

## **Problem Statement 1:**

An omni-channel retail business called "SellMart" wants to analyse its performance and customer behaviour to improve sales, profitability and customer conversion.

### **Questions:**

**Question 1:** Identify the top 5 products with the highest sales revenue in the year '2015'

**Question 2:** Determine and compare the average transaction value (ATV) for each product category MoM (Jan/Feb) in the year '2017'

**Question 3:** Calculate the conversion rate for each user, considering only users who have placed at least one order (use year = 2017)

**Question 4:** Rank users based on their total order count, with RANK SHARING allowed.

## Problem Statement 2:

An E-commerce company wants to identify the performance of their advertisements, campaigns and promotions over the past few years and track the sales contributions by each of their Marketing Vehicles. On top of that they also want to understand the customer behaviour and find the frequency of orders placed by their customers. Assume yourself to be working as a Senior Data Analyst in OrderKart, and help the company to solve their business problems by framing SQLs for the below mentioned queries.

Organic sales refers to the

### Questions:

**Question 1:** Find the top 10 active customers (customers who have made the most number of orders) in the month of November 2018

**Question 2:** Calculate the percentage of growth in the Organic sales made by OrderKart in the year '2018' and '2019' in each product category (Marketing channel is available in source column from users table)

**Question 3:** Identify the top 3 Marketing Vehicles contributing to the highest number of orders since '2017' .

**Question 4:** Find out the customer RPR, repeat purchase rate. (percent of customers who made more than 1 order).

### Problem Statement 3:

You want to analyse the performance of individual products. You also want to understand the customer feedback for various products. Solve the following questions to model seller behaviour

**Question 1:** Find the top 5 product names in descending order of prices in each category (Sort by title for items with same price)

**Question 2:** Find the minimum, maximum and average price of products by category

**Question 3:** Find the top seller names for all the ordered products (in terms of order count)

**Question 4:** Find minimum, maximum and average rating for all ordered products

**Question 5:** Identify sellers and their products which were never sold in the last two months of 2019

#### **Problem Statement 4:**

Xmart is an online E-commerce platform for purchasing everyday goods and products. You are the head of Customer Acquisition Team. Your team wants you to identify the customer base to attract in order to maximise company's growth and sales. Answer the below questions by framing meaningful queries

**Question 1:** Xmart is not having the expected growth this year. The Ad-tech team is planning to analyse the marketing channel on the year which has the highest number of customer signup.

**Question 2:** Xmart is planning to work on a marketing advertisement to increase the company's sales. Help Xmart to find the Age group that has largest customer base to attract. (<18/18-24/25-44/45-55/55+)

**Question 3:** Xmart wants to send discount coupons to customer having the highest order total amount. Help Xmart to find the customer details.

**Question 4:** Vendor `Fisher-Kemmer` wants to send promotion mail to the customer who made the highest purchase on his items. Help Xmart to find the customer Email Id details.