Assignment D: Chapter 7: Queen Anne Curiosity Shop: **Starting on page 353, read the Queen Anne Curiosity Shop case.**

1. Physical Data Model in MySQL workbench

(1) Create a database design diagram in MySQL workbench for all tables specified on page 353. Do not use the table names in the Relation Expressions of the book because the names do not follow the class convention. Instead, use the following names for the corresponding tables in the book. **The correct table names must be as follows:**

- tblCustomerQACS
- tblEmployee
- tblVendor
- tblItem
- tblSale
- tblSaleItem

(2) Follow the instructions for Questions A-C on page 354 to specify the properties of tables and relationships between tables. Use the class convention to choose the data type for each column. Other than tblSaleItem, all other tables' primary key need to be auto incremental (Identity field in SQL Server). Make sure to specify reasonable alternate keys for tblCustomerQACS, tblEmployee, and tblVendor tables. In the MySQL workbench, you select UQ property for a column to indicate that the column is an alternate key. Name the physical data model as: **AssignmentD_QACS_Workbench_LastName_FirstName.mwb**.

2. SQL Server Implementation

(1) In SSMS, select your individual database created in your Assignment B, then create a SQL file, name it as **Assignment_D_QACS_YourLastName_YourFirstName.sql.**

(2) In the SQL file, based on the physical data model, write CREATE TABLE statements for each table specified in your physical data model. After a table CREATE TABLE script is complete, execute it so that a table is created in your individual database (total 6 tables created). Each table needs to be created in one table creation definition. DO NOT using alter table in your scripts!

(3) **NOTES**: for the referential integrity constraints listed for the QACS database, we have unstated business rules that may influence the update and/or delete behavior. Depending on the business rules you adopt, you can have different designs for the update and delete behavior on foreign keys. Specify ON UPDATE and ON DELETE behaviors for each foreign key following the rules stated in the parentheses below:

CustomerID in tblSale must exist in CustomerID in tblCustomerQACS (We will not delete a customer if a customer has made a purchase)

VendorID values in tblItem must exist in tblVendor (When we delete a vendor, we delete all items from that vendor)

EmployeeID values in tblSale must exist in tblEmployee (Once an employee made a sale, we will keep the employee in the system for ever)

SaleID values in tblSale_Item must exist in tblSale (Once a sale is deleted, all related sale items need to be deleted)

ItemID values in tblSale_Item must exist in tblItem (Don't delete an item if it has been purchased)

These business rules will affect your solutions: update and delete rules for the foreign keys. Make sure the constraints are set in your table definitions.

(4) Download the Assignment D-Data.xlsx file. Import the spreadsheets into your individual database. Add '_original' to the destination table name for each imported spreadsheet. In **Assignment_D_QACS_YourLastName_YourFirstName.sql,** write six **bulk into** (For example, INSERT INTO tblCustomerQACS … SELECT… FROM Customer_original) statements to insert the data from each imported table into the corresponding table created by your CREATE TABLE scripts. Remember, because we have foreign keys created in tables, the order matters to insert data into the tables. You may get error message if you do not have the right order.

3. Submit the following files (do NOT zip them) to Canvas

(1) **AssignmentD_QACS_Workbench_LastName_FirstName.mwb**
(2) **Assignment_D_QACS_YourLastName_YourFirstName.sql**