Deliverable 1

**Report Title:** Supermarket Sales Data Analysis

We're looking at supermarket sales data to understand how well the supermarket is doing and who are their target customers.

While this helps the supermarket sell better and keep customers satisfied.

We'll check sales using Python to analyze the data, use machine learning to understand customers.

This report is specifically written for the supermarket managers to help them better understand what is going on in each branch.

We are analyzing the data to learn about sales and customers to sell more effectively.

**We want to know:**

How are sales in different branches?

What products sell the most?

Can we guess if a customer is a member or not?

**This will benefit us in having:**

Better sales plans

Loyal customers

Smart decisions on what to keep in stock

Knowing what customers want

**Analysis :**

We'll use simple analysis to describe sales and customer and more advanced analysis to predict customer types.

 We will use Python because:

It has tools (libraries) like Pandas and NumPy to handle data easily.

Many people use it, so there's a lot of help available.

It's easy to learn.

To understand our customer We'll use machine learning to guess if a customer is a member or not depending on , city, gender, what they buy, price, how many, how they pay, and ratings.

To help us do that we'll use classification algorithms like Logistic Regression, Decision Trees, and Random Forest to give members special treatment and keep them coming back.

Cleaning the data is important to make sure the data is accurate, consistent, and ready to use.

This makes the data better, easier to use, and helps avoid mistakes.

**Why supermarket sales?**

We picked this data to focus on what's important for sales and customers to helps us find what affects sales and customer behaviour.

Lastly We'll get the data ready, look at it closely, build our customer type guessing tool, test it, and then tell you what we found.