

Good Morning Ventures – Business Analytics Internship Assessment Test

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Q. Create a customer grading schema for an offline retail store that helps us understand who our most loyal customers are and who are not.

This project was made using SQL to create an ER diagram of the required schema such that customers can be graded. The reasons why a customer would approach any store (online or offline) are usually the same. In our case we would look for the reasons in a typical offline retail store.

In any offline retail store customers look for the following:

1. Discounts or Vouchers
2. Customer service
3. Prices compared to other retail stores
4. Availability of materials
5. Products (Quality, sustainability, demand)
6. Location
7. Customer reviews
8. Payment Options

1. Customer Service

The first tables I created in the ER model are employees. Metrics were employee ID, employee name, designation, type, salary and so on. Now this data is useful for HR analytics but when it comes to tracking employee/staff behavior in stores, service, quick wit, customer care. It reflects the image of the customers have of the store service.

2. Location

Location of an offline retail store makes a huge impact on the sales. Eg: if the store is present in station road locality it will have more sales on week days but will also face competition from other stores. If the store is one of a kind a certain locality then the locals would be regular customers of the retail store. Such customers are also loyal customers for the longest periods.

3. Discounts and Vouchers

Any customer loves to have discounts over regular items and even the products on the expensive side. But this not only helps to get more customers but also helps us understand which products have more margin and pin point which products are on more demand. It helps to curb loss by not ordering low margin products, low demand products or cheap quality products from manufacturers. Stores that provide more discounts have more satisfied and loyal customers.

4. Products (Quality, Demand and Sustainability)

The quality of retail products play a huge role in products in consumer products and goods. Cheap quality products that wear out after little amount of time eventually lead to lesser demands even if discounts are present. One can track the manufacturers and progress of product sales to derive conclusions about the status of the product in the market. Stores can then find an alternative product or replace it from their respective manufacturers.

5. Prices compared to other retail stores

As mentioned before location of a store plays an important role to figure out the place of the respective store in the competitive market and performance compared to stores in other localities. If the prices of the nearby stores, quality of customer service, quality of product, payment services are better than our store then eventually the store will not have loyal customers. As customers would prefer other stores. One can keep track of sales in other stores on days where the sales were less to derive what is going wrong.

6. Customer Reviews

Nowadays a simple google search is enough to find customers reviews, location, product availability and many such other information. Customer reviews play a huge role as a new customer may attract towards in hopes of better service and goods in the retail store. In the same way a simple NLP based Sentiment Analysis (polarities) on these reviews stored and updated regularly in our database can help us understand the actual problems faced by customers in the stores.

7. Payment Options

Recently in the advent of Covid-19 customers had to switch to digital wallets, UPI payments, Net banking options entirely. This flexibility helps customers use the payment options they are comfortable with and also targets customers of a particular category. Eg: If a shop is located in a posh locality then the payment options are utilized but when it comes to areas near to slums, schools, traditional markets most of the people prefer cash transactions. Billing also defers accordingly in some regions. Hence Bill and transaction tables are present in the schema.

8. Availability of Products

As mentioned before the supply of products must be optimum with respect to demand of products. Lack of Availability may lose loyal customers in the long run.

