CS 353 Database Systems

Project Proposal Report

Media Services Data Management System

Group 10

Teaching Assistant: Arif Usta

Group Members:

İbrahim Furkan Aygar 21400186

Suleyman Rahimov 21701671

Mehmet Erkin Şahsuvaroğlu 21401625

Enes Yıldırım 21602725

Contents

1.Introduction

This is the proposal of our CS353 2020 Fall semester term project. The project is called Mediaconnectx and it is a Media Services Data Management System just like the widely used and critically acclaimed platform Netflix. This proposal will include the sections Project Description, Functional and nonfunctional Requirements, Limitations, the E/R Model and finally Conclusions.

Our main goal with this project is to develop a user friendly and up-to industry standard Data Management System in order to further understand fundamentals of database systems.

Project description briefly covers the scope and properties of our system. Following the description, functional and non-functional requirements specify the main attributes and functions. The limitations section however, describes the constraints and limiting factors of our project such as restrictions and minimum requirements. In other words, the parts of the software where the system limits the users abilities for the sake of security or else. Finally, the E/R Model or the conceptual design section shows the most important part or the project that will be the skeleton of the database we will be building.

2. Project Description

Mediaconnectx is a web-based platform similar to Netflix, in which media files such as movies and series will be provided. The users will be able to register to the system by entering their name, username, age, email address, and password. After they sign in to the system, users will be able to search for the particular movies and series by using the search bar of the application. This application will also provide social media features. Users will be able to add other users as friends and view the posts this user shared. Users can also specify their genre preferences and movies and series will be recommended based on these preferences. Age of the users will also be taken into account when the system recommends media files. Users can also create channels and add the movies and series into these channels to watch them later. Users can also like and leave a comment on the movies and series. The system will have moderators to moderate media files and their comments. Moderators will be able to remove media files if media files violate the platform guidelines.

3. Functional Requirements

3.1 Register and Log in

In the home page of our web application visitors will see the login entry block, so if they registered before, they can enter by giving input of their username and password. Controller of the home page checks the username and password whether they are valid or not. If it is not valid, an error message will be shown to the user. On the other hand, if the user's login action is successful, a new web page, which contains the movies and series will be shown to the user. If a person does not have an account in the application, he/she can also register to the application. Registering the application will be done by clicking the "register" button that can be found on the sign-in page. When a user clicks this button, website orients to the "register" page. In this page, users submit their account information such as user-id, name, surname, password, username and age. Account information will be stored in the corresponding database in our server.

3.2 Users

Users can sign in via entering their information if they have an account in our database. There are six attributes of the user such as userid, name, surname, age, username and password. Id of the users will be unique in order to eliminate duplication between users. Users can pick genres before selecting the movies or series. These genres can be multiple for each media file. For example the movie can be both sci-fi and drama. Users can also reply to comments for each selected media item if they want to do that. Furthermore users can like or dislike the media file they watched. Another feature that users allow to do that for themselves is creating a channel, which contains both movies and series. By doing this users can separate their media files for their pleasure such as "most liked ones" or "mafia movies".

3.3 Moderators

If any media files are reported, the moderators of the platform will be able to review the reported material. If they see any material that violates the platform guidelines, they have the permission to delete it from the system. In addition to this,

moderators can add new media files to the system. They will also moderate the comments of the media files.

3.4 Media Files

The app will contain two types of media files: movies and series.

3.4.1 Movies

Movies can be added to the system. Each movie will have a description page, which will give information about the cast, director, duration, rating and comments of the movie. Users will be able to watch the movie by clicking the “watch” button. There will be different quality settings for people with different network bandwidths. Users can leave a like and comment on the movie if they want. They can also report the movie if they think it violates the guidelines of the platform.

3.4.2 Series

Series can be watched on the platform. Just like movies, each series will have a description page, where users can see the director, cast, rating, comments and the episode list of the series. They can watch the particular episode of the series by clicking on it. Series episodes will also have different quality settings.

3.5 Comment and Like

Comments and likes can be left on movies and TV series. Users can also rate the media file out of 10. The comments, number of likes and rating will be visible on the description page.

3.6 Channel

Users will be able to create channels and add movies and tv series in it. This will allow the users to create a “watchlist” for themselves.

3.7 Genres

Users will be able to specify their preferred genres for movies and tv series. The platform will recommend movies and tv series to the user according to these preferences. This will provide users with a magnificent watching experience.

4. Non-functional Requirements

4.1 Usability

- Usage should not be complicated for both users and moderators
- User interface should meet the expectations of users having different ages.

4.2 Extensibility

- Our application should be extended in terms of interface features.
- New web pages can be uploaded to our application with different purposes.
- Source code of our application can be altered and developed.

4.3 Reliability

- Account information should be protected from other people.
- Mediaconnectx should be reliable in perspective of users.
- Servers will work 7/24 with some maintenance breaks.

