Functional Requirement Document (FRD)

Project Name: Adidas Sales Performance Dashboard

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1. Dashboard Sections

The Power BI dashboard consists of the following key sections:

- **Sales Overview:** Displays total sales, profit, and margin trends over time.
- **Regional Analysis:** Compares sales and profitability across regions, states, and cities.
- **Product Performance:** Highlights top/least-performing products and categories.
- **Retailer Analysis:** Shows contribution of different retailers to total sales and profit.

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3. Data Requirements

The dashboard uses the following dataset columns from the Excel file (Adidas US Sales Datasets.xlsx):

Calender (dimention) : Date,Day,Month name,Month Number ,Quarter, Year

Products : Products Name

Retailer : City, Region, state , Retailer ID , Retailer

State : Invoice date, products, units sold ,total sales , operating profit , operating margin ,sales method,retailer id

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4. Filters / Slicers

The dashboard includes interactive filters and slicers for:

- Sales overview : Products , year
- Product Performance : Region , Date
- Retailer Analysis : Date
- Region Analysis : Date , Sales Method

5. Visuals / Charts

Each section of the dashboard uses the following visualizations:

- **Sales Overview:**
    - KPI Cards – Total Sales, Profit, Margin %
    - Line Chart – Sales Trend over Time
    - Dounght Chart - Total Sales by Sales Method (Online/Offline/Wholesale).
    - Column Chart – profit by product
- **Regional Analysis:**
    - Map Visualization – Sales by Region
    - Bar Chart – State-wise Sales and Profit
    - KPI Card – region having high sales
- **Product Performance:**
    - Bar Chart – Top Products by Sales
    - Pie/Donut Chart – Total sales By Profit
    - KPI Card – Least/high selling Product
    - Metrix/Table – products,total sales,profit,unit sold,profit per unit
- **Retailer Analysis:**
    - Column Chart – Sales by Retailer
    - KPI Comparison – Retailer Producing Most Profir
    - Pie chart – retailer by proft margin
    - Guage – Total units sold by retailer

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6. Interactivity

The Power BI dashboard provides the following interactive features:

- Cross-filtering between visuals for dynamic insights.
- Drill-down functionality from **Region → State → City → Product**.
- Hierarchical date navigation (**Year → Quarter → Month → Day**).
- Tooltip details on hover for all visuals.

7. Calculations / Measures

Key **DAX measures** used in Power BI include:

Calculate Table (Created using dax):-

```
    Calender =
  VAR MinDate =
     CALCULATE(MIN(Sales[Invoice Date]),ALL(Sales))
  VAR MaxDate =
     CALCULATE(MAX(Sales[Invoice Date]),ALL(Sales))
  RETURN
  ADDCOLUMNS(
      CALENDAR(MinDate,MaxDate),
      "Year",YEAR([Date]),
      "Month Number",MONTH([Date]),
      "Month Name",FORMAT([Date],"MMMM"),
      "Quarter","Q" & FORMAT([Date],"Q"),
      "Day",DAY(DAY([Date])
))
```

Sale Table:-

- **Total Sales** = SUM('Data'[Total Sales])
- **Total Profit** = SUM('Data'[Operating Profit])
- **Profit Margin (%)** = DIVIDE([Total Profit], [Total Sales])
- **Average Price per Unit** = AVERAGE('Data'[Price per Unit])
- **Total Units Sold** = SUM('Data'[Units Sold])
- **Profit per unit** = `DIVIDE(SUM(Sales[Operating Profits]),SUM(Sales[Units Sold]))`

Retailer Table =

- **Profit By Region** = `CALCULATE([Total Profit],VALUES(Retailer[Region]))`
- **Region Margin** = `DIVIDE([Profit By Region],[Sales By Region])`
- Sales By Region = `CALCULATE([Total Sales],VALUES(Retailer[Region]))`

8. Export / Reporting Needs

- Export dashboard visuals to **PDF** and **Excel** for management reports.
- **Scheduled refresh** of Power BI dataset (daily or weekly).
- Share live dashboard link via **Power BI Service** for executive access.
- Automated **email subscription reports** to stakeholders.

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9. Notes / Special Instructions

- Ensure **date format** (YYYY-MM-DD) is consistent in the dataset before Power BI import.
- Validate **relationships** between tables if future data sources are added.
- Maintain uniform naming conventions for **regions, products, and retailers**.
- Dashboard should maintain **responsive layout** across desktop and Power BI web view.
- Apply **data privacy and role-based access controls** when shared via Power BI Service.