POWER BI MINI PROJECT DOCUMENTATION

1. Dataset Download

For this analysis, the dataset was sourced from e-commerce data available through [Kaggle]. The dataset contains key Tables such as:

- Sales
- Product
- Counties
- Employees
- Customers
- Category

The dataset was downloaded in CSV format and imported into Power BI Desktop for transformation and visualization.

2. Dataset Operations

Several operations were performed to clean and prepare the dataset:

1.Data Cleaning:

- Removed duplicates
- Handled null and missing values
- Trimmed whitespace from text fields

2.Data Transformation:

- Converted price and date to numeric and date formats
- Extracted City name from purchase address using Power Query

- Created new calculated columns:

  - ```
    Cost Price = 'MASTER SALES
    2'[Quantity]*RELATED(products[Unit Cost Price])
    ```
    ```

- Final Price = IF (
  'MASTER SALES 2'[Cost Price] > (
  'MASTER SALES 2'[Cost Price] * (1 - 'MASTER SALES 2'[Discount])
  ),
  'MASTER SALES 2'[Sales price],
  'MASTER SALES 2'[Sales price] * (1 – 'MASTER SALES 2'[Discount])
)
- Sales price = 'MASTER SALES 2'[Quantity]*RELATED (products[Unit Selling PRICE])
- Weekday Name = FORMAT ('MASTER SALES 2'[Sales Date], "dddd")
- Week Number = WEEKDAY ('MASTER SALES 2'[Sales Date],2)

3.Filtering & Sorting:

- Filtered top categories and high-performing Products
- Sorted products by sales and order id

3. Data Modelling

DAX Measures Created:

```
TOTAL SALES = SUM('Sales Data'[Sales Price])

TOTAL COST = SUM('Sales Data'[Price Each])

