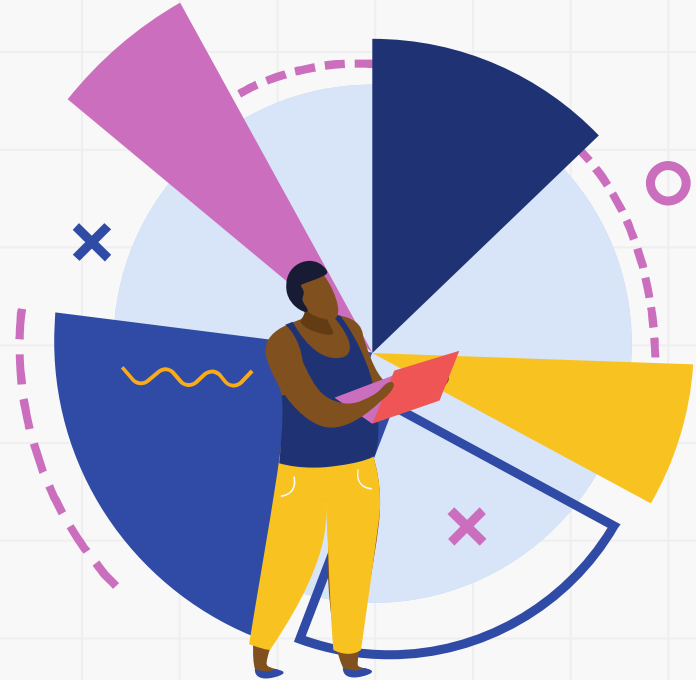
02

Purpose & Responsibility

Goal

The goal of this project is to provide clear and accurate insights for **10** specific business questions from the **ad hoc** requests. These insights will be used by **Executive** as top management to improve decision-making.

Role

My role is to act as a **Junior Data Analyst** who is responsible for analyzing business data using SQL and presenting actionable insights to help top-level management make informed decisions.

Task

✓ Run **SQL** queries to answer the **10 ad hoc business requests**.
✓ Analyze the data and identify key insights that respond to the needs of the business.
✓ Create a presentation that clearly shows these insights in a way that top-level management can easily understand and use for decision-making.

03

Data Processing

Dataset Overview

A comprehensive overview of the tables found in the **Atliq Hardware** database.

|	
dim_customer	contains customer-related data
dim_product	contains product-related data
fact_gross_price	contains gross price information for each product
fact_manufacturing_cost	contains the cost incurred in the production of each product
fact_pre_invoice_deductions	contains pre-invoice deductions information for each product
fact_sales_monthly	contains monthly sales data for each product.

Data are available for **Fiscal Year 2020** and **2021**. At **Atliq Hardware** fiscal year starts from **September** month of calendar year.

