

SAMPLE DOMAIN MODELING QUESTIONS

1. The following tables form part of a database held in a relational DBMS:

Hotel (hotelNo, hotelName, city)

Room (roomNo, hotelNo, type, price)

Booking (hotelNo, guestNo, dateFrom, dateTo, roomNo)

Guest (guestNo, guestName, guestAddress)

Where Hotel contains hotel details and hotelNo is the primary key;

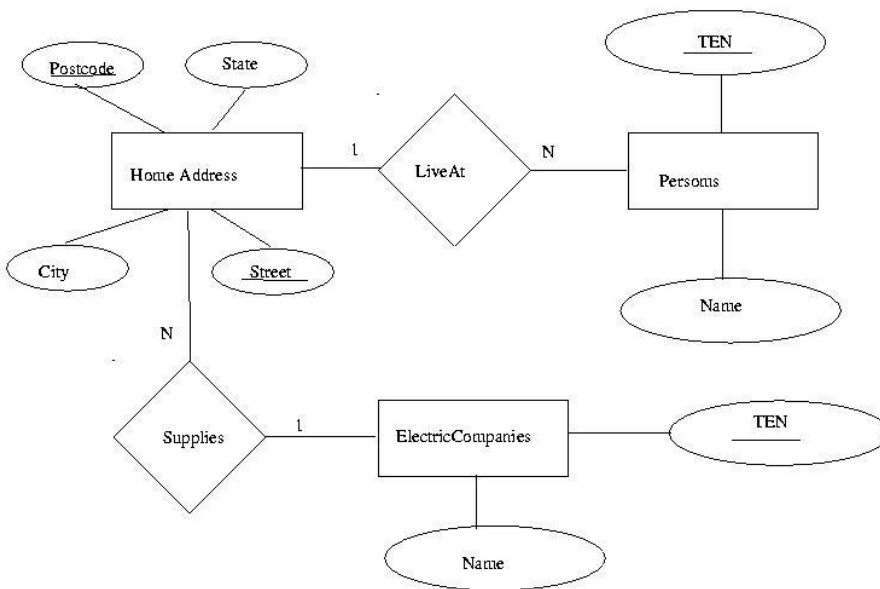
Room contains room details for each hotel and (roomNo, hotelNo) forms the primary key;

Booking contains details of bookings and (hotelNo, guestNo, dateFrom) forms the primary key;

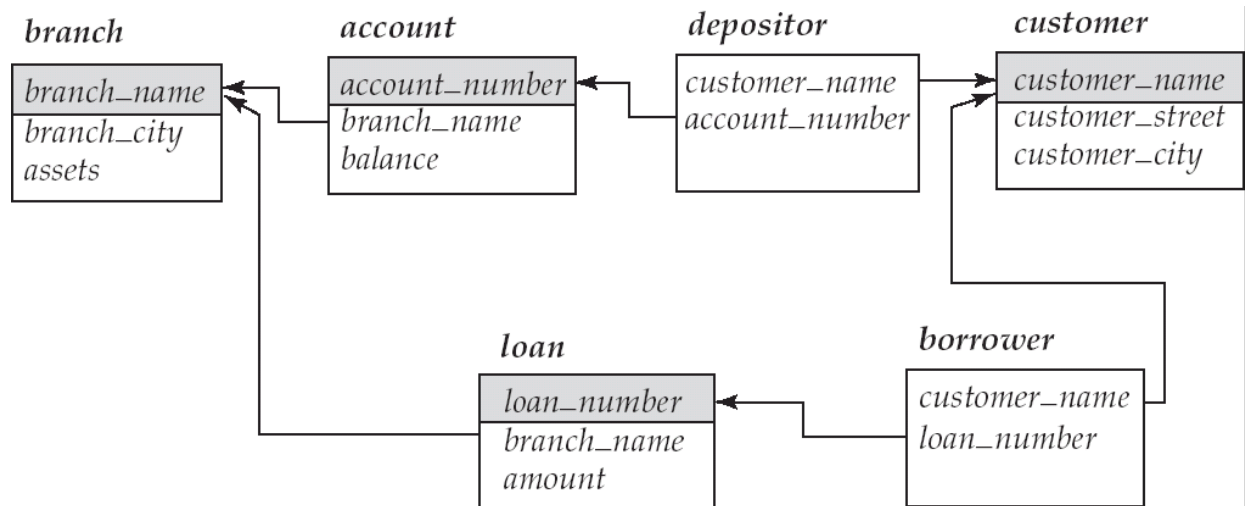
Guest contains guest details and guestNo is the primary key.

Identify the foreign keys in this schema. Explain how the entity and referential integrity rules apply to these relations.

2. Convert the following ER design into UML and a relational design:



3. Consider the following Banking schema:



Write query for the following:

- Find all loans of over \$1200
- Find the loan number for each loan of an amount greater than \$1200
- Find the names of all customers who have a loan, an account, or both, from the bank
- Find the names of all customers who have a loan at the Perryridge branch.

4. A Toy database: ER schema

