Movie Rental Store Data Management System

Project Proposal Report

CS 353 - Section 2 - Group 23

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29.2.2016

http://ilteristabak.github.io/movierentalsystem/

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Problem Statement

In this project, it is intended to prepare a movie rental data store management system via a web application. It is basically designed to enable the customers rent their desired movies within limited period of time or buy them. The movies are sold or rented in Blu-ray and DVD format.
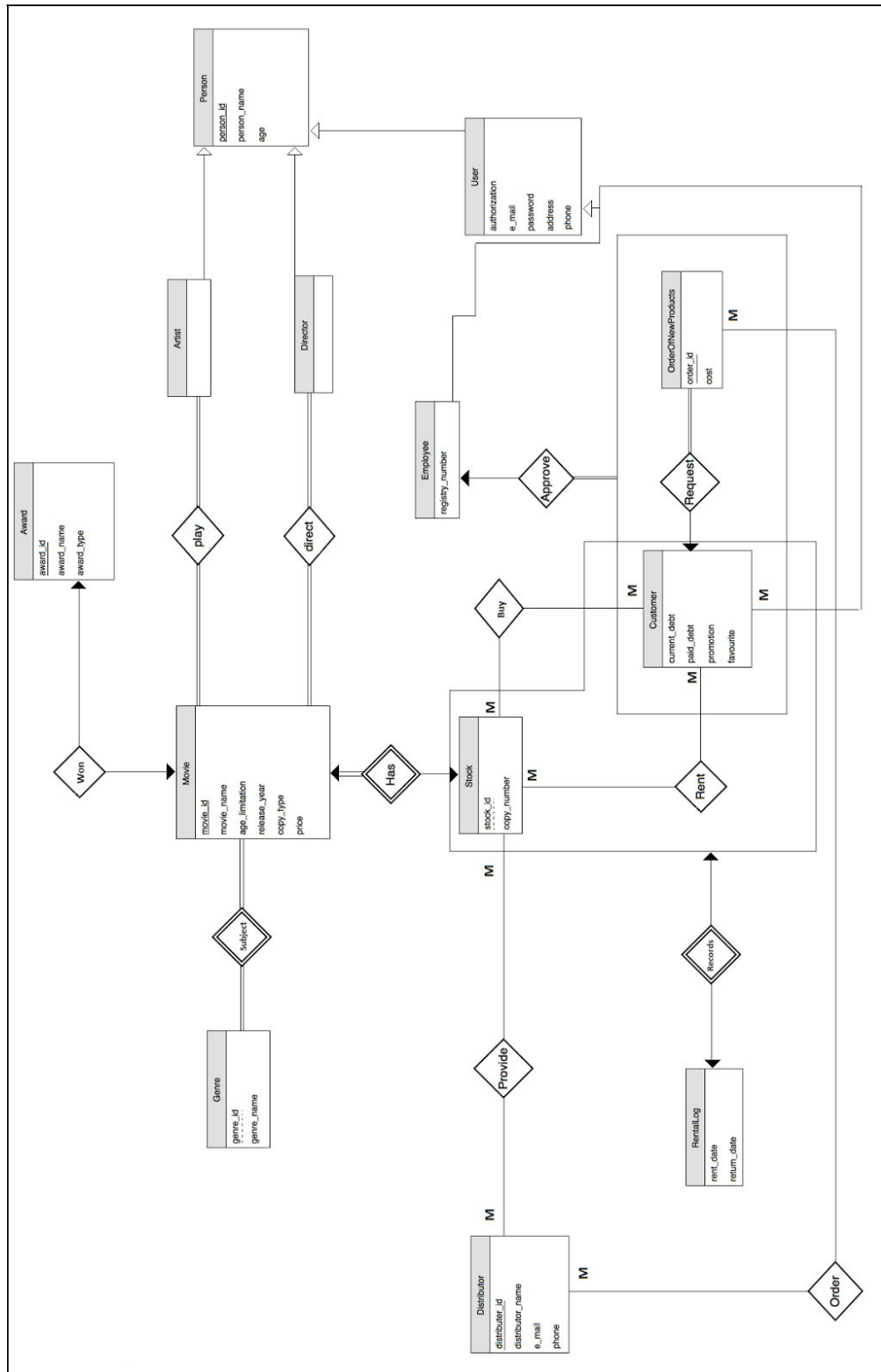
The system stores different kinds of copies of movies and detailed information about them such as directors, artists and genre of the movies. A customer can first become a member of the web application and makes a log in to the system with a password. Customers can search for the movies directly by movie names or can use the filtrations that the system supports if there is no specific movie in mind. The control mechanism of the system prevents the customers from buying or renting the movies according to the age limits. The customer can either rent the movies for period of time and pay the rent or buy the movies. The rental penalties in terms of extra money are applied to the customers with their late returns. The system provides the customers with the opportunity of requesting the order of movies which do not exist in the stocks of the system.

Data store management system keeps the records of all the customers and renting information. By this way, the admin of the web application can maintain the control of the renting logs and perform the necessary actions on the customer accounts such as prohibiting the accounts which do not pay their debts. The system can also apply discounts and promotions on the movies, based on the renting history of the customers.

Additionally, the system stores the data of the employees and the distributors. By this way, the admin keep track of the administration via the web application.

E / R Diagram

*Note: stock_id in Stock table will be equal to movie_id in the implementation.

Requirements

There are four different users of the system as customers, employees, distributors and system admin. For each user, the system has different functionalities.

Customers

A customer should be able to:

- Create a customer account with user name, age, email and password
- Login to the system using his user name and password
- View his/her own profile
- Change his/her information
- Search for a movie by movie name
- Search a genre to list all movies of it in the system
- Search for a director by director name to list the all his/her movies in the system
- Search for an actor by director name to list the all his/her movies in the system
- List information about a movie
- Rent a movie by specifying the medium type (blu-ray or DVD)
- Buy a movie by specifying the medium type (blu-ray or DVD)
- Pay the rental price
- View his/her debt
- Request an Order of a new product

Employee

An employee should be able to:

- Create an employee account with user name, email and password
- Login to the system using his user name and password
- View his/her own profile
- Change his/her information
- View the orders made by customers
- Approve/disapprove these orders
- List the customers and view their debts
- Set promotion details

Distributor

A distributor should be able to:

- Create a distributor account with user name, email and password
- Login to the system using his user name and password
- View his/her own profile
- Change his/her information
- View ordered products

System Admin

An admin should be able to:

- Login to the system using his user name and password
- Add employees to the system
- Add distributors to the system
- Ban the customer accounts who exceed the maximum debt limit
- Remove the ban from the customer accounts when they pay their debts
- Set the maximum rental day limit
- Set promotion details

Limitations

Customers

Customers cannot:

- Rent movies if they exceed a certain amount of debt.
- Reach the employee information except from name and e-mail adress.
- Rent more than 1 movie at a time.
- Have more than 3 movies rented without returning at least one of them.
- Rent or buy movies which are not appropriate to their age limit.
- Rent or buy movies if the preferred movie is not available on the stock at the moment.
- Rent a copy of the same movie that has been rented by the same user and hadn't been returned at the time.
- Make a request for movies if the requested movie is already in OrderOfNewProducts (requested by another user).

Employee

Employees cannot:

- Delete or ban a customer account
- Cannot remove distributors from the system

Distributor

The distributor cannot:

- Delete any accounts from the system
- View transaction history of customers
- View user information except than employee's e-mail adress
- Cannot modify any information other than it's own account

System Admin

System admin has no limitations.