SQL - Marketing Campaign Analysis

SQL Project

SQL Concepts:

- Data Filtering with SQL Operators
- Aggregating and Sorting Functions
- String, Math, and DateTime Functions
- JOINs and Subqueries
- Windows Function
- Case Statement, Procedures, Functions and Views

Overview of the Project:

The project will be divided into 4 different sections.

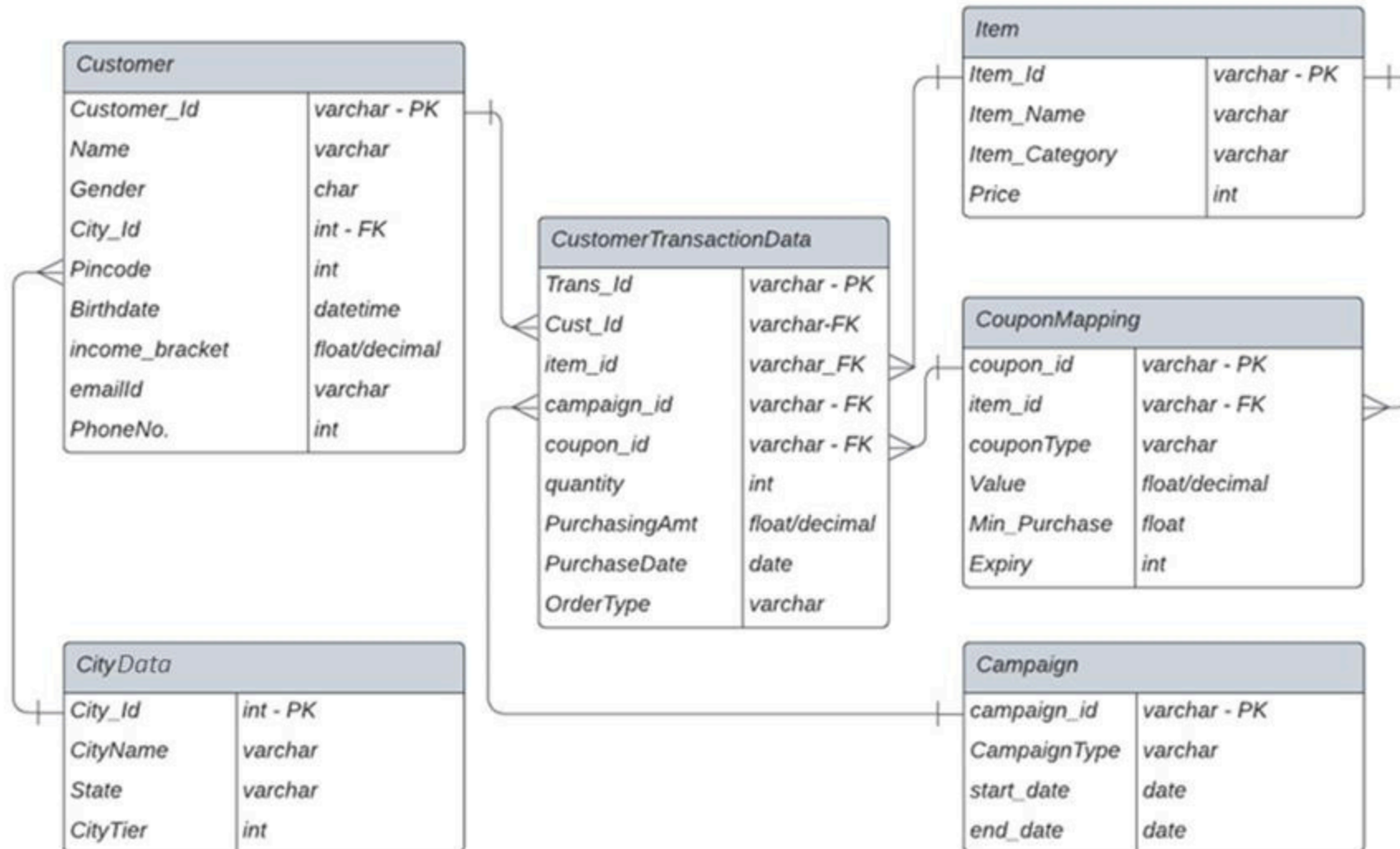# Quick Intro on Marketing Campaign Analysis

Retro Paints Inc. is a paint company which was recently launched in 2019. Since then, they have established their name in top tier 1 and 2 cities (slowly expanding to tier 3 cities as well).
They have orders coming from household, industrial and government sectors. In recent years, they are seeing quite a steady growth and would like to continue that in future.

They have hired you as a Data Scientist in their data consulting team which offers services across various departments such as sales, marketing, logistics, etc.
They have given you a sample of data from their databases. You have to work on some of the pain points of the marketing team like consumer growth, lead conversions, etc. as well as help them work on new set of campaigns.

Let's visit the Campaign schema...

Customer

Customer_Id	varchar - PK
Name	varchar
Gender	char
City_Id	int - FK
Pincode	int
Birthdate	datetime
income_bracket	float/decimal
emailId	varchar
PhoneNo.	int

CityData

City_Id	int - PK
CityName	varchar
State	varchar
CityTier	int

CustomerTransactionData

Trans_Id	varchar - PK
Cust_Id	varchar-FK
item_id	varchar_FK
campaign_id	varchar - FK
coupon_id	varchar - FK
quantity	int
PurchasingAmt	float/decimal
PurchaseDate	date
OrderType	varchar

Item

Item_Id	varchar - PK
Item_Name	varchar
Item_Category	varchar
Price	int

CouponMapping

coupon_id	varchar - PK
item_id	varchar - FK
couponType	varchar
Value	float/decimal
Min_Purchase	float
Expiry	int

Campaign

campaign_id	varchar - PK
CampaignType	varchar
start_date	date
end_date	date

Section 1: Getting the overview of the data

Q1. Check the cardinality of following columns (Counts)

1. Different type of paints provided by the company.
2. Different Coupon Types that are offered.
3. States where the company is currently delivering its products and services.
4. Different Order Types.

Q2. Identify total number of sales (transactions) happened by

1. Yearly basis
2. Quarterly basis
3. Yearly and Monthly basis

Q3. Identify the total purchase order by

1. Product category
2. Yearly and Quarterly basis
3. Order Type
4. City Tier

Section 2: Understanding lead conversions

The company wants to understand the customer path to conversion as a potential purchaser based on our ca mp ai gn s.

1. Identify the total number of transactions with campaign coupon vs total number of transactions without campaign coupon.
2. identify the name of potential leads who have made a purchase but have not yet used a campaign coupon

Section 3: Understanding Customer Engagement

1. Which customers have used the most coupons and what is the total price.

2. Name of customer in Which city have the highest number of transactions and what is the total

Section 4: Automating tasks

1. Create view for top 10 Customers by Purchasing Amount

2. Top 5 Customers (from Household and Industrial Sector) Based on Purchase Amount