CSE 3241 Project Checkpoint 01 – Entities and Relationships

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In a **NEATLY TYPED** document, provide the following:

1. Based on the requirements given in the project overview, list the entities to be modeled in this database. For each entity, provide a list of associated attributes.

   CUSTOMER- customer id, username, name, address, phone number
   BOOK- ISBN, Name, author first name, author last name, price, genre, publisher
   EMPLOYEE- employee id, username, name, address, work phone number, position
   SELLER- seller id, mailing address, publishers worked with, contact within the company
   TECHNICAL STAFF- employee id, username, name, address, work phone number, last time and date logged into company database
   PUBLISHERS- name, employee contact, account number, [list of titles]

2. Based on the requirements given in the project overview, what are the various relationships between entities? (For example, "CUSTOMER entities purchase BOOK entities").

   EMPLOYEE oversees SELLER
   TECHNICAL STAFF is a division of EMPLOYEES
   SELLER owns the right to given BOOK

3. Propose at least two additional entities that it would be useful for this database to model beyond the scope of the project requirements. Provide a list of possible attributes for the additional entities and possible relationships they may have with each other and the rest of the entities in the database. Give a brief, one sentence rationale for why adding these entities would be interesting/useful to the stakeholders for this database project.

   A wish list entity is always useful for customers to keep tract of items they want to purchase but cannot at the present. Keeping track of this could help customers remember what they want, and they can even share it with friends.

   A sale entity is also a good implementation. If the company needed to clear inventory fast it can go under this entity and hopefully it can sell.

4. Give at least four examples of some informal queries/reports that it might be useful for this database might be used to generate. Include one example for each of the additional entities you proposed in question 3 above.
   a. Find a book on sale that is less than $3

b. Find a book on my friend's wish list in the adventure genre
c. Find the main employee contact for a given seller company
d. Find who made the last update to the database

5. Suppose we want to add a new publisher to the database. How would we do that given the entities and relationships you've outlined above? Given your above description, is it possible to add a new publisher to your database without knowing the title of any books they have published? If not, revise your model to allow for publishers to be added as separate entities.

   How we built the database above would not allow for a publisher to be added without knowing any book titles because I have it as an attribute under the book entity. After Revision, I have a PUBLISHER entity with various information about them as attributes. For example, I added an attribute of a list of titles so we can easily look up who published what.

6. Determine at least three other informal update operations and describe what entities would need to have attributes altered and how they would need to be changed given your above descriptions. Include one example for each of the additional entities you proposed in question 3 above.
   a. Update the list of titles the store carries from the publisher entity
   b. Update a person's wish list (add to wish list)
   c. Update a price on a sale item (mark down the item even more)

7. Provide an ER diagram for your database. Make sure you include all of the entities and relationships you determined in the questions above ***INCLUDING the entities for question 3 above***, and remember that ***EVERY*** entity in your model needs to connect to another entity in the model via some kind of relationship.