Principles of Databases
2021

Assignment

Complete the following assignment, ideally, in teams of two students.

Using Entity-Relationship Diagrams and Normalisation, design a database for the following system. Write the SQL code to generate the tables and populate them with some sample data. Developed a set of queries that a user would use to query the database.

A theater booking systems is required to be developed for a large chain of theaters. Each movie theater has a name, address and a set of phone numbers. A movie theater consists of several screens. Each screen has a size and a seating capacity. The screens show movies on specific dates and times. Each movie has a name, a director and a release date, and consists of several actors. Users, who are identified by their name and email address, use their credit card to book seat at a film showing. Each credit card has a unique number, an expiry date and a name. The system also records the user's postal address. The system will allow users to search for films based on the film's title, director or the actors.

Write up your joint report that includes:
- your Entity-Relationship Diagram,
- a description of any normalization you may have done and
- the SQL code to:
    - build,
    - populate and
    - query the database.

Make sure that your names and ID numbers are clearly marked on the front page of your report.

Your report must be emailed to david.sinclair@dcu.ie by 0800CST on Tuesday 4th May 2021.