Assignment 3a

The Queen Anne Curiosity Shop project questions in Chapter 3 asked you to create a set of relations to organize and link the Queen Anne Curiosity Shop typical sales data shown in Figure 3-33 and the typical purchase data shown in Figure 3-34. The set of relations may look like the following:

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

SALE (SaleID, CustomerID, InvoiceDate, PreTaxTotal, Tax, Total)

SALE\_ITEM (SaleID, SaleItemID, PurchaseID, SalePrice)

PURCHASE (PurchaseID, PurchaseItem, PurchasePrice, PurchaseDate, VendorID) VENDOR (VendorID, Vendor, Phone)

Use these relations and the data in Figures 3-33 and 34 to answer the following questions.

**FIGURE 3-33**

Sample Sales Data for The Queen Anne Curiosity Shop

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **LastName** | **FirstName** | **Phone** | **InvoiceDate** | **InvoiceItem** | **Price** | **Tax** | **Total** |
| Shire | Robert | 206-524-2433 | 14-Dec-17 | Antique Desk | 3,000.00 | 249.00 | 3,249.00 |
| Shire | Robert | 206-524-2433 | 14-Dec-17 | Antique Desk Chair | 500.00 | 41.50 | 541.50 |
| Goodyear | Katherine | 206-524-3544 | 15-Dec-17 | Dining Table Linens | 1,000.00 | 83.00 | 1,083.00 |
| Bancroft | Chris | 425-635-9788 | 15-Dec-17 | Candles | 50.00 | 4.15 | 54.15 |
| Griffith | John | 206-524-4655 | 23-Dec-17 | Candles | 45.00 | 3.74 | 48.74 |
| Shire | Robert | 206-524-2433 | 5-Jan-18 | Desk Lamp | 250.00 | 20.75 | 270.75 |
| Tierney | Doris | 425-635-8677 | **1**0-Jan-18 | Dining Table Linens | 750.00 | 62.25 | 812.25 |
| Anderson | Donna | 360-538-7566 | 12-Jan-18 | Book Shelf | 250.00 | 20.75 | 270.75 |
| Goodyear | Katherine | 206-524-3544 | 15-Jan-18 | Antique Chair | 1,250.00 | 103.75 | 1,353.75 |
| Goodyear | Katherine | 206-524-3544 | 15-Jan-18 | Antique Chair | 1,750.00 | 145.25 | 1,895.25 |
| Tierney | Doris | 425-635-8677 | 25-Jan-18 | Antique Candle Holders | 350.00 | 29.05 | 379.05 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Purchaseltem** | **PurchasePrice** | **Purchase Date** | **Vendor** | **Phone** |
| Antique Desk | 1,800.00 | 7-Nov-17 | European Specialties | 206-325-7866 |
| Antique Desk | 1,750.00 | 7-Nov-17 | European Specialties | 206-325-7866 |
| Antique Candle Holders | 210.00 | 7-Nov-17 | European Specialties | 206-325-7866 |
| Antiq ue Candle Holders | 200.00 | 7-Nov-17 | European Specialties | 206-325-7866 |
| Dining Table Linens | 600.00 | 14-Nov-17 | Linens and Things | 206-325-6755 |
| Candles | 30.00 | 14-Nov-17 | Linens and Things | 206-325-6755 |
| Desk Lamp | 150.00 | 14-Nov-17 | Lamps and Lighting | 206-325-8977 |
| Floor Lamp | 300.00 | 14-Nov-17 | Lamps and Lighting | 206-325-8977 |
| Dining Table Linens | 450.00 | 21-Nov-17 | Linens and Things | 206-325-6755 |
| Candles | 27.00 | 21-Nov-17 | Linens and Things | 206-325-6755 |
| Book Shelf | 150.00 | 21-Nov-17 | Harrison, Denise | 425-746-4322 |
| Antique Desk | 1,000.00 | 28-Nov-17 | Lee, Andrew | 425-746-5433 |
| Antique Desk Chair | 300.00 | 28-Nov-17 | Lee, Andrew | 425-746-5433 |
| Antique Chair | 750.00 | 28-Nov-17 | New York Brokerage | 206- 325-9088 |
| Antique Chair | 1,050.00 | 28-Nov-17 | New York Brokerage | 206-325-9088 |

**FIGURE 3-34**

Sample Purchase Data for The Queen Anne Curiosity Shop

*A Follow the procedure from the book to assess these data.*

1. List all functional dependencies.

1. List any multivalued dependencies.

3. List all candidate keys.

1. List all primary keys.
2. List all foreign keys.

6. State any assumptions you make as you list these components.

1. *List questions you would ask the owners of The Queen Anne Curiosity Shop to verify your assumptions.*
2. *If there are any multivalued dependencies, create the tables needed to eliminate these dependencies.*
3. *Do these data have the multivalue, multicolumn problem? If so, how will you deal with it?*
4. *Do these data have the inconsistent data problem? If so, how will you deal with it?*
5. *Do these data have a null value data problem? If so, how will you deal with it?*
6. *Do these data have the general-purpose remarks problem? If so, how will you deal with it?*