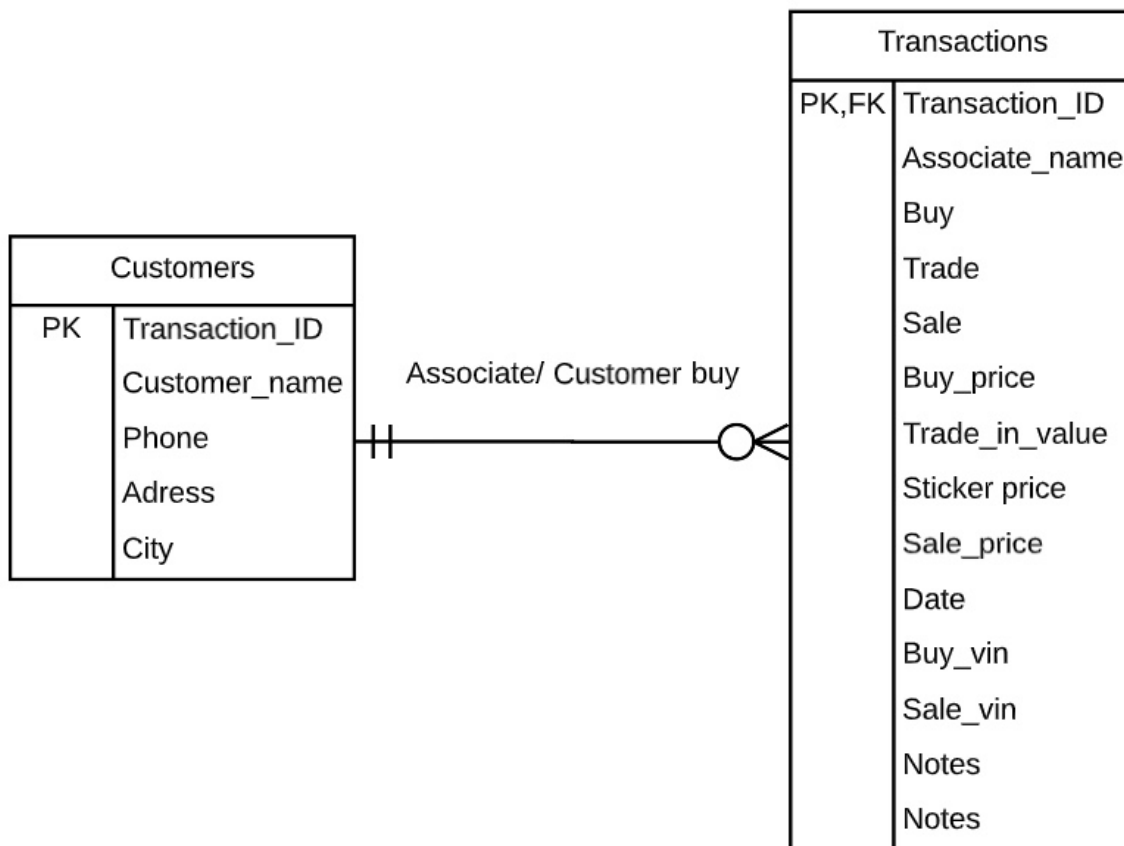


# Ontologies/ ER Diagram Design

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CS 598 Foundations of Data Curation

