1. Introduction

This report presents a detailed sales analysis for **Ferns & Petals (FNP)**, a gifting company operating across multiple occasions and cities.
The purpose of this analysis is to evaluate sales performance, customer behavior, product trends, delivery efficiency, and time-based ordering patterns to support data-driven business decisions.

The analysis was conducted using **Microsoft Excel**, with data cleaning and data modeling performed using **Power Query**, followed by dashboard creation using **Pivot Tables and Charts**.

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2. Business Objectives

The key objectives of this analysis were to:

- Evaluate overall revenue and order performance
- Identify high-performing occasions, products, and cities
- Understand customer purchasing behavior
- Analyze delivery time efficiency
- Study time-based and seasonal sales patterns
- Examine the relationship between order quantity and delivery time

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3. Dataset Overview

The analysis is based on three datasets:

3.1 Orders Dataset

Contains transactional information such as:

- Order ID
- Order Date and Delivery Date
- Order Time and Delivery Time
- Quantity
- Occasion

3.2 Customers Dataset

Contains customer-level information:

- Customer ID
- Customer Name
- City
- Gender

3.3 Products Dataset

Contains product-level information:

- Product ID
- Product Name
- Product Category
- Price

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4. Data Cleaning & Data Modeling

Data preparation and modeling were performed using **Power Query in Excel**.

Key steps included:

- Removal of missing and duplicate values
- Standardization of date, numeric, and currency data types
- Merging Orders, Customers, and Products datasets into a **single consolidated fact table**
- Creation of calculated columns:
    - **Revenue = Quantity × Price**
    - **Order-to-Delivery Time (in days)**

A **flat (denormalized) data model** was used to ensure accurate aggregation and compatibility with Excel pivot-based analysis, especially within the Excel Home & Student environment.

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5. Dashboard Overview

An interactive Excel dashboard was developed to visualize key business metrics and trends.

Key KPIs:

- **Total Revenue:** ₹35.2 Lakh
- **Total Orders:** 1,000
- **Average Customer Spending:** ₹3,520
- **Average Delivery Time:** 5.53 days

Dashboard Visuals:

- Revenue by Occasion
- Monthly Revenue Trend
- Top 10 Cities by Orders
- Revenue by Product Category

- Top 5 Products by Revenue
- Revenue by Order Hour

Slicers were implemented to allow dynamic filtering by **date and occasion**.

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6. Key Insights

- Occasion-based demand is a major revenue driver, with **Anniversaries, Raksha Bandhan, and Holi** contributing the highest sales.
- A small number of **top-performing products and categories** generate a significant share of total revenue.
- Sales are concentrated in **urban cities**, indicating strong regional demand patterns.
- Customers place most orders during **midday and evening hours**, suggesting optimal timings for promotional campaigns.
- Delivery performance remains consistent, with an average delivery time of approximately **5.5 days**.

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7. Quantity vs Delivery Time Analysis

An additional analysis was conducted to study the relationship between **order quantity and delivery time**.

- **Correlation coefficient: 0.003478174**

Interpretation:

The correlation value indicates **no meaningful relationship** between order quantity and delivery time.
This suggests that higher order volumes do **not negatively impact delivery efficiency**, reflecting a scalable and stable logistics process.

This analysis was intentionally excluded from the dashboard to maintain clarity but is included here for analytical completeness.

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8. Conclusion

This project demonstrates a complete **Excel-based analytics workflow**, including data cleaning, data modeling, dashboard development, and insight generation.
The findings provide actionable insights that can support improvements in:

- Occasion-based marketing strategies
- Product promotions and bundling
- City-level sales planning
- Delivery operations and logistics

Overall, the analysis highlights the effectiveness of Excel as a powerful tool for business analytics when combined with structured data modeling and visualization techniques.

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9. Report Usage

This report complements the interactive Excel dashboard and serves as a **business-facing summary** suitable for:

- Portfolio presentation
- GitHub documentation
- Stakeholder communication