

# Ferns and Petals Sales Analysis using Excel

## Problem Statement:

Ferns and Petals (FNP), specializing in gifts for various occasions, provided a dataset containing customer, product, and order details. The objective is to analyze this data to uncover key sales trends, customer behavior insights, and product performance, ultimately aiding the company in improving its sales strategy and customer satisfaction.

## Key Tasks and Actions:

### 1. Extract Data:

Data was extracted from the attached dataset, ensuring all relevant information for analysis was captured.

### 2. Data Cleaning:

- Handled missing or inconsistent values.
- Standardized formats for dates, categories, and product names.
- Removed duplicates to maintain data integrity.

### 3. Transformation:

- Created calculated columns for metrics such as delivery time, revenue per order, and average customer spending.
- Formulated new metrics using DAX expressions, including revenue by occasion and product popularity indices.

### 4. Data Modeling:

- Established relationships between tables for smooth integration of data.
- Implemented hierarchy for date-based analysis, allowing insights at granular levels like months and occasions.

### 5. Data Analysis:

- Leveraged pivot tables and DAX formulas to derive trends and summaries for revenue, delivery time, customer spending, and more.

### 6. Dashboard Creation:

- Designed a visually appealing and interactive dashboard using Power Query and Power Pivot.
- Incorporated slicers, filters, and visual elements for intuitive navigation.

## Results:

### 1. Total Revenue:

The overall revenue for the analyzed period is ₹35,20,984.

### 2. Order and Delivery Time:

- Average Order-to-Delivery Time: **5.53 days**

- Suggests timely deliveries with room for optimization.
- 3. **Monthly Sales Performance:**
  - Sales peaked in **February**, likely due to Valentine's Day.
  - Lowest sales occurred during **May**, highlighting a potential seasonal dip.
- 4. **Top Products by Revenue:**

The top revenue-generating products include:

  - Magnam Set: ₹1,21,905
  - Quia Gift: ₹1,14,476
  - Dolores Gift: ₹1,06,624
  - Harum Pack: ₹1,01,556
  - Deserunt Box: ₹97,665
- 5. **Average Customer Spending:**

On average, customers spend **₹3,520.98**.
- 6. **Revenue by Occasions:**
  - **Anniversaries** and **Valentine's Day** dominate the revenue share.
  - **Diwali** and **Raksha Bandhan** follow as significant contributors.
- 7. **Top 10 Cities by Order Count:**

Cities like **Imphal**, **Dhanbad**, and **Kavali** rank highest in terms of orders, presenting key markets for targeted promotions.
- 8. **Revenue by Hour (Order Time):**
  - Revenue shows peaks during **afternoon and evening hours**, indicating prime times for customer activity.
- 9. **Product Popularity by Occasion:**
  - **Cakes** and **Sweet Hampers** dominate during birthdays and anniversaries.
  - **Colors** and **Soft Toys** are popular for festivals like Holi.
- 10. **Impact of Order Quantity on Delivery Time:**

Higher order quantities did not significantly delay delivery times, indicating effective logistics management.

## **Conclusion:**

The Ferns and Petals sales analysis provides an in-depth understanding of sales performance, customer spending patterns, and product popularity across different occasions. The total revenue of ₹35,20,984 and an average customer spending of ₹3,520.98 highlight the brand's strong performance in its market.

Key findings show that:

- February is the highest-performing month, driven by Valentine's Day, while May has the lowest sales.

- Anniversaries and Valentine's Day generate the most revenue, indicating strong seasonal demand.
- Products like cakes and sweets dominate for events like birthdays and anniversaries, while soft toys and colors are popular during festivals like Holi.
- Peak revenue hours occur in the afternoon and evening, showcasing customer behavior trends.

The dashboard serves as a powerful tool to monitor these trends, enabling data-driven decision-making for better targeting and resource allocation.

### **Recommendations:**

- 1. Targeted Marketing Campaigns:**
  - Focus marketing efforts during peak months like February (Valentine's Day) and November (Diwali) to maximize revenue.
  - Create special promotions for underperforming months, such as May, to boost sales.
- 2. Personalized Customer Engagement:**
  - Utilize customer data to send personalized offers based on popular products like cakes and sweets for birthdays and anniversaries.
  - Introduce occasion-specific gift bundles to attract more customers.
- 3. Geographical Expansion and Focus:**
  - Prioritize high-performing cities like Bangalore, Delhi, and Mumbai for localized campaigns.
  - Explore growth opportunities in cities with moderate order counts by increasing brand visibility.
- 4. Product Portfolio Optimization:**
  - Increase inventory for top-selling products during peak occasions to avoid stockouts.
  - Experiment with adding new product categories based on customer preferences to diversify offerings.
- 5. Delivery and Logistics Efficiency:**
  - Reduce the average delivery time of 5.53 days by optimizing logistics.
  - Offer express delivery options for premium customers to enhance satisfaction and boost loyalty.
- 6. Revenue by Hour Optimization:**
  - Schedule targeted email campaigns and discounts during peak revenue hours (afternoon and evening) to increase sales further.

By implementing these recommendations, Ferns and Petals can enhance its market positioning, improve customer satisfaction, and achieve sustained revenue growth.