Consider the online auction database schema and description given below.

Online Auction Database Relational Schema

Online Auction Database Description (From Sunderraman Text Ex. 4.19)
Consider an online auction database system in which members (buyers and sellers) participate in the sale of items. The data requirements for this system are summarized as follows:

- The online site has members who are identified by a unique member id and are described by an email address, their first name, last name, a password, their home address, and a phone number.
- A member may be a buyer or a seller. A buyer has a shipping address recorded in the database. A seller has a bank account number and routing number recorded in the database.
- Items are placed by a seller for sale and are identified by a unique item number assigned by the system. Items are also described by an item title, an item description, a starting bid price, bidding increment, the start date of the auction, and the end date of the auction.
- Items are also categorized based on a fixed classification hierarchy (for example a modem may be classified as /COMPUTER/HARDWARE/MODEM).
- Buyers make bids for items they are interested in. A bidding price and time of bid placement is recorded. A buyer can place multiple bids for an item at different times. The person at the end of the
auction with the highest bid price is declared the winner and a transaction between the buyer and the seller may proceed soon after.

Buyers and sellers may place feedback ratings on the purchase or sale of an item. The feedback contains a rating between 1 and 10 and a comment. Note that the ratings are placed on a completed transaction by the buyer or seller of the item in the transaction.

Part I: Tables + Constraints

Write create-auction.sql script which has SQL statements for creating the tables and constraints for the auction database system. Enforce meaningful constraints for foreign keys with on update, on delete. Imagine you were implementing this application for an auction company that you own, how would you like to have your foreign keys enforced with on update, on delete? Specify in your code accordingly

Constraints: Be sure to include primary keys, and foreign keys. The data types of the tables for the most part are self explanatory. I will explain the ones which are little ambiguous. The MID, AccountNo, RoutingNo columns are of varchar2(20) data types. ItemNo column in the ITEM table is a system generated integer starting with 1 and auto incrementing by 1. BidTime column is of type DATE. In Oracle, columns of type DATE the date and also time. Enforce users to require a value for Email. Also enforce that a bidding end date cannot be earlier than the bidding start date. Each item is required to have a value of seller associated with it. All prices meaning the BidPrice, StartBid, BidIncr need to be a positive value. The BRating and SRating need to be a value between 1 and 10.

Part II: Data Manipulation

Load each of your tables with at least 10-15 rows (more is better), and include your insert statements in a separate file titled insert-auction.sql. Be creative and have a database instance where you have multiple buyers bidding on a item, and a single buyer bidding on a item at different times, and so on.

Submission: Submit create-auction.sql and insert-auction.sql electronically using http://d2l.mu.edu. Make sure you use exactly the given file names when you submit because my grading script will look for those names only. Hand in the hard copy of the assignment at the beginning of the class on the due date. Also submit some screen shots showing your table creations, constraint validation checks, and sample data in your tables.