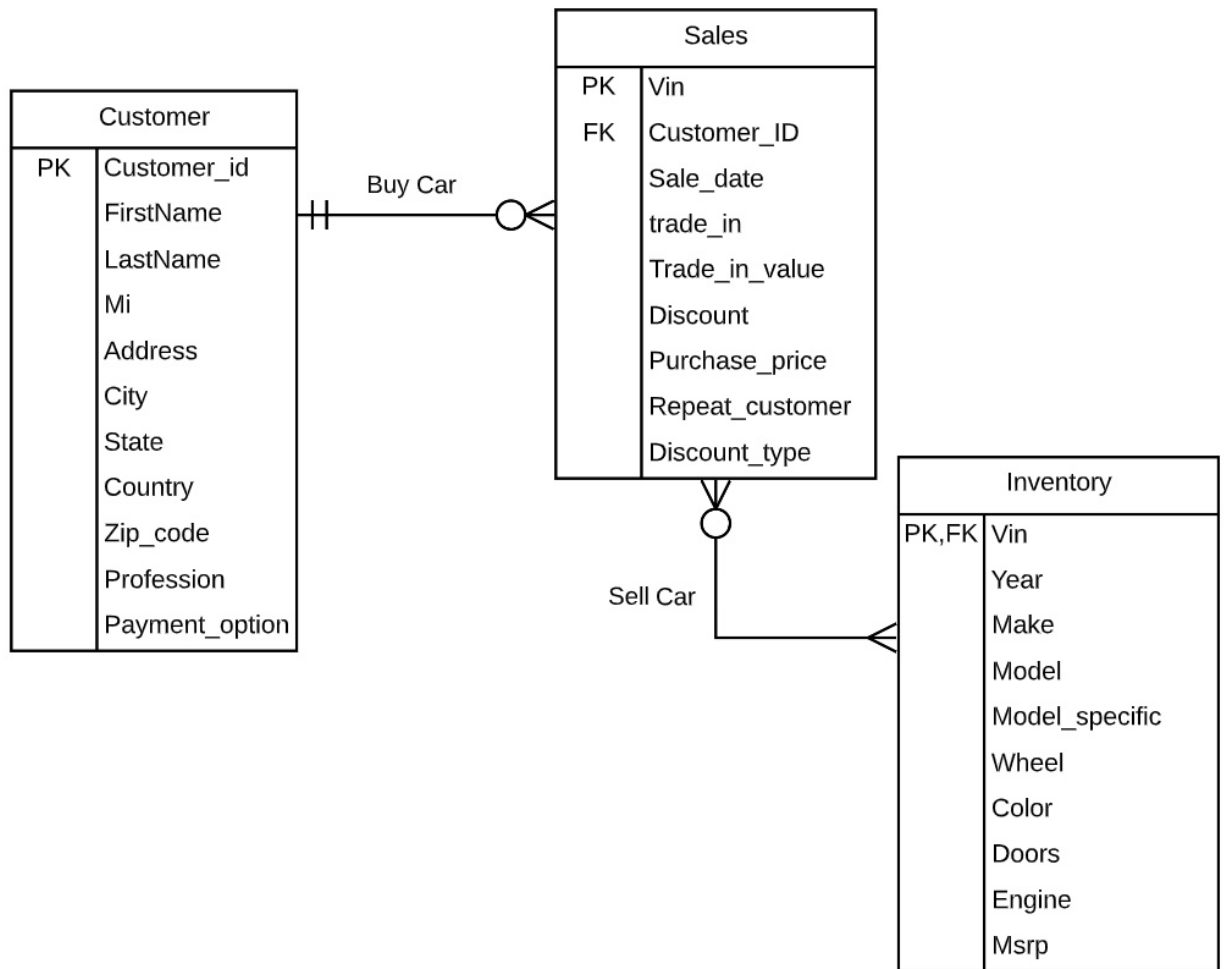
From assignment one, we had an auto dealer company with three departments: Inventory, Sales, and Customer relations. There is a database schema in place for this setting. We are now introducing new information from another dealer of pre-owned cars. The task is to design an ER diagram and integrate it with the existing database. Both dealers will be able to use the newly merged schema seamlessly. I will use crow foot notation to complete this assignment.

