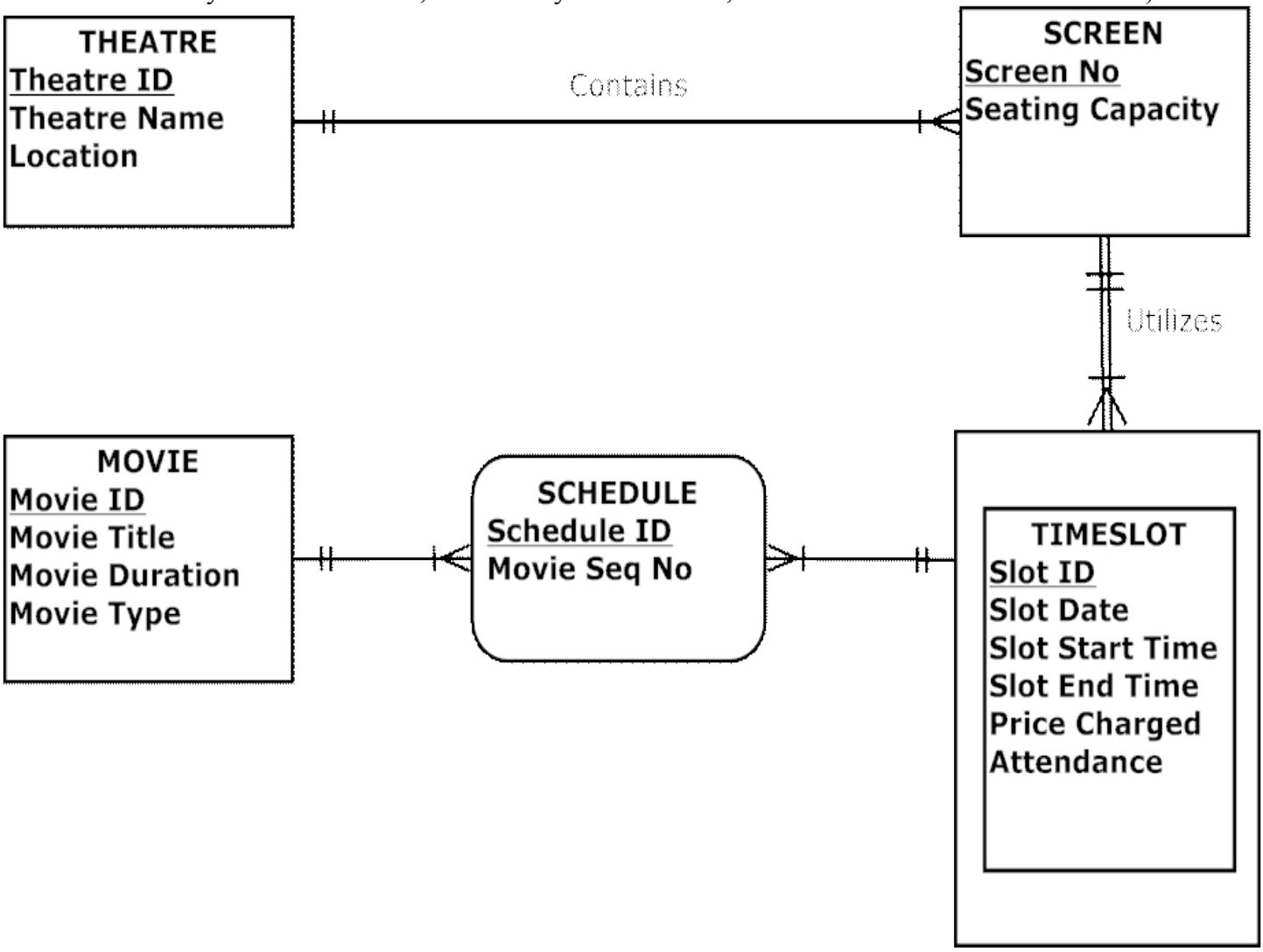
ISYS 464, (Beckman)
Homework #2: Description

Chapter 3, textbook page 145, "Problems and Exercises, #20".

(10 points)

20. TomKat Entertainment is a chain of theaters owned by former husband and wife actors/entertainers who, for some reason, can't get a job performing anymore. The owners want a database to track what is playing or has played on each screen in each theater of their chain at different times of the day. A theater (identified by a Theater ID and described by a theater name and location) contains one or more screens for viewing various movies. Within each theater each screen is identified by its number and is described by the seating capacity for viewing the screen. Movies are schedule for showing in time slots each day. Each screen can have different time slots on different days (i.e., not all screens in the same theater have movies starting at the same time, and even on different days the same movie may play at different times on the same screen). For each time slot, the owners also want to know the end time of the time slot (assume all slots end on the same day the slot begins), attendance during that time slot, and the price charged for attendance in that time slot. Each movie (which can be either a trailer, feature, or commercial) is identified by a Movie ID and further described by its title, duration, and type (i.e., trailer, feature, or commercial). In each time slot, one or more movies are shown. The owners want to also keep track of in what sequence the movies are shown (e.g., in a time slot there might be two trailers, followed by two commercials, followed by a feature film, and closed with another commercial).



Chapter 4, textbook page 193, "Problems and Exercises, #6".

(10 points)

6. Figure 4-33 (page 194) shows an EER diagram for a simplified credit card environment. There are two types of card accounts: debit cards and credit cards. Credit card accounts accumulate charges with merchants. Each charge is identified by the date and time of the charges as well as the primary keys of merchant and credit card.

   a. Develop a relational schema.
   b. Show the functional dependencies.