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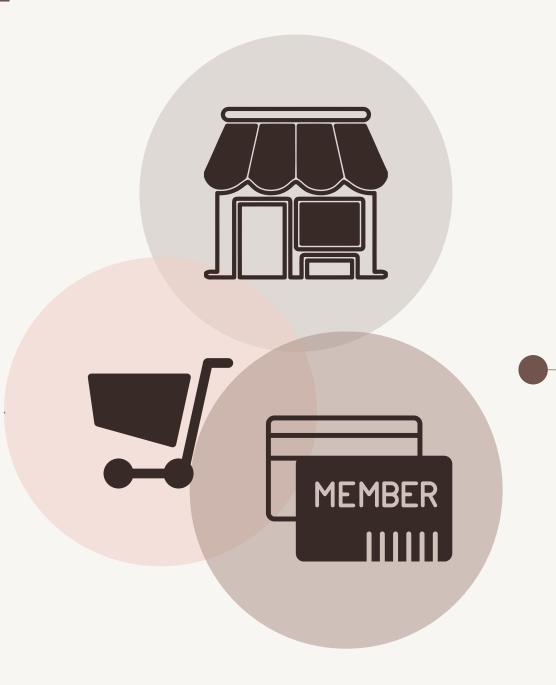
05

Final Product



### Part 1: Visualization & Analysis

- The primary objective of the visualization project for Multi Mart Retail store is to provide a comprehensive and visually intuitive view of the sales happened in the store and revenue generated from sales from the year 2019 to 2023.
- This comprehensive analysis aims to shed light on the store's sales performance and revenue generation.
- With a focus on customer behavior and preferences, our goal is to guide the store in making informed decisions about the potential expansion of its Loyalty Card program to new regions.
  - The project identifies revenue patterns, payment preferences, and promotional drivers, suggesting strategies to optimize revenue generation and customer engagement for Multi Mart.
- The Analysis resulted to a conclusion that expanding Loyalty Card memberships to other regions would be beneficial for the Multi Mart store.





### Part 2: Modeling & Prediction



Despite the recent introduction of a new loyalty card membership program, the primary objective remains to increase purchases of the store and profitability compared to historical performance.



The second phase of this project entails predicting future purchases within the store and subsequently predicting the revenue it will generate.



Our team will leverage machine learning models and methodologies to predict store purchases to help calculate the revenue.



The aim is to use supervised regression learning models to train on past and current data of the store's purchases enabling it to make predictions for the future performance



## **Project Progress**

Mid Term Interview Week

STEPS PERFORMED	Week 1	Week 2	Week 3	Week 4	Week 5	Week 7	Week 8	Week 9		
Initial data analysis for Machine Learning										
Feature Derivation										
Categorical data Pre-processing										
Variable Correlation Analysis										
Applied models to get base score										
Feature Importance & Principal Component Analysis										
Model Selection & Evaluation										
Selected Model: Gradient Boosting Regressor										

# **Upcoming Activities**

STEPS PERFORMED	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	
Optimizing Model Performance							
Finalized Model for Deployment							
Evaluating Model on new unseen data							
Model Deployment							
				FINAL INTERVIEWS			
					FINAL PRESENTATION	DEDADT	
						REPORT	



