**Project Title:**

E-Commerce Sales Dashboard

**Objective:**

To create an interactive and insightful dashboard for monitoring and analyzing key sales metrics of an e-commerce business, enabling data-driven decision-making.

**Tools & Technologies Used:**

## Project Goals

* Visualize overall e-commerce performance through KPIs.
* Identify top-performing states, categories, and sub-categories.
* Analyze monthly profit trends and customer spending.
* Monitor category-based and state-wise distribution.
* Highlight insights that help boost sales and profitability.

| **Metric** | **Value** | **Description** |
| --- | --- | --- |
| **Total Sales** | 438K | Total revenue generated from all orders. |
| **Quantity Sold** | 5615 | Total number of items sold. |
| **Total Profit** | 37K | Net profit after deducting costs. |
| **Average Order Value** | 875.54 | Revenue per order, calculated as Total Sales ÷ Quantity Sold. |

## Dashboard Components & Visualizations

### 1. ****Profit by Month****

* **Type:** Column Chart
* **Description:** Displays monthly profit trends throughout the year.
* **Insight:** Highest profits recorded in January and March; notable dip in July.

### 2. ****Payment Mode Distribution****

* **Type:** Donut Chart
* **Categories:**
  + Clothing: 949 transactions (63.27%)
  + Electronics: 308 transactions (20.53%)
  + Furniture: 243 transactions (16.2%)
* **Insight:** Clothing dominates in transaction volume.

### 3. ****Sales by State****

* **Type:** Horizontal Bar Chart
* **Top Performing States:**
  + Maharashtra
  + Madhya Pradesh
  + Uttar Pradesh
* **Insight:** Maharashtra significantly leads in total sales.

### 4. ****Spends by Customer****

* **Type:** Stacked Bar Chart
* **Top Customers:**
  + Himanshu
  + Mohd Anas
  + Shiv
* **Insight:** Spending behavior varies; Clothing has the highest share across top customers.

### 5. ****Profit by Sub-Category****

* **Type:** Horizontal Bar Chart
* **Top Profitable Sub-Categories:**
  + Printers
  + Bookcases
  + Saree
* **Insight:** Electronics sub-categories (like printers) are leading in profitability.

### 6. ****Filters:****

* **Quarters:** Q1, Q2, Q3, Q4 – for time-based analysis.
* **Category:** Clothing, Electronics, Furniture – for product-based filtering.

## Analysis & Insights

* **Product Category Dominance:** Clothing generates the most transactions, indicating strong customer preference or higher frequency of purchases.
* **Regional Strengths:** Maharashtra and Madhya Pradesh are the top sales contributors; regional marketing strategies can be focused here.
* **Sub-Category Performance:** High profitability from Printers and Bookcases suggests the need to boost inventory and marketing in these areas.
* **Customer Loyalty:** Repeat and high-spending customers like Himanshu and Shiv can be targeted with loyalty programs.
* **Seasonal Trends:** Profit fluctuations across months indicate seasonal demand – critical for planning promotions and inventory.

## Business Recommendations

* Increase inventory and marketing for high-performing sub-categories (Printers, Bookcases).
* Focus on Clothing for discount campaigns due to its popularity.
* Offer targeted promotions in high-performing states like Maharashtra and MP.
* Investigate reasons behind profit dips (e.g., July) – could be due to returns, stock issues, or low traffic.
* Introduce loyalty programs for top customers to retain them.

## Future Enhancements

* Add year-on-year (YoY) and quarter-on-quarter (QoQ) comparison trends.
* Integrate demographic data (age, gender) for customer segmentation.
* Drill-down capabilities for state-wise sub-category analysis.
* Real-time data integration from e-commerce platforms or APIs.
* Incorporate inventory and return data for a holistic view.