You can check detailed info:
Github Project Documenttion

Data Model
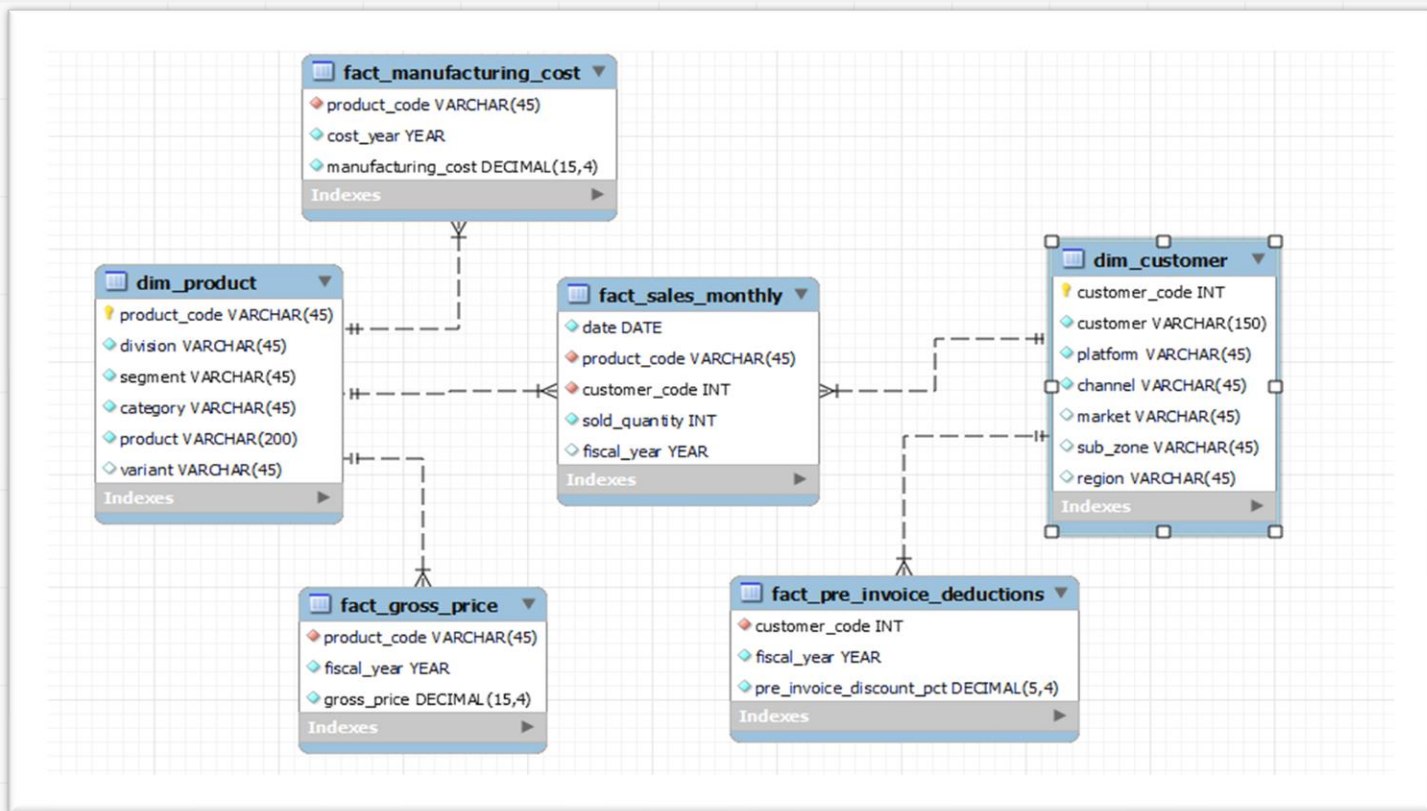
04

Result & Insights

Request 1

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

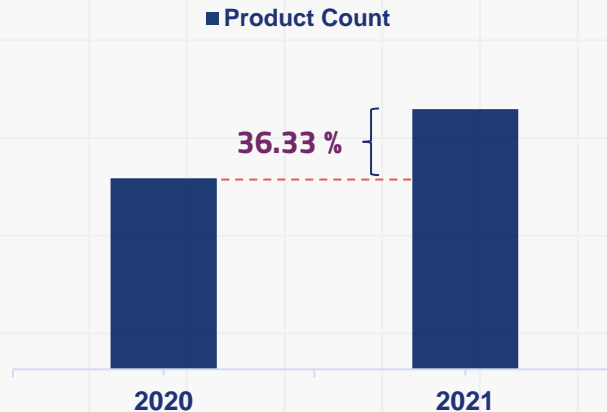| market |
| --- |
| ▶ India |
| Indonesia |
| Japan |
| Philhines |
| South Korea |
| Australia |
| Newzealand |
| Bangladesh |

Insight

- Broad Market Presence in APAC
- Opportunities in Emerging Markets
- Potential for Market-Specific Strategies

Request 2

What is the percentage of unique product increase in **2021** vs. **2020**?

	unique_products_2020	unique_products_2021	pecentage_chg
▶	245	334	36.33

■ **Product Count**

36.33 %

2020   2021

Insight

- Atliq's product count grew by 36.33% from 245 in FY 2020 to 334 in FY 2021.

- indicating product expansion and potential market growth.

Request 3

Provide a report with all the unique product counts for each segment.

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

■ Product Count

Notebook
Accessories
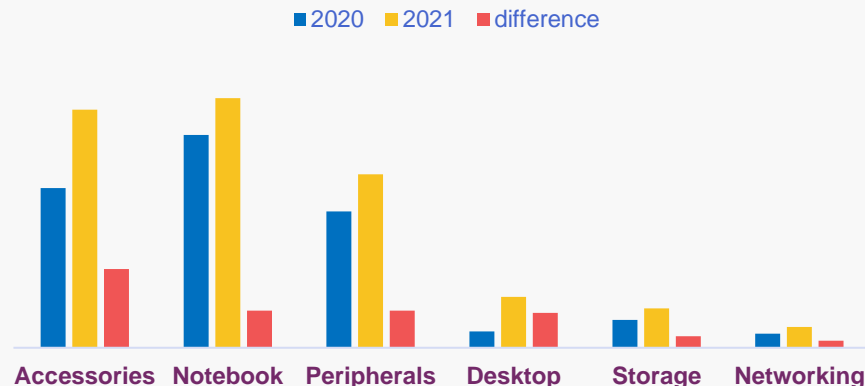Peripherals
Desktop
Storage
Networking
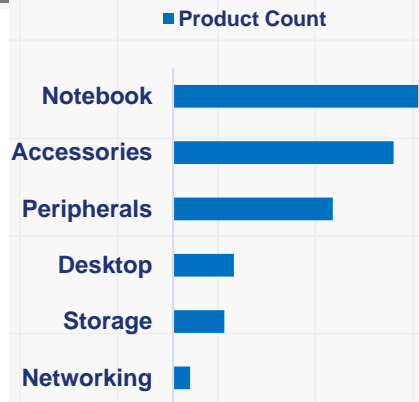
Insight

