DEVELOPMENT OF A DASHBOARD FOR ANALYSIS AND MONITORING THE MARKETING PROMOTION

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ABSTRACT

This study aims to develop a Business Intelligence dashboard for analysis, monitoring the marketing promotion using Microsoft Power BI. The dashboard is designed to analyze, track, and promote marketing activities related to coupon usage data in the retail business. In addition, it is used to examine customer segments and purchase behaviors from coupon utilization. This study uses data retrieved from the company's database system, which includes coupon codes, branch details, coupon redemption, coupon usage, and customer purchase records. The data analysis was performed in multiple views, including reports group by month, day, time, branch, product, gender, generation, sub-group, and coupon code. This multi-dimensional analysis allows for monitoring the effectiveness of coupon usage and customer purchase behavior. Furthermore, this study develops a tool that can be used to evaluate the impact of the coupon-based marketing strategy on each customer segment and provides business insights for the executives and stakeholders decision-making and marketing planning regarding coupon usage. Moreover, the results help the development of appropriate marketing strategies for each customer group.
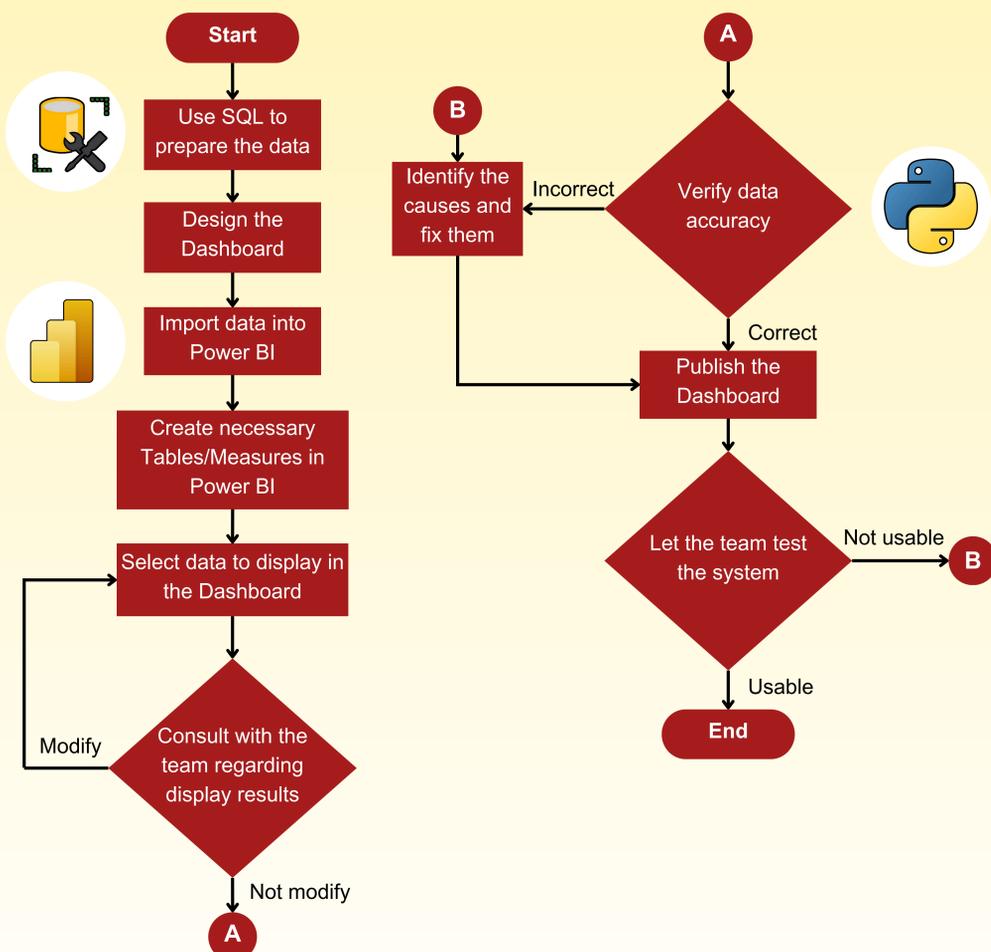
INTRODUCTION

Data is essential to business decision-making in both public and private organizations. The management and analysis of big data—which is diverse and rapidly changing—help businesses make decisions accurately and promptly. With Business Intelligence tools that can gather, analyze, and present data in an easily understandable format, executives and teams can track trends, evaluate performance, and adjust business strategies effectively. This is especially true in coupon management, where analyzing coupon usage data enables organizations to gain a comprehensive view of customer behavior and assess the impact on sales clearly, thereby improving marketing strategies to better align with a rapidly changing environment and meet customer needs efficiently. Allows the company to gain insights into customer behavior, helping to refine offers and promotions to match customer behavior and needs better.