Customer Grading System Schema

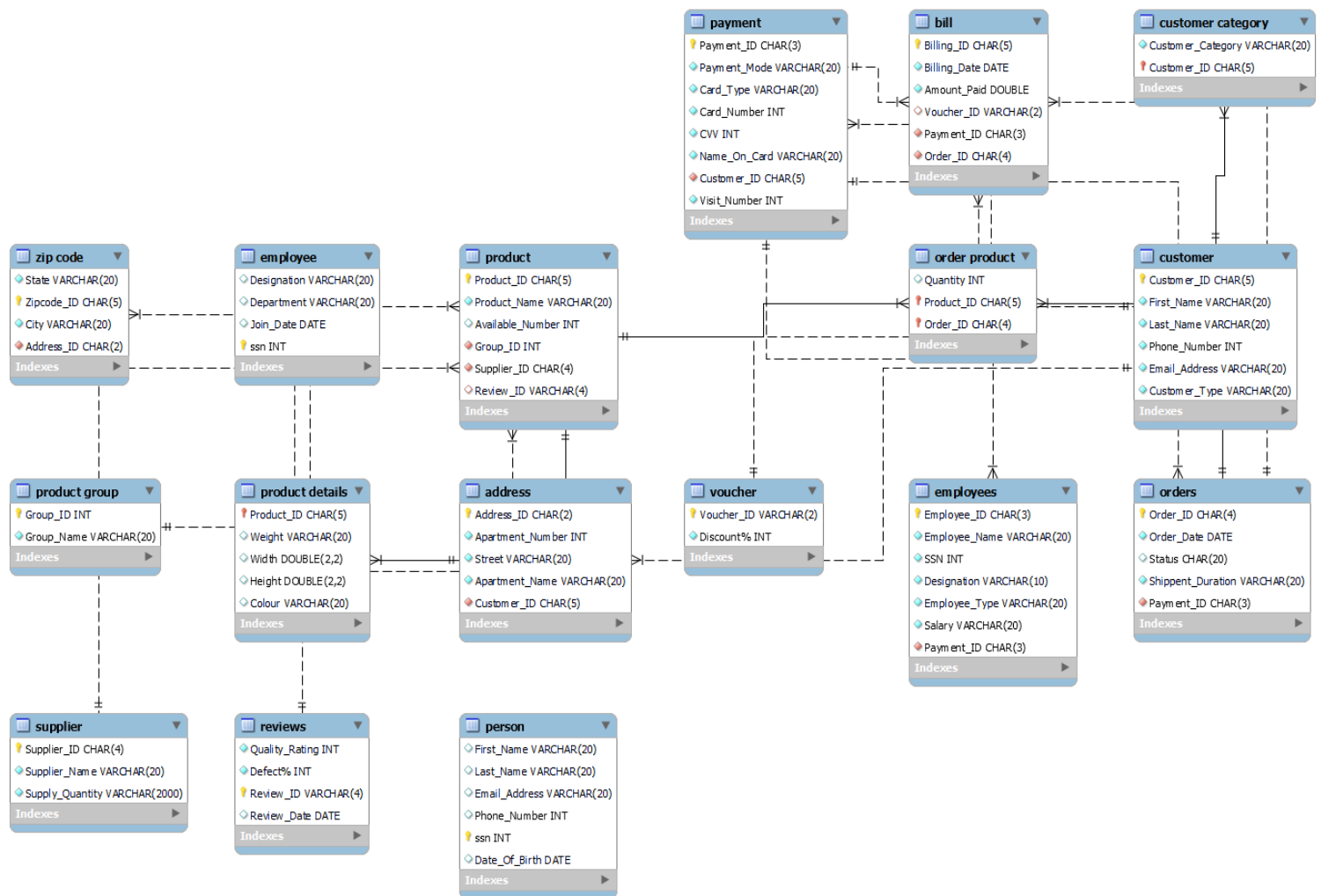
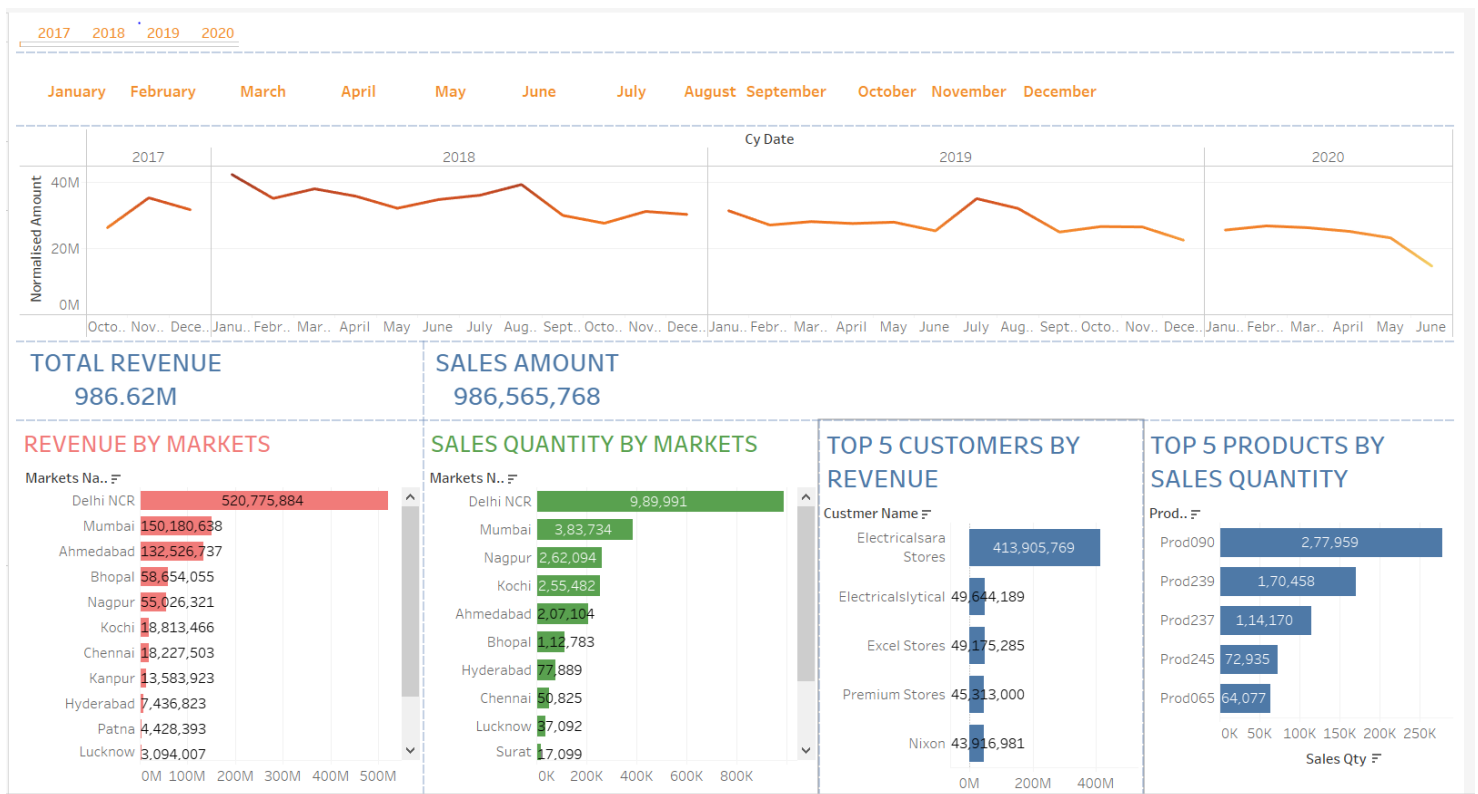


Tableau Dashboard of Sale Analysis that's possible with this Schema



This is just a single snap of an example of how much detailed analysis this schema can get into to find loyal customers. I hope you find my solution helpful. Link to SQL code: https://github.com/ShrishtiHore/Customr_Grading_System.