- Prioritize Notebooks and Accessories, as they have the most products and likely the most customer demand.

- Consider adding more products in Storage and Networking to capture more of the market in these areas.

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Request 4

Which segment had the most increase in unique products in **2021** vs **2020**?

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

■2020 ■2021 ■difference

Insight

- Strong growth in Accessories (+34) and consistent demand in Notebooks and Peripherals (+16 each) highlight these as high-potential segments for further investment and development.

- Desktop's growth (+15) suggests rising interest, worth exploring. Meanwhile, reassess Storage and Networking for possible optimization or cost-saving opportunities.

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Request 5

Get the products that have the highest and lowest manufacturing costs

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

Insight

- Consider evaluating high-cost products like AQ HOME Allin1 Gen 2 for possible cost-saving measures in manufacturing.

- With a significant range in manufacturing costs, assess pricing strategies to ensure profitability across the product lineup.

Request 6

Generate a report which contains the top 5 customers who received an average high **Pre Invoice Discount %** for the fiscal year **2021** and in the **Indian** market

| 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

■ Avg Discount %

Insight

- Major customers like Flipkart, Viveks, and Ezone receive discounts over 30%. While this boosts sales volume, we need to ensure it doesn't hurt profit margins too much.

- Adjust discounts by linking them to sales performance or long-term contracts with top customers. This approach can help increase revenue while managing discounts better, especially for big clients like Amazon and Croma.

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Request 7

Get the complete report of the Gross sales amount
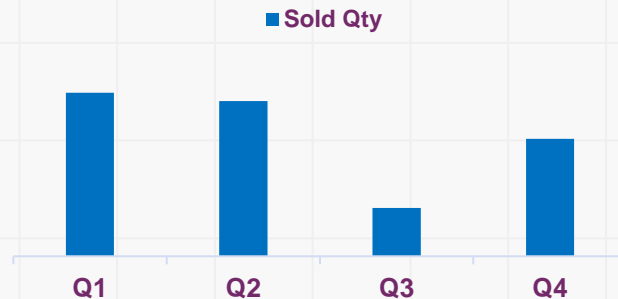for the customer **Atliq Exclusive** for each month.
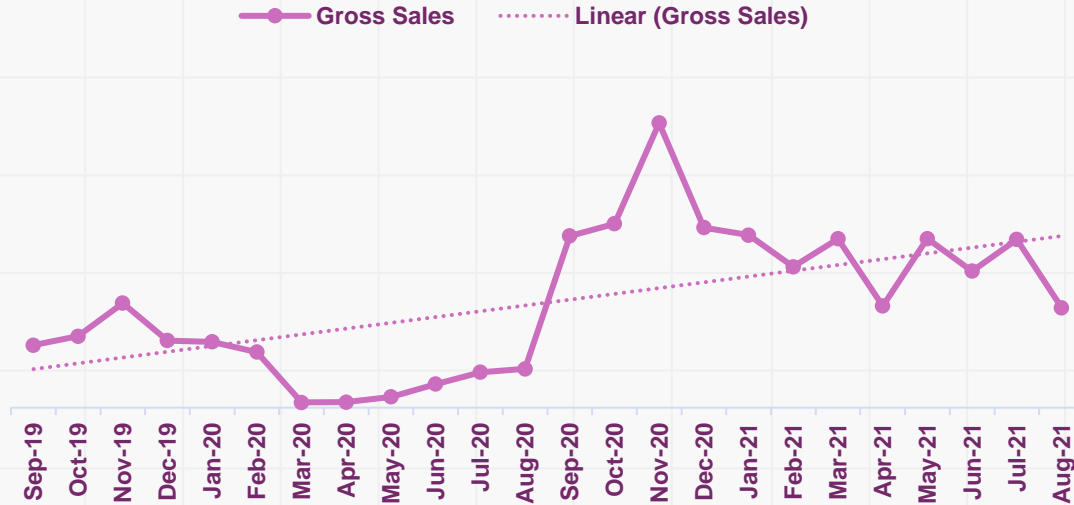
Month	Year	gross_sales_amount
September	2019	4.50
October	2019	5.14
November	2019	7.52
December	2019	4.83
January	2020	4.74
February	2020	4.00
March	2020	0.38
April	2020	0.40
May	2020	0.78
June	2020	1.70
July	2020	2.55
August	2020	2.79
September	2020	12.35
October	2020	13.22
November	2020	20.46
December	2020	12.94
January	2021	12.40
February	2021	10.13
March	2021	12.14
April	2021	7.31
May	2021	12.15
June	2021	9.82
July	2021	12.09
August	2021	7.18

