**SUPERMARKET SALES ANALYSIS**

**Objective of the project**

The goal of the project is to have insight into the sales data of supermarket company and gather the various factors that affect sales in different branches.

**Problem statement**

The project aims to explore the supermarket company sales data to find out top performing branches and products, sales trend of various products and customer behavior.

**Dataset description**

The dataset was obtained from Kaggle. This dataset contains sales transactions from a three different supermarket company branches, respectively located in Mandalay, Yangon and Naypyitaw. The data contains 17 columns and 1000 records.

**Main Analysis parts**

Product Analysis (EDA) To findout the various product lines, best performing products lines and the product lines that need to be improved.

Sales Analysis to answer the question of the sales trends of product. The result of this can help use measure the effectiveness of each sales strategy the business applies and what improvements are needed to gain more sales.

Customer Analysis To unpack the different customers segments, purchase trends and the profitability of each customer segment.

**Used Approach**

Data Wrangling/Preparation: This is the first step where inspection of data is done to make sure NULL values and missing values are detected and data replacement methods are used to replace, missing or NULL values. In this case the data is more or less clean. We just prepare the data the way it is convenient for our analysis.

Build a database: Create table and insert the data.

**Feature Engineering**

To generate some new columns from existing ones. Add a new column- named ‘name\_of\_day’ that contains the extracted days of the week on which the given transaction took place (Mon, Tue, Wed, Thur, Fri). This will help answer the question on which week of the day each branch is busiest. – named ‘name\_of\_month’ that contains the extracted months of the year on which the given transaction took place (Jan, Feb, Mar). Help determine which month of the year has the most sales and profit.

**Business questions will be answered in this analysis**

1. How many unique cities are there?
2. In which city is each branch?
3. How many unique product\_lines are there?
4. What is the most selling product\_line?
5. What is the total revenue by month?
6. Which cities gain the largest revenue?
7. Which product line brought the largest revenue?
8. What product\_line had the largest VAT?
9. Which product\_line considered as Good/ did above average sales which is 5.5 otherwise Bad?
10. Which branch sold more products than the average product sold?
11. What is the most common product\_line by gender?
12. What is the average rating of each product\_line?
13. What is the number of sales made on each day?
14. Which customer type brings the most revenue?
15. How many unique payments are there?
16. Which customer type buys the most?
17. What is the gender of most of the customers?
18. Which day of the week had the best average ratings?