Supermarket sales analysis
Project 1

We are in possession of a supermarket dataset that includes information from three branches: A, B, and C. The dataset provides comprehensive details on customer purchases and their transaction history. The supermarket company is keen on evaluating not only individual product sales but also the sales performance of each branch. As a data analyst, your responsibility is to meticulously conduct basic exploratory data analysis (EDA).

Company wants to analyse its sales and want below information.

Q1 Is your supermarket more popular with males or females?

Q2 What does the customer rating look like and can you also comment on its skewness?

Q3 What can you say about the aggregate sales across the branches?

Q4 Which is the most popular payment method used by customers?

Q4b Find Branch wise Payment method distribution in all branches?

Q5 Does gross income affect customer ratings?

Q6 Find rating distribution between branches?

Q7 Which is the most profitable branch?

Q8 How is the relationship between Gender and Gross income?

Q9 Can you see any time trend in gross income?

Q10 Which product line helps supermarket generate the most income?

Q11 What is the spending pattern of both males and females, meaning in which category do they spend more?

Q12 How many products are bought by customers?

Q13 Which day of the week has maximum sales?

Q14 Which hour of the day is busiest?

Q15 Which product line should your supermarket focus on?

Q16 Which city should be chosen for expansion and what products should be focussed on?

Data set details

Invoice ID- unique number generated by a business issuing an invoice to a client

Branch- Different branch of supermarket

City- different city where branch is located

Customer type- Member or not member

Gender-male or female

Product line-Product type

Unit Price-price of one product

Quantity-number of quantities

Tax 5%-tax percentage on product

Total-total sales

Date-date of purchase

Time=time of invoice generated

Payment-payment method

Cogs- The cost of goods sold

Gross margin percentage-supermarket gross profit percentage

Gross income-gross income of supermarket

Rating-rating given by customer.