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Request 8

In which quarter of 2020, got the maximum total sold quantity?

Quarter	Total_sold_quantity
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

■ Sold Qty

Month	Q1	Q2	Q3	Q4
	September	December	March	une
	October	January	April	July
	November	Februay	May	August

Insight

- The Q1 achieved the highest total sold quantity at 7.01 million units, indicating strong sales performance at the beginning of the year.

- Sales decreased in Q2, Q4, and dropped significantly in Q3, suggesting potential challenges like COVID-19 Pandemic Impact, economic uncertainty, Market Saturation, Retail and Distribution Challenges affecting sales as the year progressed.
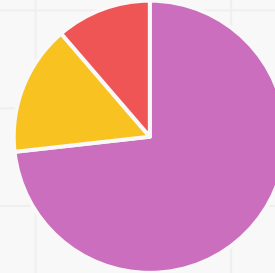
Request 9

Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

channel	gross_sales_mln	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30

■ Retailer ■ Direct ■ Distributor

Insight

- The retailer channel generated $1,219.08 million, contributing 73.23% of total gross sales, highlighting its crucial role in revenue generation.

- Strengthen relationships with retailers for better promotions while exploring ways to enhance sales through direct and distributor channels to improve overall contributions.

Request 10

Get the **Top 3** products in each division that have a high total sold quantity in the fiscal year **2021**?

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

Insights
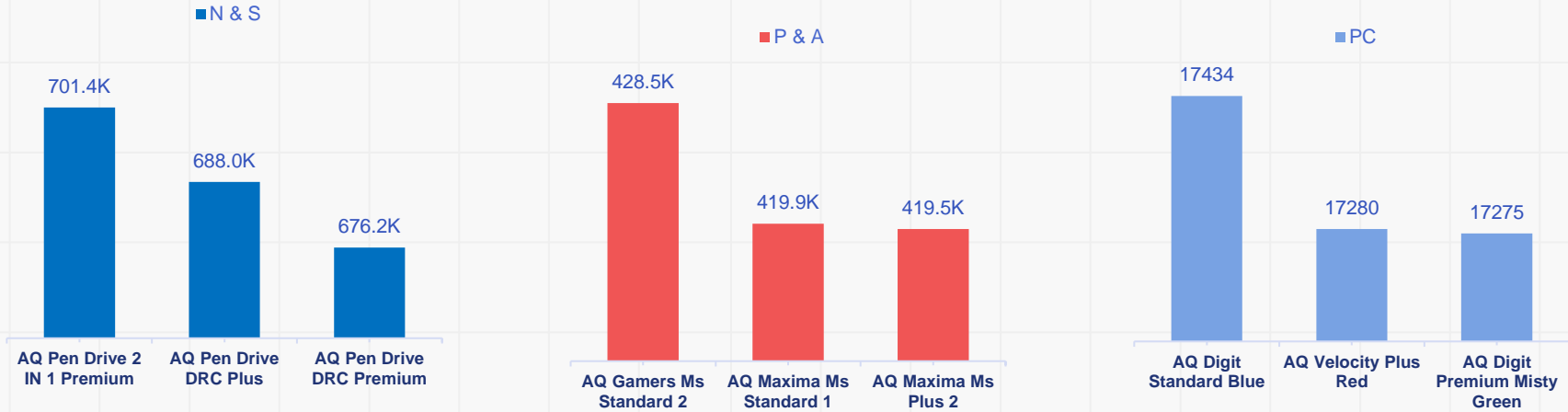
- The top-selling products are pen drives and gaming mice, indicating a high consumer preference in these categories. This suggests opportunities to expand product offerings and marketing efforts in these areas.

- Low sales in the PC division highlight the need for more variety and targeted marketing to meet consumer demand.

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Thank You!

Feel free to share your feedback in the comment section

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Data Analysis – SQL Project