PROFIT MARGIN = (([TOTAL SALES] - [TOTAL COST]) / [TOTAL SALES]) * 100
```

4. About Visualization

The Power BI dashboard developed for this project provides a dynamic and interactive overview of sales performance, trends, and insights across time, product categories, and cities. The dashboard is designed with a vibrant, user-friendly interface that incorporates slicers for Product and City, enabling users to filter and explore the data with ease.

A. SALES ANALYSIS DASHBOARD

- **KPI Cards**
  - Show important numbers like total sales, quantity sold, and profit margin
  - .Update right away when filters like product or date are changed.

- **Sales Trend (Yearly) – Line Chart**
  - Displays sales revenue over several years to see if sales are growing or falling.
  - Helps check if marketing or new markets are working well.

- **Top Countries by Sales and Customer Share – Dual Donut Charts**
  - Compare the top five countries by how much they sell and how many customers they have.
  - Clicking on a country filters the other charts to show detailed information for that country.

- **Top Product Categories by Sales Volume – Column Chart**
  - Shows the ten product groups with the highest sales volumes.
  - Sorting helps find smaller groups that might need more focus or promotion.

- **Top Products by Customer Popularity and Revenue – Combo Chart**
  - Combines sales amount and number of customers to find popular and high-value products.
  - Two axes let you see both measures on one chart without switching views.

B. DETAIL SALES ANALYSIS

- **Monthly Sales Trend – Line Chart**
  - Shows sales for each month to find seasonal changes like busy or slow months.
  - Filtering by country shows how sales change in different places.
- **Weekly Sales Distribution – Horizontal Bar Chart**
  - Displays sales for each day of the week to find which days do best.
  - Helps decide when to run promotions or schedule workers.
- **Country-Level Performance – Matrix Table**
  - Lists sales numbers, profits, and customers for all countries for easy comparison.
  - Sorting highlights countries with high sales but low profit or other issues.
- **Slicers (Month and Country)**
  - Located on the left for easy filtering of all charts at once.
  - Let users focus on specific months or countries without changing pages.

C. PRODUCTS ANALYSIS

- **Sales Share by Product Class – Donut Chart**
  - Shows how much sales come from high, medium, and low classes of product
  - Helps spot if the company depends too much on one class.
- **Top Products by Sales Share – Column Chart**
  - Ranks the ten best-selling products to identify key revenue sources
  - Supports decisions on stock and supplier management.
- **Total Sales by Category and IsAllergic – Clustered Column Chart**
  - Breaks down sales by category and whether the product is allergy-safe.
  - Finds areas where allergy-safe products sell less and need attention.
- **Top Products by Customer Share – Donut Chart**
  - Shows which products have the most customers, regardless of sales amount.

- Helps marketing plan loyalty and cross-selling efforts.

➢ **Left-Pane Slicers (Month and Country Name)**

- Keep filters consistent for easy use across reports.
- Allow detailed study of product sales by time and place.

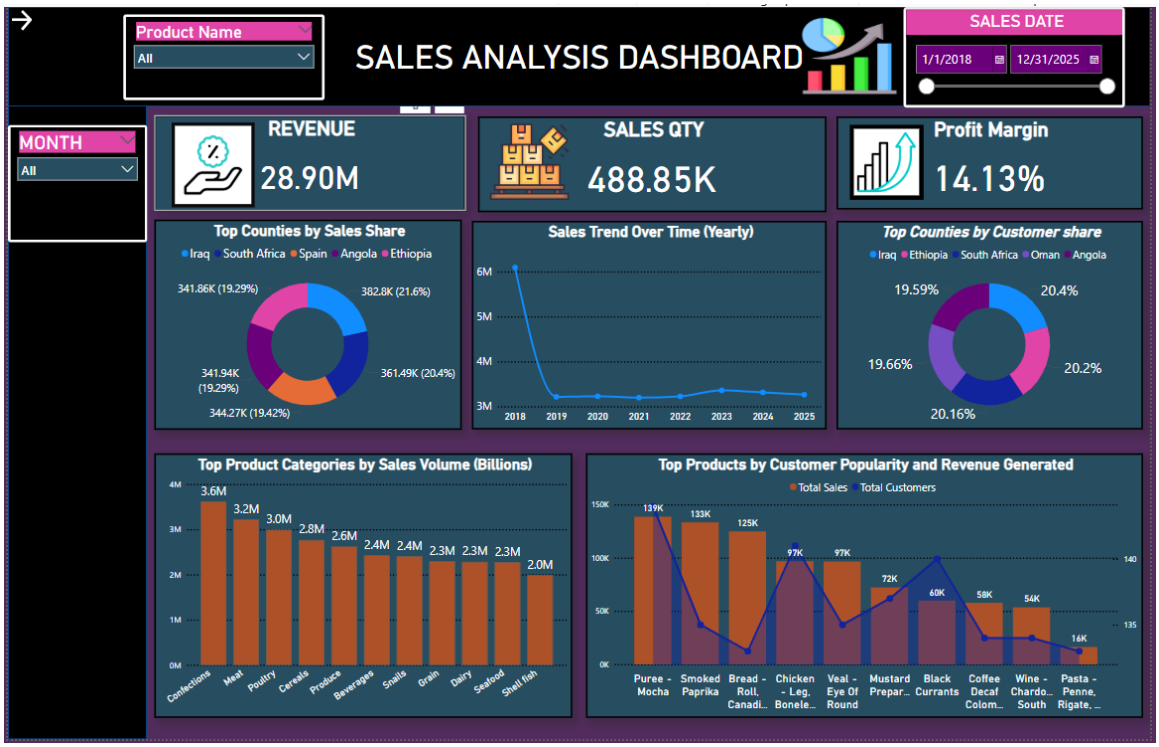
5. Conclusion

This Power BI project provides valuable insights into Flipkart's sales data by analyzing product performance, sales trends over time, and geographical distribution. The dashboard highlights key metrics such as total sales quantity, revenue, and profit margin, enabling stakeholders to identify top-selling products and high-performing cities easily. Interactive slicers for product and city allow dynamic exploration of data, making it a practical tool for sales strategy and decision-making.

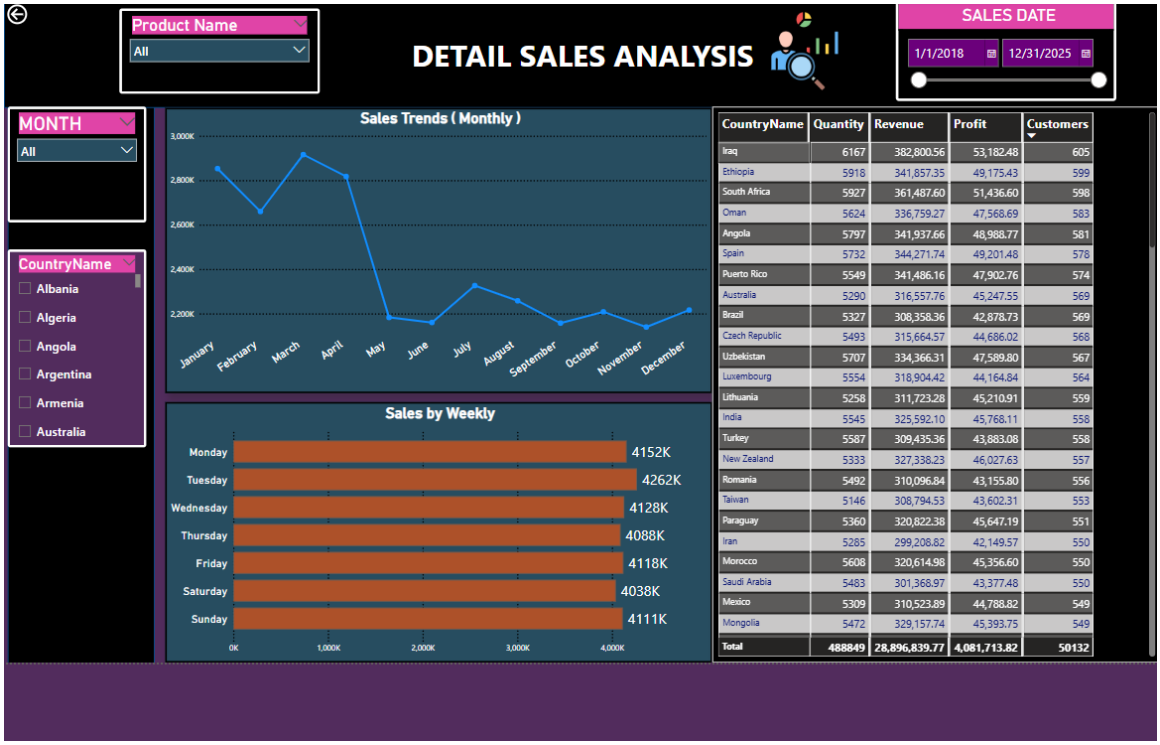
The clear visualization of weekly sales distribution and monthly trends helps uncover seasonal patterns, supporting inventory and marketing planning. Overall, this project demonstrates how effective data modeling and visualization can transform raw e-commerce data into actionable business intelligence.

6. Attach Snapshot of Your Project

Screenshot 1: Sales Dashboard



Screenshot 2: Detail Sales Analysis



Screenshot 3: Product Analysis