Chapter 2 Homework

Due Date: September 13, 2021 (5:00PM)

The Queen Anne Curiosity Shop is an upscale home furnishings store in a well-to-do urban neighborhood. It sells both antiques and current-production household items that complement or are useful with the antiques. For example, the store sells antique dining room tables and new tablecloths. The antiques are purchased from both individuals and wholesalers, and the new items are purchased from distributors. The store's customers include individuals, owners of bed- and-breakfast operations, and local interior designers who work with both individuals and small businesses. The antiques are unique, though some multiple items, such as dining room chairs, may be available as a set (sets are never broken). The new items are not unique, and an item may be reordered if it is out of stock. New items are also available in various sizes and colors (for example, a particular style of tablecloth may be available in several sizes and in a variety of colors).

CUSTOMER (CustomerID, LastName, FirstName, EmailAddress, EncryptedPassword, Address, City, State, ZIP, Phone, *ReferredBy*)

ITEM (ItemID, Item Description, CompanyName, PurchaseDate, ItemCost, ItemPrice)

SALE (SalelD, CustomerID, SaleDate, SubTotal, Tax, Total)

SALE_ITEM (*SaleID*, *SaleltemID*, ItemID, ItemPrice)

The referential integrity constraints are:

ReferredBy in CUSTOMER must exist in Customer1D in CUSTOMER

CustomerlD in SALE must exist in CustomerlD in CUSTOMER

Saleld in SALE_ITEM must exist in Saleld in SALE

ItemID in SALE_ITEM must exist in ItemID in ITEM

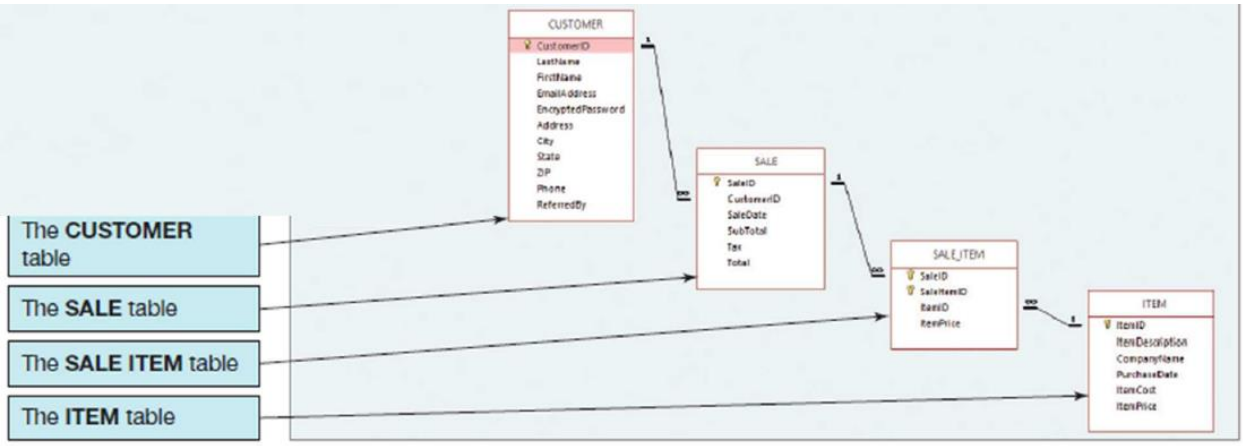
Assume that CustomerlD of CUSTOMER, ItemID of ITEM, Saleld of SALE, and SaleltemID of SALE_ITEM are all surrogate keys with values as follows:

CustomerID Start at 1 Increment by 1

ItemID Start at 1 Increment by 1

Saleld Start at 1 Increment by 1

The database that The Queen Anne Curiosity Shop has created is named QACS, and the four tables in the QACS database schema are shown below. Note that CUSTOMER contains a recursive relationship between ReferredBy and CustomerID, where ReferredBy contains the CustomerlD value of the existing customer who referred the new customer to the Queen Anne Curiosity Shop.



1. Show all data in each of the tables (5 points)
2. List the LastName, FirstName, and Phone of all customers (5 points)
3. List the LastName, FirstName, and Phone for all customers with a FirstName of 'John' (5 points)
4. List the LastName, FirstName, Phone, SaleDate, and Total of all sales in excess of $100.00 (5 points)
5. List the LastName, FirstName, and Phone of all customers whose last name includes the characters 'ne'. (5 points)
6. List the LastName, FirstName, and Phone for all customers whose eight and ninth digits (starting from the left) of their phone number are 56. For example, a phone number ending in '567' would meet the criteria. (5 points)
7. Determine the maximum, minimum, and average sales Total. (5 points)
8. Count the number of customers having each combination of LastName and FirstName (5 points)

9. Show the LastName, FirstName, and Phone of all customers who have had an order with Total greater than $100.00. Use a subquery. Present the results sorted by LastName in ascending order and then FirstName in descending order. (10 points)
10. Show the LastName, FirstName, and Phone of all customers who have had an order with Total greater than $100.00. Use a join. Present the results sorted by LastName in ascending order and then FirstName in descending order. (10 points)
11. Show the LastName, FirstName, and Phone of all customers who have bought an Item named ‘Desk Lamp’. Use a subquery, Present results sorted by LastName in ascending order and then FirstName is descending order. (20 points)
12. Show the LastName, FirstName, and Phone of all customers who have bought an Item named ‘Desk Lamp’. Use a join, Present results sorted by LastName in ascending order and then FirstName is descending order. (20 points)

Submission Format:

In a word document, for each question, provide your sql query and it’s output. If you faced any difficulty with a query, describe the difficulty and how you overcame it (link to a google search, youtube video, class notes…)