

Exercise 1: Database Design, ER Diagram

In this assignment, you are supposed to design a database schema and implement it on a relational database management system.

Task

Draw the Entity Relationship ("ER") Diagram for the database described below:

This database archives and rents movies to its customers online. The records of customers, movies, and rentals are stored on an information system.

A customer, who must be 18 years or older, creates his record online with ID, name, contact info and birthdate. He can register up to 5 digital devices with unique IDs for his/her own use.

A digital device is either a smart phone, tablet, smart TV or computer and it must belong to a unique customer.

A customer can search movies in the database based on name, director, and cast. When a customer decides to rent one or more movies online, s/he first pays for them via an online payment method (e.g. PayPal, iDeal, credit card, ...).

Afterwards, the customer is able to download rental(s) to one of his/her registered device(s) and play the movie(s). There is no other way to run movies. The customer is allowed for 90 consecutive days, starting with the rental date, to play the movie.

During this period, statistics about each play of the rental by that customer on his/her specific device is recorded. This data is uploaded automatically to the database system at the end of rental period for analysis.