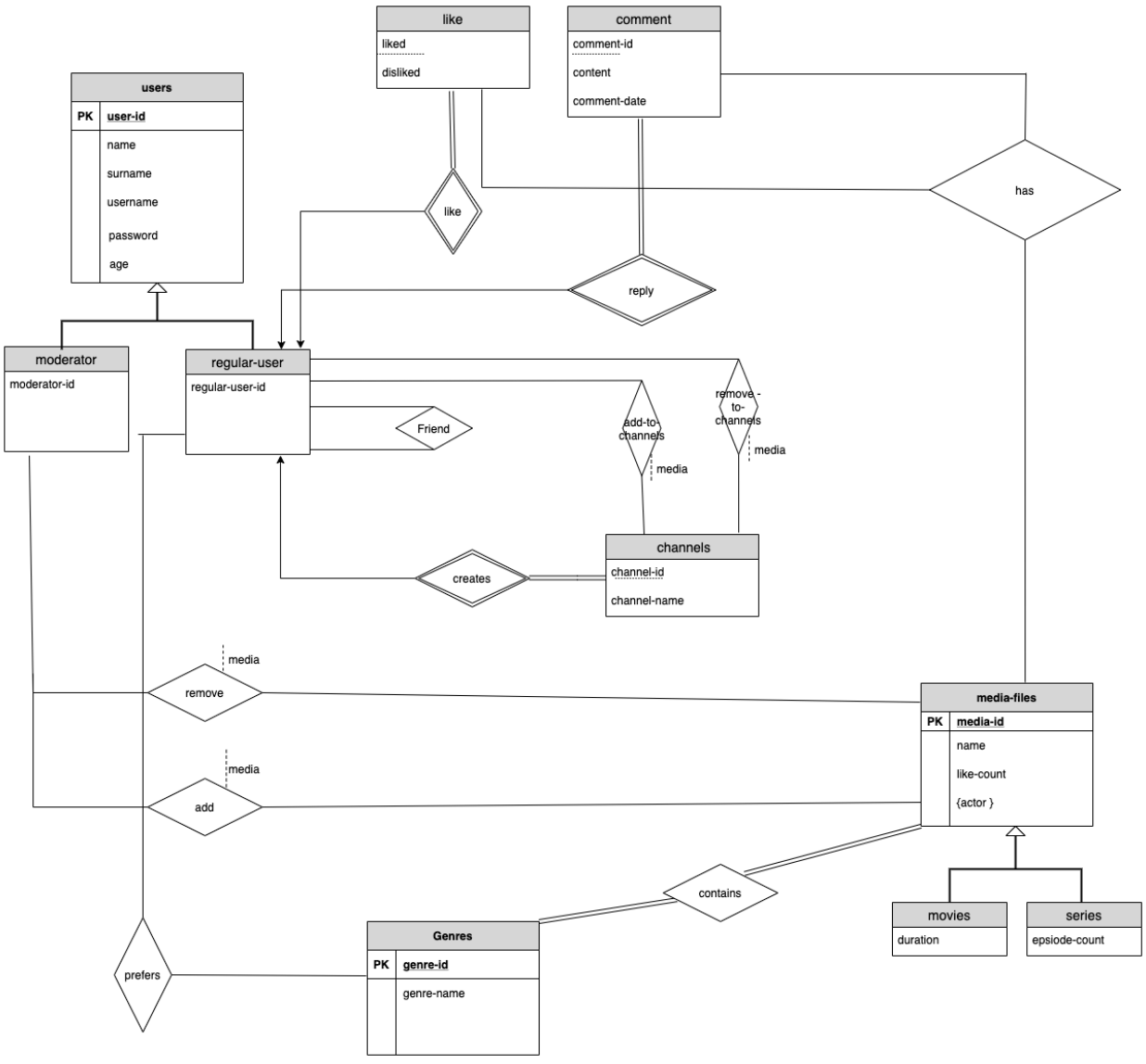
4.4 Capacity

- Our application needs memory space in order to maintain the database system.
- The large amount of video storage could interrupt the speed and performance

5. Limitations

- Moderators cannot upload media files that contains pornography.
- Users cannot comment on media contents which include insult or illegality.
- Users cannot download the files in order to keep rights of the publishers.
- The contents should be appropriate for the movies or series. For example blog videos cannot be accepted.

6. Conceptual Design (E/R Model)



7. Conclusions

To sum up, we have a goal to build web media services application for the usage of many people from different ages. The name of our application is “Mediaconnectx”. There will be different genres for every media file and users can select whatever they want and add them to their channel in order to watch later. Users have age inputs, which means that we may put age restricted contents to the application with helping our moderators.

In this report, we explained the description of the project with functional and non-functional requirements. There is also a limitation part that demonstrates limitation of usage for this application. We also have an E/R diagram that is the main scaffold of our database management system.

Our reports can be found on the website “https://aerk1996.github.io/cs353group10/” at the reports section.