The Movie Choice Helper

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Abstract

The purpose of the Movie Choice Helper-project was to create an application that makes the process of deciding what movie to watch, where to watch it and also with whom, a little bit easier. The Movie Choice Helper is a multiuser web-based application that users can register on, list there movies (both owned and seen), and access this page to plan a movie night. The final result is a functional application, giving movie-watchers a helping hand when having trouble deciding what movie to watch, and where to see it.

1 Introduction

Planning movie nights, it often is hard to agree on what movie to watch, where to watch it and even with whom. It is often case the the movie suggested for viewing has been seen by others in the gang. Having a guide to do the selection, or at least give a good suggestion of which movies are suitable for the movie night would be very nice when these problems occur. Such a guide is also what has been done in this project.

The fundamental functionality of the Movie Choice Helper is the following two options.

1. If one has a company to watch a movie with, the Movie Choice Helper helps to find a movie with as high grades as possible and also it must not have been recently seen by anyone in the company.

2. If one has a movie to watch but no company, the Movie Choice Helper helps to find some nice people that most likely also would like to see that movie.

2 Approach

First of all some specifications about what the Movie Choice Helper should be able to perform was derived. After that, the group sat down and started to design the database that the application should use. The database was directly designed as an EER-diagram and after some modifying it was translated into an SQL database schema with tables and some important rules. When the database was designed it was implemented and tested in PostGreSQL. During the tests it was slightly modified on some points until it was accepted by the whole group.
Figur 1: The database as an EER diagram

Now it was time start developing the Movie Choice Helper. The system was developed with a web interface implemented in PHP with the database in PostGreSQL behind. These choices where made because both PHP and PostGreSQL were installed at the computers that the project group had access to and because both had rumours of them being easy to learn and use.

The login and user handling in the application is handled with PHP session variables. A session is started when a user manages to log in to the system and destroyed as the user logs out.

The time consuming parts of the development were:

1. Developing a parser that checked what movies the biograf showed and at what time. These facts was to be inserted into the database and updated everyday. To do this parsing in PHP regular expressions was used. Though very powerful these are not trivial to use.

2. When a person creates a user in the system he/she also must mark out on a citymap where he/she lives. This is used later when the system calculated distances between persons. Creating the map function that gave each person coordinates in the city when clicking on a point on the map took great effort of the group.

3. Finally making the not trivial functions that calculated what movie to see or what company to see a movie with also demanded some development time.

Beside the three parts above most time were spent on making the system easy to
use and understand. Of course some effort was also put in making the interface "beautiful".

3 Results

The project finally rendered in a quite helpful Movie Choice Helper, which can be found at http://www.cs.umuse.se/~c00ahm/proj. Though it has not been taken in serious use yet it will be a nice tool for moviewatchers with some experience of applications on the internet. After some time of usage the database would contain most of todays popular movies and of course it would expand as long as people kept using it. Beside that it helps people choosing movies to see or moviecompany it also helps the users to keep in memory what movies they own and what movies they have seen. It is also possible to check what movies other users have and if one has seen that movie. This is a nice feature if one wants to borrow some movie and wants to find some close living user that has the movie.

Figure nr 2 is a screenshot from a session where the user "skarpegg" checks what movies the user "slarti" owns. Besides the classical facts about each movie there is also a column that indicates whether "skarpegg" has seen the movie.

![Movie Choice Helper Screenshot](image.png)

Table 2: A screenshot showing user "skarpegg" checking what movies the user "slarti" owns.

The screenshot in figure nr 3 is from a session where "skarpegg" asks the Movie Choice Helper which movies that "slarti" might want to watch together with "skarpegg". The movies in green are more preferable than those in yellow which in turn are more preferable than those in red. Having a fairly small amount of database records, the system responds very fast on a users queries. This might
Figur 3: A view of the (rated) suggestions of movies presented when user "skarpegg' wants to see a movie with "slarti"
not be as fast in the future as the database grows, as it is not implemented with a mind towards scaling, for time being.

3.1 The rating
The ratings of users/movies are functions of the distance to the user logged in, the date of when the movie was last seen (if ever) and whether or not the user owns the movie at hand. That is, a movie that a user owns, and has never been seen gets a very high rating. Likewise, a user that hasn’t seen the movie chosen, lives close to the user logged in and owns the movie gets a high rating.

When a movie is rated, the points are based on the audio formats available and the region; DTS and Dolby Digital 5.1 gives more points than stereo and mono, and region 2 has the highest value.

4 Discussion
During the project there has not been any special problems that slowed down the development progress. On the other hand the developers have had to watch out to not to get caught in optimizing small contributing parts of the system too much. Also there has been a tendency towards to much graphical fiddling. But as time went closer to the deadline for the project more and more effort were put into more important parts of the system.

One of the goals with the project was to use an advanced database with pretty advanced queries but it showed to be, although containing a large number of tables, a quite simple database that most of the time handles pretty basic queries.

5 Conclusion
We have developed a fully functional system built as a web application that helps "movie-people" keep track of what movies they and other users owns and also it helps them to decide what movie to watch along with whom. The system that now only works in Umeå could easily be implented over other cities also.

6 Future work
Neither the SQL-queries nor the PHP-source-code have been optimized in any way. Ther are not as much erro-checking or security issues covered as there should be, for the application to be used extensively over large groups of users.

If the MCH would be used amongst largers groups of people, a good way of dealing with the scaling in such situations would be to incorporate some use of communities in which only the user and her/his friends are included.

7 References
Mainly two web sites were used to extract information and to guide us through the problems.
http://www.postgresql.org - The official PostgreSQL site.