**Task to be performed**

**Project Objective**

Perform a comprehensive analysis on this retail dataset to help answer key business questions. Your project should be organized into the following tasks:

**Task 1: Data Preparation**

• Read the CSV file.

• Parse and convert the Date column into appropriate format.

• Extract additional useful information like Year, Month, or DayOfWeek from the Date.

• Clean and preprocess the data if required.

**Task 2: Basic Exploration**

• How many total transactions are there?

• How many unique customers are in the dataset?

• What are the top 5 most common products sold across all transactions?

• Which cities have the highest number of transactions?

**Task 3: Customer Behavior Analysis**

• Which customer categories spend the most on average?

• Do certain customer categories prefer specific payment methods?

• What is the average number of items bought per transaction per store type?

**Task 4: Promotion & Discount Impact**

• What is the average cost of transactions where a discount was applied vs not applied?

• Compare the average number of items purchased for different promotion types.

• Which promotion type seems to be most effective in terms of increasing total cost?

**Task 5: Seasonality Trends**

• Which season has the highest total revenue?

• Are there seasonal preferences for certain store types or product categories?

• Create a plot showing average spending per season.

**Task 6: Visualization Dashboard**

• Bar plot of number of transactions per city

• Pie chart showing distribution of payment methods

• Line chart of monthly revenue trends (grouped by year if applicable)

• Heatmap or stacked bar showing revenue by season and customer category