BENEFITS

1. Assists the business in using the findings to make well-informed judgments about changing marketing tactics to be more suitable and successful.

2. Gives the business a greater understanding of the needs of each section of customers, allowing it to create marketing strategies that suit their tastes and requirements.

3. Enables the business to learn more about the behavior of its customers, which aids in improving promotions and offers to better suit their requirements and behavior.

METHODOLOGY

Start
→ Use SQL to prepare the data
→ Design the Dashboard
→ Import data into Power BI
→ Create necessary Tables/Measures in Power BI
→ Select data to display in the Dashboard
→ Consult with the team regarding display results
- Modify → (back to Select data)
- Not modify → A

A → Verify data accuracy
- Incorrect → Identify the causes and fix them → B (back to Verify data accuracy)
- Correct → Publish the Dashboard
→ Let the team test the system
- Not usable → B
- Usable → End

OBJECTIVE

To develop a dashboard for analysis and monitoring the marketing promotion.

RESULTS

Figure 1 Customer Coupon Usage Analysis and Tracking Screen
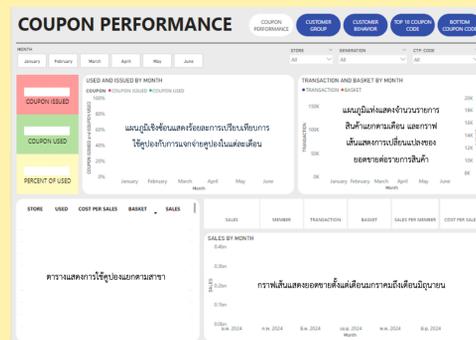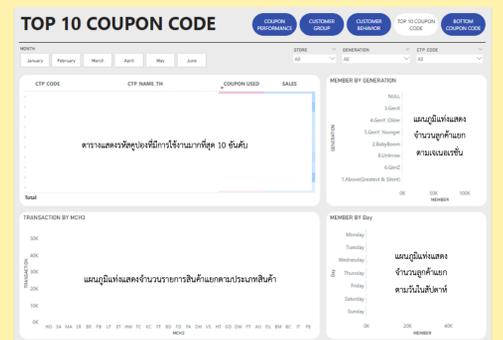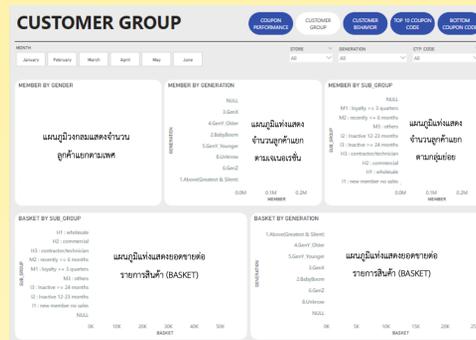

Figure 2 Customer Group Analysis Screen

Figure 3 Customer Purchase Behavior Analysis Screen

Figure 4 Customer Behavior Analysis Screen for Top 10 Coupon Code Users

Figure 5 Customer Behavior Analysis Screen for Bottom Coupon Code Users
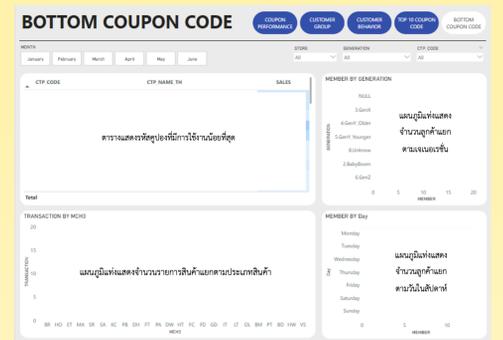
CONCLUSION

The study found that the Business Intelligence tool has a wide range of functions, allowing users to design and develop reports in various formats, analyze large amounts of data, and present information in an easily understandable format. The Dashboard consists of 5 main reports: the coupon performance report, which displays coupon usage data; the customer group report, which shows general information about customers; the customer purchase behavior report, which provides information about the types of products purchased and coupon usage behavior; the top 10 most used coupons report, which shows customer purchasing behavior; and the least used coupons report, which shows customer purchasing behavior.

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