

Data Analysis and Visualization Using SQL and Power BI

Case study of Alpha Group Ltd.

Alpha Group Ltd is a Pan Nigeria company that focuses on retail sales of different electronic products. They currently operate in 17 locations across Nigeria but there is a need to prioritize their investments across different products especially for the main office (Lagos)

You are the Data Analyst working with Alpha Groups Ltd, your boss who is the Regional Sales Manager for Lagos has given you the mandate to carry out analysis on the company's historical sales data in order to help him in making further decisions in terms of improvement and Investment

The below instructions are guidelines on what you are to do, read carefully;

1. Import the Transactions data into the MySQL Workbench
2. Write SQL Queries to Extract the following tables with the below Header Specifications

Table A - **Orders**

- a. OrderID
- b. Sales_date
- c. Productkey
- d. CustomerID
- e. Quantity
- f. Order Status
- g. Location
- h. Discount band
- i. OrderValueCategory(This is a new column which you are to add based on the following criteria);

Quantity	OrderValueCategory
Greater than 75	High Value Orders
Less than or equal to 75	Average Value Orders
Less than 40	Low Value Orders

Table B - Products

- a. ProductKey
 - b. ProductName
 - c. Brand
 - d. Subcategory
 - e. Category
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- 3. Export the extracted tables (Orders and Products) as CSV files
 - 4. Re-import the extracted Orders Table into MySQL Workbench
 - 5. Save the Exported Product tables as a CSV file; Do not re-import this table.
 - 6. In your Power BI file, connect to the Orders table (MySQL database), the product table (CSV file) and the customers table (Excel File)
 - 7. Create a detailed report based on the boss's requirement using these tables. Your report should include recommendations and adequate insights.
NB. The report can be a multiple page report.
 - 8. The report should be submitted as a pdf.

Deliverables:

- 1. A pdf document summarizing the findings and insights from the data analysis.
- 2. SQL file containing your Scripts

