Information and Computer Science Department
Fall Semester 101
ICS 324 – Database Systems
Enhanced Entity Relationship Model Exercise

Objectives

The objective of this lab is to draw an Enhanced Entity Relationship (ER) diagram from a given specification (or problem statement)

Outcomes

After completing this Lab, students are expected to:

- Be able to draw manually an EER diagram from a given specification (or problem statement).

Lab Exercise

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 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. 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.

Design an Entity-Relationship diagram for the auction database.