COEN 280: Database Systems
Spring 2016
Homework Assignment 1
Due: Monday, 4/18/2016 @11:59pm

Project Description

The goal of this assignment is to design a conceptual schema using the **(E)ER** Data model.

(E)ER data model (50 points)

Design a schema that incorporates the specification described below as efficiently as possible. You should submit a written diagram of your schema design using the notation given in the class. In this diagram, indicate all the classes, subclasses, relationships (weak & strong), relationship cardinalities and degrees, total participations, attributes, and primary keys. In addition, specify whether each attribute is single-valued or multi-valued, stored or derived, and atomic or composite. In your design, you can make and state reasonable assumptions if they are not specified in the specification.

Design Specification

Yelp is a local business directory service and review site with social networking features. It allows users to give ratings and review businesses. You are going to design the database system for Yelp (www.yelp.com). It should store and manage the following information but it is not exactly same as real Yelp website. However, if you have ambiguous parts you can assume data type based on real Yelp system:

Yelp User

A Yelp user has a unique yelp ID, first name, last name, gender, birthdate, birthplace, age, email, a profile picture, list of friend ids. Yelp users can be complemented by their friends. A Yelp user can rate any business on a scale of 1-10 and provide reviews. Note that the user should be able to review the same business multiple times.

Reviews

A review has an ID, rating, content which can be text or photo, author, publish date and list of users who voted the review as funny, cool and useful. Reviews are categorized as either "Recommended' or "Not Recommended." A "Recommended" review will be visible to all users in the business review list. The Yelp user who authored the review, should be able to see the reviews he/she authored (recommended or not recommended)

Business

Each business has an ID, name, address, phone number, list of "Recommended" reviews, review count and photos. A review is belonged to a business.

Business Category

Each business has a Category. A business category has an ID and a name. A business category can be of restaurants, music, and department stores categories.

Photo

A Photo has a unique ID. A photo is belonged to a business. A Photo has an author, a description, and location and a list of users who marked the photo as "Helpful"

Submission Guidelines
You are REQUIRED to submit a pdf to Camino. It should also include your reasonable assumptions.