Nicholas Ramella, Herat Zaveri, Harsh Patel
Ananya Dass
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Deliverable 2

Goals:

The goal of this phase of the project is to have a clear rational map. The map should be correctly translated from the EER diagram with appropriate keys and attributes. The map should be correctly connected so that data can be changed without any problems. We should have an appropriate amount of data to satisfy the system.

EER to Relational Mapping:

We started relational mapping with entity Photo. Photo has PhotoID as primary key, and has attributes of Speed, Film,F-Stop,Color B&W, Resolution, and Price. Photo has subclasses therefore we created three tables for landscape, abstract,and portrait. Landscape has a foreign key of PhotoID, and separate table Location has keys of place, and country,and its attributes are description, and PhotoID which will point to the Landscape table. For Abstract we have an attribute of comment,and key of PhotoID which points to the Photo table. For Portrait we have Models relation therefore we have three tables to store data for this relationship. Portrait, Models,and model. Portrait has one key which is PhotoID which points to the Photo table. For Models we have primary keys PhotoID ,MName, and MBDate. It also has an Agency. For Model we have the primary key of MName, MBDate, and attribute of MBio,MSex.MName and MBDate is pointed from the Models table because there are many to many relationships. For the photographer table we have primary keys PName, PBDate ,and attributes of PBio, Paddress,

PNationality. Some photographers are influenced by some other photographer(s) therefore we have a table related to influences. Influences have the primary key of PName, PBDate, and attributes of influencer name, and influencer BDate.

The photo shop will sell photos therefore we need an entity for transaction and customer. For the transaction table we have TransID as primary key, and attributes of TDate, TotalAmount, CardNo, CardType, CardExpDate, and LoginName. LoginName points to the customer's LoginName which is a key under the Customer table. The customer table has attributes of Password, CName, CType, Billing Address, StreetAddress1, StreetAddress2, City, State, ZipCode.

After adding primary keys for each table, the last thing we had to do was to add those foreign keys to the Photo table. So we added PName and PBDate which points to the photographer. We also added TransID which points to the Transaction Table.

Constraints

Every landscape must have a place and country.

Every portrait must have a model name and model birthdate.

Every photo must have a photographer name and photographer birthdate.

Every photo that is bought must have a customer login name and transaction ID.

Every photo must have PhotoID, photographer name, photographer birthdate.

Every Photo can only have one Transaction ID or None at all if not sold.

Every photo that has a photographer has a date of the shooting.

Every photo should only be from one sub class (landscape, abstract, and portrait).

Customers can only have one account associated with them.

Every account should have a unique username or login name.

Difficulties Faced:

The difficulty we faced was identifying the constraints that were over referential integrity constraints. We needed to look at what kind of violations occurred in different situations, such as, a customer is unable to have two accounts and Photo must have all information about it. Another difficulty we faced was determining how to represent the 1:N relationships and which table would inherit the foreign key and what if one side had total participation.