Ferns and Petals (FNP) – Comprehensive Sales Analysis Project Report

Introduction
Ferns and Petals (FNP) is a well-known gifting company that provides a wide range of products including flowers, cakes, chocolates, plants, and personalized gifts for multiple occasions. With increasing competition in the online gifting market, analyzing sales data is critical to understanding customer behavior, identifying revenue drivers, and improving operational efficiency. This project focuses on analyzing FNP sales data to extract meaningful insights and present them through an interactive dashboard.

Project Objective
The objective of this project is to perform a detailed sales analysis using historical order data and develop a comprehensive dashboard that tracks key performance indicators such as total revenue, total orders, average delivery time, customer spending, product performance, city-wise demand, and occasion-wise sales trends. The analysis aims to support strategic decision-making and business optimization.

Dataset Description
The dataset consists of multiple structured files including Orders, Customers, and Products. The Orders dataset contains order ID, order date, delivery date, order quantity, revenue, city, and occasion. The Customers dataset includes customer identifiers and location details. The Products dataset includes product names, categories, and pricing details. The data spans multiple months and captures sales across major Indian cities.

Data Cleaning and Preprocessing
Data preprocessing was a crucial step in this project. Missing values were identified and handled appropriately, duplicate records were removed, and incorrect data entries were corrected. Date columns were converted into proper date formats to derive month-wise and year-wise insights. Categorical values such as city names and product categories were standardized to ensure consistency across the analysis.

Tools and Technologies Used
Microsoft Excel was used as the primary tool for data analysis and visualization. Data transformation and aggregation were performed using Pivot Tables. Pivot Charts and line graphs were used to visualize trends and comparisons. Slicers were implemented to allow dynamic filtering by order date, delivery date, month, city, product category, and occasion.

Analytical Approach and Models Used
This project follows a descriptive analytics approach. Statistical aggregation techniques such as sum, average, and count were applied to analyze revenue, order volume, delivery time, and customer spending. No predictive or machine learning models were used; instead, the focus was on trend identification, performance comparison, and business insight generation through exploratory data analysis (EDA).

Sales Trends Analysis (Before and After)
Before analysis, sales performance lacked clear visibility into seasonal demand and revenue drivers. After implementing month-wise and occasion-wise analysis, clear trends emerged. Sales showed consistent spikes during festive and special occasions such as Diwali, Raksha Bandhan, Valentine's Day, and Birthdays. Non-festive periods showed comparatively lower but stable sales, highlighting opportunities for targeted promotions.

Key Findings

The analysis revealed that a limited number of products contribute significantly to overall revenue. Certain cities consistently generated higher order volumes, indicating strong regional demand. Customer spending increased notably during festive occasions. Delivery time analysis showed that higher order quantities did not significantly impact delivery efficiency, suggesting a well-optimized logistics process.

Dashboard Insights

The interactive dashboard provides a consolidated view of business performance, including total orders, total revenue, average order and delivery time, and average customer spending. Visualizations highlight top-performing products, top cities by order volume, and revenue comparison across occasions. Dynamic filters enable users to drill down into specific time periods and business dimensions.

Business Impact and Conclusion

This sales analysis project demonstrates how data-driven insights can support business decision-making. The findings can help FNP optimize inventory planning, improve marketing strategies during peak seasons, and enhance customer satisfaction through better demand forecasting. The project strengthened practical skills in data analysis, dashboard creation, and translating data into actionable business insights.