**Coffee Sales Analysis using Power BI**

**👩‍💼 Student Details**

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**Course:** BBA (BA 31)  
**Subject:** Business Analytics / Power BI Project  
**Year:** 2025  
**Project Title:** *Coffee Sales Analysis using Power BI*

**📘 1. Introduction**

In today’s business environment, data-driven decisions are essential for improving efficiency and profits. This project focuses on analyzing the sales performance of a coffee shop using Microsoft Power BI.

The goal is to identify sales patterns based on coffee types, time of day, weekdays, and months — and to visualize these insights through an interactive dashboard.

**🎯 2. Objectives**

The main objectives of this project are:

1. To analyze total and average coffee sales using Power BI.
2. To identify top-performing coffee products.
3. To determine the most profitable times of day and days of the week.
4. To understand monthly sales trends for forecasting and planning.
5. To design an interactive dashboard for business insights.

**📊 3. Tools and Technologies Used**

| **Tool** | **Purpose** |
| --- | --- |
| **Power BI Desktop** | Data visualization and dashboard creation |
| **Excel / CSV File** | Source data (Coffe\_sales.csv) |
| **GitHub** | Project hosting and sharing |
| **SPSS (optional)** | Predictive analysis and data cleaning |

**🧾 4. Dataset Description**

The dataset used for this project is titled **“Coffe\_sales.csv”**.  
It contains transaction records for a coffee shop, including details such as:

| **Column Name** | **Description** |
| --- | --- |
| Date | Transaction date |
| Coffee Name | Name of the coffee product |
| Size | Cup size (Small, Medium, Large) |
| Quantity | Number of cups sold |
| Money | Total sale amount |
| Time | Time of transaction |
| Day | Day of the week |
| Month | Month of transaction |
| Period of Day | Morning, Afternoon, or Evening |

This dataset was cleaned and formatted in Power BI for visualization.

**📈 5. Data Cleaning and Preparation**

The following steps were performed before visualization:

1. Converted the **Date** column into proper *Date format*.
2. Created additional columns for **Month Name**, **Weekday**, and **Period of Day**.
3. Removed missing and duplicate records.
4. Verified numeric fields like *Money* and *Quantity* for consistency.
5. Loaded the cleaned data into Power BI for dashboard creation.

**🧮 6. Power BI Dashboard Components**

The Power BI dashboard includes the following visuals:

| **Visual Type** | **Description** |
| --- | --- |
| **Card Visuals** | Display total sales, total orders, and average sale per order. |
| **Bar Chart** | Shows sales by coffee type in descending order. |
| **Column Chart** | Displays sales by weekday (Monday–Sunday). |
| **Line Chart** | Shows monthly sales trend. |
| **Pie Chart** | Displays sales by period of the day (Morning, Afternoon, Evening). |
| **Slicers** | Allow filtering data by Month and Weekday. |

**🧠 7. Key Insights**

From the dashboard analysis, the following insights were discovered:

* ☕ *Americano with Milk* is the highest-selling coffee type.
* 🌞 *Afternoon* time has the highest total sales.
* 📅 *Tuesday and Friday* are the busiest sales days.
* ⏰ Peak sales occur between *2 PM and 6 PM.*
* 🗓️ *March* records the highest total monthly revenue.

These insights can be used by management to plan marketing campaigns, staffing schedules, and inventory purchases.

**💡 8. Conclusion**

The **Coffee Sales Analysis Dashboard** provides a clear view of the coffee shop’s performance.  
Through Power BI, complex data was transformed into meaningful visuals, helping identify key sales trends.  
The analysis highlights customer behavior, peak sales periods, and best-performing products — providing a foundation for better business decision-making.

**🌐 9. GitHub Repository Link**

The complete project files (Power BI Dashboard, CSV dataset, and Report PDF) are available on GitHub:  
🔗 [GitHub Repository - Coffee Sales Analysis Power BI](https://github.com/YourUsername/Coffee-Sales-Analysis-PowerBI)

**📷 10. Dashboard Screenshots**

*(Paste your screenshots here — for example:)*

1️⃣ **Main Dashboard Overview**  
🖼️ *[Insert Screenshot]*

2️⃣ **Sales by Coffee Type**  
🖼️ *[Insert Screenshot]*

3️⃣ **Monthly Sales Trend**  
🖼️ *[Insert Screenshot]*

**✍️ 11. References**

* Microsoft Power BI Documentation
* Kaggle Datasets
* Course Material (Business Analytics - BA 31)

**✅ 12. Summary**

This project successfully demonstrates how **Power BI** can transform raw sales data into a meaningful, interactive, and visually appealing dashboard.  
It combines data analysis and business intelligence skills to uncover actionable insights from real-world data.

**💫 Submitted by:**

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