CSE 3330 – Project #1 – Online Ticketing System

You are asked to create a database structure for online ticketing system (OTS) that sells movie tickets. The functional requirements of the system are listed below:

1. The system should be able to list cities where its cinemas are located.
2. Each city displays a number of movies released in that particular city.
3. Once the user makes their movie choice, the system displays multiple cinemas with available show times.
4. The user should be able to select the show from a cinema and book their tickets.
5. You can book multiple seats according to the cinema and movie choice.
6. The database should be able to distinguish between available seats from the booked ones.
7. The system can look up a reservation# and see which seats were booked.

Assumption: each movie session only has 10 seats. Each cinema has only 3 screening rooms. There are only 4 session times per screening room.

Part 1: ER Diagram

1. Construct a clean and concise ER diagram for the OTS database. List your assumptions and clearly indicate the cardinality mappings.

Part 2: SQL Queries

Write SQL queries OR use a simple Web interface to get the results of the following queries:

2. Enter a city name and retrieve all the movies that are released within that particular city.
3. List all cinemas that are showing a particular movie.
4. List the seats that are booked in all cinemas for a particular movie.
5. Given a specific cinema and movie list the showing times for that movie.
6. Given a movie and session time how many seats are available.
7. Given a reservation# list the cinema, movie session, and time where seats were booked.
8. List the movies with their corresponding time, city, and cinema name.
9. Given a session time list movie title and session times that do not have any seats available.

You should turn in via Canvas to a document that includes:

1. Which tools were used for the project. (Readme file)
2. ER Diagram

3. Source code of SQL CREATE statements, or screen shots of how you created the tables via one of the tools.
4. Explain which method you used to load the data into the tables.
5. Source code of SQL SELECT statements for each query executed, showing the query result; OR screen shots of your simple Web interface that was used to execute the queries and show the query results.
6. Contribution list.

Data Set:

Will be uploaded at the end of the week in several csv files.