1. The pre-owned database consists of the Customers and transactions databases, as shown in the ER diagram below.



PK -Primary key  
FK- Foreign Key

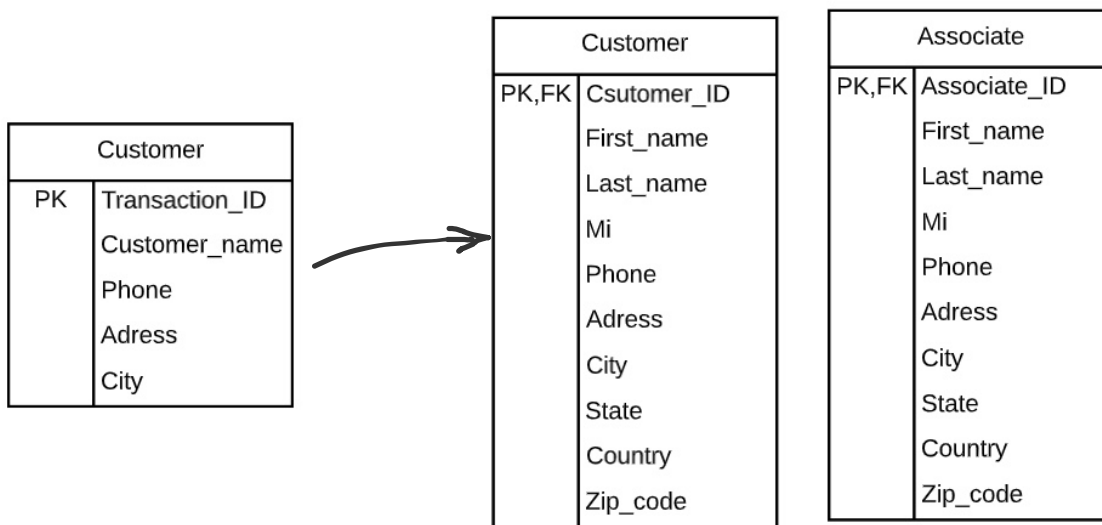
2. The following ER diagram reflects the schema design from Assignment 1.  
Three tables, including Customer, Sales, and inventory, interact when a customer buys from the auto dealership.



