**Data Preparation:**

Date Formatting: Ensure dates are in proper format (YYYY-MM-DD)

In table view change the data type to **date** then change the format in **yyy-mm-dd**

Data Types: Set appropriate data types in PowerBI (Date, Currency, Percentage)

Similarly in table view click on column like **revenue and cost** or whichever you want to change set data type as **decimal number** then format it as **currency.** Same in column like **profit margin** set data type as decimal number then format it as **percentage**.

Relationships: Create relationships between datasets using Region and Customer\_Type

**Region-Based Relationship**

**Tables Connected**: Sales or Orders table

Region Lookup or Customers table

**Field Used**: Region

**Type**: One-to-Many

**Purpose**:  
Enables analysis of sales, satisfaction, or customer trends across different regions. For example:

“Revenue by Region” (Page 1)

“Regional Sales Comparison” (Page 2)

“Regional Customer Profile” (Page 4)

**Customer Type Relationship**

**Tables Connected**:Customers or Orders

**Field Used**: Customer\_Type

**Type**: One-to-Many

**Purpose**:  
Allows segmentation of customers into categories like New, Returning, and Loyal. Used for:

“Loyalty Status Breakdown” (Page 3)

“Customer Type Performance Comparison” (Page 4)

Calculated Columns: Create calculated measures for profit, growth rates, and averages

Avg Cost = AVERAGE(Sales[Cost])

Total Profit = SUMX(Sales, Sales[Cost] \* Sales[Profit\_Margin])

## ****Page 1: Executive Summary****

This page provides a high-level overview of the business's key performance indicators (KPIs) and revenue trends.

### ****1.Total Revenue, Profit, and Units Sold (KPIs):**** KPIs update dynamically based on slicers (like Date or Region).

**2.Monthly Revenue Trend (Line Chart)**

**X-Axis**: Month

**Y-Axis**: Revenue

**3.Revenue by Region (Map or Bar Chart)**

**X-Axis**: Region/City

**Y-Axis**: Revenue

Shows regional revenue contribution

**4.Top 5 Products by Revenue (Bar Chart)**

X-axis : Product Name

Y-axis: Sum of Revenue

## 🔹 ****Page 2: Sales Performance****

This page analyzes product-wise and representative-wise sales along with profitability and regional differences.

1.**Sales by Product Category (Donut Chart)**

**Legend**: Product Categories

**Values**: Total Sales

Identifies top-performing categories

**2.Sales Rep Performance (Bar Chart)**

**X-Axis**: Sales Rep

**Y-Axis**: Revenue or Order Count

Evaluates individual performance and supports sales team optimization.

**3.Profit Margin Analysis (Scatter Plot)**

**X-Axis**: Sales Amount

**Y-Axis**: Profit

Identifies which products are both profitable and popular.

1. **Regional Sales Comparison (Column Chart)**

**X-Axis**: Region

**Y-Axis**: Sales

Compares performance across regions to guide expansion or investment.

## 🔹

## ****Page 3: Customer Analytics****

Focuses on customer behavior, satisfaction, loyalty, and demographic insights.

### ****Customer Satisfaction Distribution (Histogram)****

### ****X-Axis****: Rating Score

### ****Y-Axis****: Customer Count

Reveals how customers rate their experience overall.

1. **Loyalty Status Breakdown (Pie Chart)**

**Legend: Loyalty Status**

****Value:** Customer id**

**3.Customer Demographics (Bar or Clustered Chart)**

**X-Axis**: Gender

**Y-Axis**: Customer id

Useful for identifying customer personas and tailoring services.

**4.Customer Acquisition Trend (Line Chart)**

**X-Axis**: Avg order value

**Y-Axis: Total orders**

Measures marketing effectiveness and growth over time.

## 🔹 ****Page 4: Cross-Analysis****

Cross-examines multiple dimensions to uncover deeper patterns in customer behavior.

### ****Customer Satisfaction vs Order Value (Scatter Plot)****

### ****X-Axis****: Order Value

**Y-Axis**: Satisfaction Score

**Bubble Size**: Number of Orders

Helps find correlation between spending and satisfaction.

**2.Regional Customer Profile (Stacked Bar Chart)**

**X-Axis**: Customer Count

**Y-Axis**: Region

**Legend**: Customer Type

Helps determine where loyal or new customers are most prevalent.

3.**Product Category Preference by Demographics (Clustered Bar Chart)**

**X-Axis**: Product Category

**Y-Axis**: Gender

Tailors marketing and inventory based on demographic preferences.

**4.Customer Type Performance Comparison (Column Chart)**

**X-Axis**: Customer Type

**Y-Axis: Revenue, Satisfaction score**

Evaluates which customer types contribute most to business success.