Ferns N Petals (FNP) Sales Analysis Dashboard

📌 Project Overview

Ferns N Petals (FNP) is a leading online gifting platform offering personalized gifts, flowers, and hampers for occasions like Valentine's Day, Raksha Bandhan, Diwali, and Birthdays. This project analyzes FNP's 2023 sales data to explore patterns in customer behavior, product performance, and city-wise demand. Using Excel, an interactive dashboard was developed to summarize revenue trends, order quantities, and delivery performance, helping the company make data-driven marketing and logistics decisions.

📁 Dataset Description

The dataset consists of three CSV files, each containing structured information used to drive insights:

1. orders.csv

- Order ID: Unique identifier for each order

- Customer ID: Links the order to a customer

- Product ID: References the product being ordered

- Order Date and Delivery Date: Help calculate delivery time

- Quantity: Number of items ordered

2. products.csv

- Product ID: Unique identifier for each product

- Product Name: Name of the gift/product

- Category: Broad product category (e.g., Flowers, Soft Toys, Chocolates)

- Price: Unit price of the product

- Occasion: The event or celebration the product is associated with

3. customers.csv

- Customer ID: Unique customer identifier

- Customer Name: Name of the customer

- City: Customer location used for city-level analysis

The data includes **1,000 rows of order records**, giving a comprehensive view of transactions, delivery efficiency, and customer trends across different cities and gift categories.

🛠️ Data Preparation & Analysis Workflow

To build the dashboard, the following steps were completed using **Microsoft Excel**:

1. **Data Extraction**

Imported all three datasets (orders.csv, products.csv, and customers.csv) into Excel.

2. Data Cleaning & Transformation
Used the **Power Query Editor** to:

- Remove duplicates and null values

- Change data types

- Merge tables using common keys

- Add calculated columns like Total Revenue and Delivery Time

3. Data Modeling
To support seamless PivotTable analysis, I used a **Star Schema** data model in Excel:

Star Schema Design:

Fact Table:

- Orders Table → Contains transactional data like Order ID, Product ID, Customer ID, Quantity, Order Date, Delivery Date, and Revenue (calculated).

Dimension Tables:

- Products Table → Describes product attributes (Product Name, Category, Price, Occasion)

- Customers Table → Contains customer details (Name, City)

The **Orders table** sits at the center and connects to dimension tables using **one-to-many relationships**:

- Product ID (Orders → Products)

- Customer ID (Orders → Customers)

This star schema ensures efficient summarization and filtering in PivotTables, supporting fast, scalable business analysis.

4. Pivot Table Analysis
Created multiple PivotTables to:

- Summarize total revenue, order count, and customer spending

- Analyze product performance by occasion

- Evaluate city-wise sales and delivery patterns

5. Dashboard Creation
Used **Pivot Charts, Slicers, Conditional Formatting**, and card visuals to build a clean, interactive dashboard for business insights.

🎯 Business Objectives

The analysis aimed to answer 10 critical business questions:

1. **Total Revenue:** What is the overall revenue generated?

2. **Average Order and Delivery Time:** How long do orders take from placement to delivery?

3. **Monthly Sales Performance:** Are there any seasonal trends?

4. **Top Products by Revenue:** Which products are the top performers?

5. **Customer Spending Analysis:** How much do customers spend on average?

6. **Top 5 Products Sales Performance:** What are the best-performing products?

7. **Top 10 Cities by Orders:** Which locations have the highest number of orders?

8. **Order Quantity vs Delivery Time:** Does quantity affect delivery?

9. **Revenue by Occasion:** Which occasions generate the most revenue?

10. **Product Popularity by Occasion:** Which products are most ordered for each occasion?

📊 Key Dashboard Insights

The dashboard revealed **₹35,20,984 total revenue** generated from **1,000 total orders**, with an **average delivery time of 5.53 days** and **3,045 total quantities sold**.

- **Occasion-wise Revenue:** Anniversaries, Raksha Bandhan, and Holi emerged as top-performing events, highlighting strong seasonal demand during February and August.

- **Category-wise Revenue:** Soft Toys, Sweets, and Colors categories generated the highest sales, indicating customer preference for emotionally resonant gifts.

- **City-wise Analysis:** Imphal, Kavali, and Dhanbad recorded the highest sales volumes, suggesting opportunities for localized campaigns.

- **Gender-wise Revenue:** Sales were almost evenly split, with **female customers contributing 51%** and **male customers 49%**, showing a balanced customer base.

- **Top 5 Products:** Items like *Aut Box*, *Accusantium Set*, and *Officiis Pack* led in revenue, implying strong customer appeal and potential for cross-selling.

💡 Business Recommendations

- **Seasonal Campaigns:** Launch focused marketing efforts around high-demand occasions like Valentine's Day and Raksha Bandhan.

- **Product Strategy:** Expand availability of top-selling categories like Sweets and Soft Toys across other festive events.

- **City-Level Marketing:** Implement targeted ad campaigns and delivery offers in high-performing cities.

- **Customer Engagement:** Use balanced gender data to design inclusive promotions and loyalty programs.

- **Operational Optimization:** Reduce average delivery time below 5 days for improved customer satisfaction.

🧩 Tools Used

Microsoft Excel (Power Query, PivotTables, Slicers, Charts, Conditional Formatting)
Datasets: *orders.csv, products.csv, customers.csv*

📎 Conclusion

The **FNP Sales Analysis Dashboard** offers a clear, data-driven view of the company's performance across products, cities, and occasions. The insights highlight strong seasonal demand patterns, popular product categories, and city-level opportunities. This analysis can help FNP refine its promotional strategy, expand product reach, and enhance delivery efficiency for improved customer experience and profitability.