**Business / Functional Requirement Document**

1. Data Gathering / Requirement:

Assemble a sales reports with different visuals to best show the Sales Insights in one page Dashboard. Feel free to use your imagination to best represent the data you have available.

1. Sales (folder by year)
2. Categories (Excel)
3. Geography (Excel)
4. Product (CSV / Database)
5. SalesRep (Excel)
6. SubCategories (Excel)

Task 1.1:

Create a mechanism to load all the files from the sales folder in a single Sales fact table.

The mechanism needs to be resilient as:

-removing a file from the sales folder does not create an error for missing files.

-adding a new yearly sales file will automatically be loaded in the fact query upon refresh.

1. Data Modeling:

Task 2.1:

Do the respective transformations to the Sales fact table in order to split the Country form the City in field “Location”. Make sure you set up the correct Data Type to allow Geo maps.

Do the necessary updates in the Date field to make sure you can setup the Date format.

Task 2.2:

Create unique key (GeoKey) in Sales and Geography table

Task 2.3:

The Dimensional queries SalesRep and Sub Category need additional treatment. Some ID columns have the following format:



Create a small function that removes the “ID - ” part of these columns that you can invoke and reuse for these two queries to clean the IDs.

Task 2.4:

Create the Data Model connecting all tables and using the Calendar table already set up in the pbix.

1. DAX calculations

Task 3.1:

Calculate **Total Revenue** in Sales table, using the Product’s Retail Price, and multiplying it by the Units.

Task 3.2:

Calculate **Total Cost** in Sales table, using the Product’s Standard Cost, and multiplying it by the Units.

Task 3.3:

Calculate **Gross Profit** in Sales: Total Revenue – Total Cost

Task 3.4:

Calculate a **Gross profit MoM growth Change%** measure that could benefit us in decision making

Task 3.5:

Calculate a measure for **AVG sales per day** – this is the average sum of **Total Revenue** per day based on the Dates of actual Sales.

Task 3.7:

* Breakdown Analysis by **Product (drop or increase)**

Calculate the following time measures:

* This is QBR Report. So **QoQ Growth is required**

1. Use the measures and calculations to assemble a sales reports with different visuals to best show the Sales Insights in one page Dashboard. Feel free to use your imagination to best represent the data you have available.

If you plot Month on x-axis, make sure the months are sorted from Jan-Dec.

Building Dashboard from scratch

| **Aspect** | **Dataset** | **Semantic Model** |
| --- | --- | --- |
| **Definition** | Collection of raw data from various sources. | Enhanced and structured representation of data with relationships, calculations, and measures. |
| **Content** | Tables with raw data. | Tables, relationships, calculated columns, and measures that provide a more business-friendly view of the data. |
| **Creation Tool** | Power BI Desktop | Power BI Desktop |
| **Purpose** | Storing and managing raw data. | Providing a meaningful and organized view of data for analysis and reporting. |
| **Relationships** | Minimal or basic relationships. | Well-defined relationships between tables based on business logic. |
| **Calculation Entities** | Limited or no calculated columns or measures. | Utilizes calculated columns and measures to derive additional insights. |
| **Data Modeling** | Basic data modeling for storage. | Comprehensive data modeling for analytical purposes. |
| **Interactivity** | Limited interactivity and analysis capabilities. | Supports rich interactivity, dynamic reporting, and exploration of data. |
| **Publishing Location** | Can be published to Power BI Service. | The semantic model is part of the dataset and is also published to Power BI Service. |
| **User Interaction** | Users directly interact with raw data. | Users interact with a more refined and business-oriented view of the data. |
| **Data Presentation** | May lack context and business logic. | Presents data in a more meaningful and context-rich manner. |
| **Data Refresh** | Refresh may involve reloading raw data. | Refresh can include updating both raw data and calculated entities. |
| **Access Control** | Permissions are typically at the dataset level. | Permissions can be set at the dataset and semantic model levels. |
| **Collaboration** | Limited collaboration features. | Enables collaborative analytics with shared models and reports. |