Project #1.2
CAS CS 460: Introduction to Database Systems

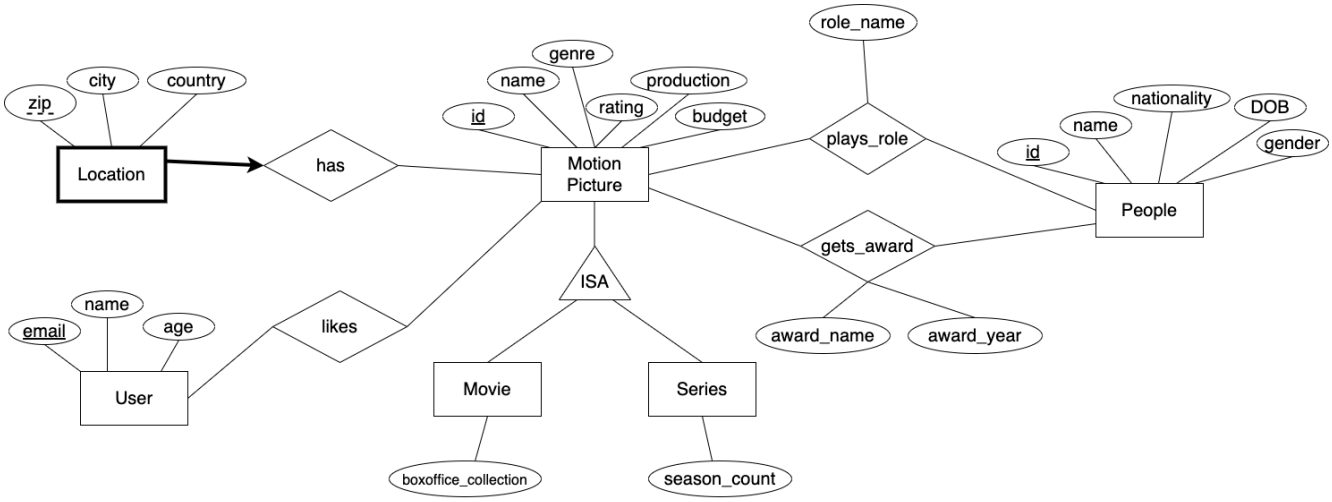
In the first project, you will design a simple website like IMDB that uses a movie database. This application will have a simple UI that is connected to a MySQL database

In the first deliverable, you have already submitted an Entity-Relationship Diagram (ER Diagram) for the application, along with a relational schema. For this next deliverable, you will create a simple UI that connects to the back-end (i.e., database). We will provide you with the required schema description to be used for the rest of the project.

We again recommend that you start as early as possible on this assignment.

1. Schema Description

An infotainment startup plans to create a website that will allow its users to view details of various motion pictures. Registered users will be able to view the list of all movies, search movies by name, genre, actor etc. Besides users will be able to 'like' movies. The required ER Diagram for the database is as follows:



Below, we list the tables required in the relational schema along with their primary and foreign keys:
MotionPicture (id, name, rating, production, budget)
User (email, name, age)
Likes (uemail, mpid)
Movie (mpid, boxoffice_collection)
Series (mpid, season_count)
People (id, name, nationality, dob, gender)
Role (mpid, pid, role_name)
Award (mpid, pid, award_name, award_year)
Genre (mpid, genre_name)

Note: Primary keys are underlined and foreign keys are in blue.

2. Part 1: Building the Relational Schema

a) Build the given schema in a MySQL database in your local system using "CREATE TABLE" statements.
b) Pay attention to participation constraints, especially with weak entities. Also make sure to identify all foreign keys and primary keys (if required).

3. Part 2: Creating a UI

We need a simple UI to execute and display results to the users. Below, we list the basic requirements of the UI:

a) The user, through the UI should be able to execute a list of queries (we will list the required queries in the next deliverable) that should be parametrized when necessary. For this part (PA 1.2), just for sanity checking, implement few basic queries like – (i) keep a button 'view all movies'; upon clicking it, it will list out all movies and their details, (ii) keep a button 'view all actors', which will work accordingly.

b) The queries can be executed from the front-end by clicking on links or buttons. Textbox, check boxes or option buttons can be used for parametrization requirements of queries.
Note: only providing a textbox where the user will manually enter every query is unacceptable.

c) The results of the queries should be displayed in a tabular format if the result has multiple tuples and columns.

d) For the requirement of "users liking movies", the UI should support a way of requesting the user's info and accept the user liking a movie through a button. Remember, the likes table must be updated if a user likes a movie.

These are a few basic requirements for the UI, and improvements to the front-end design to meet the required functionality is left to the student's perspective. The basic template for connecting the UI to the database has been discussed in Lab 4 and its corresponding slides have been updated on the class website. Please visit the office hours if you need any help.

4. Logistics

4.1. Collaboration

This is a be a group project with maximum size of 2.

4.2. Submitting your assignment

Please use the group submission option while submitting your assignment. Please place all the relevant php files (index.php and other files if you use multiple pages in your application) under a folder named PA1_2. For this assignment we have two submission options:

1. Upload PA1_2 folder to a git repository. Gradescope allows you to submit a link to a github or bitbucket repo so please use that option.
2. Zip PA1_2 folder and submit the zipped file on gradescope.

The due date for this first part (PA 1.2) is October 14 (11:59 PM).

4.3. Helper Links

https://getbootstrap.com/docs/4.0/components/forms/

https://www.w3schools.com/