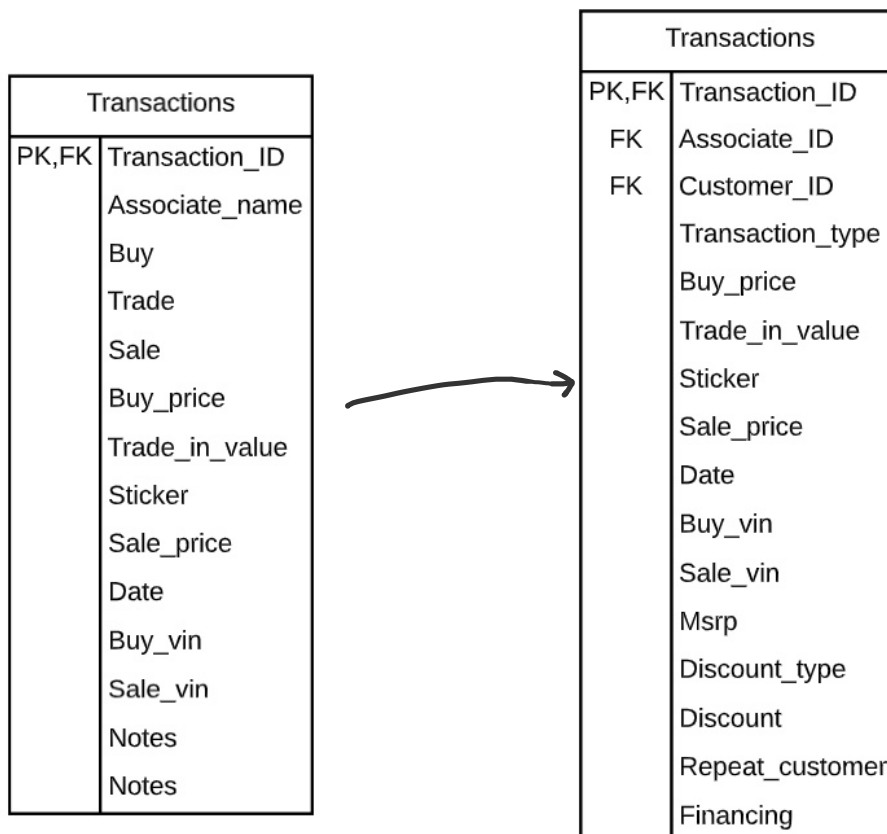
### 3. Intermediate ER diagrams

#### Tasks

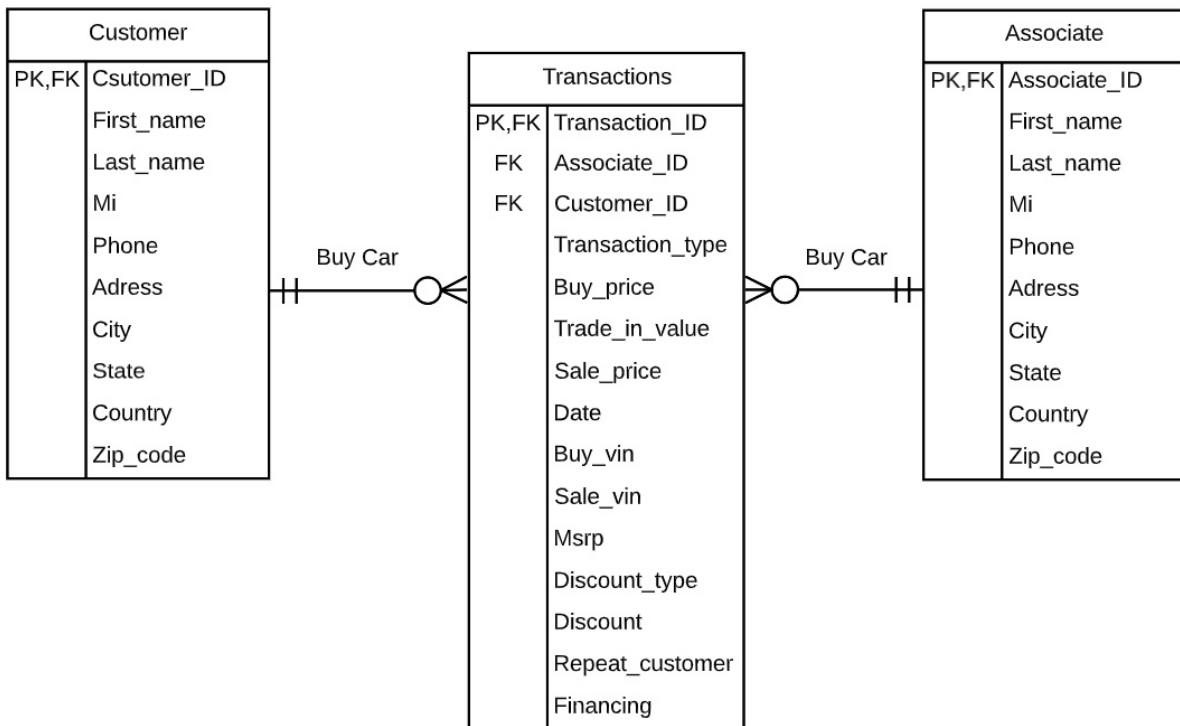
- Transform the customers' table of the pre-owned database to match the auto dealer database by adding attributes from the auto dealer table
- Separate customer and associate since they produce different transactions of the same person
- Split customer name into first and last name and add Mi attribute from auto dealer customers
- Add missing attributes that form a complete address such as state, country and zip code



- Transform the sales table from auto dealer and transactions in the pre- owned into the transaction table as shown below by adding attributed from the sales table.
- Introduce the two Ids associated with customer and associate from the previous step
- Get rid of notes since we have repeat customer and discount type. Also financing as a bool
- Replace buy, sell and trade with one Boolean attribute transaction type
- Add a customer and associate ID as keys to link to the transaction and inventory tables



- Merge the new Customer and transactions table formed above.
- A person can make a transaction either as a customer or an associate.



- Finally merge the Customer, transactions and Inventory tables

