

PWSP DATABASE MANAGEMENT CLASS
VIDEO STORE DATABASE DESIGN PROBLEM
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Instructions: Create an E-R diagram based on the following problem description. List the assumptions, which lead to the development of your E-R diagram.

Description: You were hired by Blockywood Video to design a database for their video rental system. Luckily, you have had some experience renting videos (every Saturday night!) and you know that the video store needs to be able to information about customers, movies, and distributors.

A movie title (e.g. Lord Voldemort of the Rings) has an ID number generated by the store. In addition, there is a title, release date, rating (G, PG-13, etc.), and price category (a newly released movie tends to be more expensive). Other movie related information saved is the director, producer, principal actor, and principal actress.

Jane Doe is a customer and to rent movies, she is the owner of a Blockywood Video card which is scanned every time she makes a purchase. To obtain a card the owner needs to be above 18 (checked during application). The account associated with the card has a specific ID number (generated by the store), as well as the owner name (Jane Doe), her address, phone number, credit card information (optional), and amount credited/debited to the account. Additionally, she has both her husband (John Doe) and her son Jimmy Doe listed as other authorized users on the account and a rating for Jimmy of PG-13, which means that the video rental store is not allowed to let him have access to a higher rating video. Her husband also owns a Blockywood Video card in which Jane and Jimmy are listed as authorized users.

Distributors have organizational names, an address, representative, and phone number. Videos are purchased from distributors on a specific date for a specific price. There can be multiple videos with the same movie title. Videos are also given a unique id number.

The video rental system allows for a video rental history, which maintains the video rented, rental date, card that it was rented with, return date, and amount paid. This information helps the recommendation of new videos and to maintain accounts. The video rental system should also be able to specify the maximum number of videos a customer can rent and the amount of time a movie can be late until the account is frozen.