TATA revenue report in 2011

**Question 1**  
The CEO of the retail store is interested to view the time series of the revenue data for the year 2011 only. He would like to view granular data by looking into revenue for each month. The CEO is interested in viewing the seasonal trends and wants to dig deeper into why these trends occur. This analysis will be helpful for the CEO to forecast for the next year. illustrate

**Question 2**  
The CMO is interested in viewing the top 10 countries which are generating the highest revenue. Additionally, the CMO is also interested in viewing the quantity sold along with the revenue generated. The CMO does not want to have the United Kingdom in this visual.

**Question 3**  
The CMO of the online retail store wants to view the information on the top 10 customers by revenue. He is interested in a visual that shows the greatest revenue generating customer at the start and gradually declines to the lower revenue generating customers. The CMO wants to target the higher revenue generating customers and ensure that they remain satisfied with their products.

**Question 4**  
The CEO is looking to gain insights on the demand for their products. He wants to look at all countries and see which regions have the greatest demand for their products. Once the CEO gets an idea of the regions that have high demand, he will initiate an expansion strategy which will allow the company to target these areas and generate more business from these regions. He wants to view the entire data on a single view without the need to scroll or hover over the data points to identify the demand. There is no need to show data for the United Kingdom as the CEO is more interested in viewing the countries that have expansion opportunities.

# Business demand overview

* Reporter: CEO and CMO
* Value of change: visual dashboard
* Necessary system: Tableau

User stories

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No# | As a(role) | I want(request/demand) | So that I (user value) | Acceptance criteria |
| 1 | CEO | To get a line chart to show the revenue with time series (each month) in 2011 | Can forecast for the next year based on seasonal trends and dig deeper into these trend | A Tableau dashboard which shows monthly revenue |
| 2 | CMO | A detailed overview of revenue and product quantity sold per countries | Can follow up country that contributes the most revenue | A Tableau dashboard which allows me to filter data for each country not including UK |
| 3 | CMO | A detailed overview the information on the top 10 customers by revenue | Can follow up the greatest revenue generating customer at the start and gradually declines to the lower revenue generating customers | A Tableau dashboard which allows me to filter data for each customer |
| 4 | CEO | A dashboard overview of all countries which regions have the greatest demand | Can target these areas and generate more business from these regions | A Tableau dashboard with map comparing each country |

# Data cleaning

* Size of Dataset: The dataset contains 541,909 rows (transactions) and 8 columns (attributes). InvoiceNo StockCode Description Quantity InvoiceDate UnitPrice CustomerID Country
* Invoice Date: filter year of 2011 and drill down to the month
* Missing Customer IDs: There are missing values in the 'CustomerID' field, which is unexpected. Every transaction should ideally have a customer ID associated with it. 135050 rows with null value
* Duplicate rows : delete duplicate and blank row to get vailed 488,624 rows
* Unit Price: filter all unit price more than 0 IF [Unit Price] < 0 then 'less than 0' ELSE 'more than 0' END
* Quantity: filter all quantity more than 1 IF [Quantity] < 1 then 'less than 0' ELSE 'more than 0' END

# Data Visualization

Description: Led a comprehensive analysis of profitability within diverse categories, leveraging key metrics such as Customer Purchase Latency, Country Sales Pareto, and RFM Customer Segments.

Achievements:

Developed and executed data-driven strategies to enhance profitability.

Utilized advanced analytics techniques to identify opportunities for revenue growth.

Collaborated with cross-functional teams to implement actionable insights.

Presented findings and recommendations to senior leadership for informed decision-making.

* Line chart with forecast,
* month to date comparing each month
* Horizontal Bar chart for 10 countries by revenue (by order, highlight first one)
* Column chart, stack chart quantity and revenue no uk
* Horizontal Bar chart for 10 Customers by revenue
* Heat Map by quantity product(color, number) sold no UK