Capstone Proposal for

FlickShare

INSTRUCTOR

Joseph D. Gradecki

BY

Jeremiah Pineda

DEPARTMENT OF COMPUTER SCIENCE

Maryville University

**Project Definition**

My project is to create a web application that can be used to share and manage video libraries with friends and families.

**Project Relevance and Rationale**

There are people with very large collections of videos both in DVD and VHS formats that they have collected over the years. Many lend these out to friends and families.

**Problem**

People with very large libraries, hundreds or thousands, have no easy way to manage their collection that helps them keep track of who borrowed them and don’t have an easy way of informing others of what they have.

**Project Objectives and Benefits**

My application will provide a way for a close circle of friends and family members a way to organize their video libraries that are searchable online by registered users. Each registered user can add their own collection into the system. The application will keep track of the owner of the video and provide a way for others to reserve a video to borrow. Users will have the ability to leave reviews of the movies they have seen. This becomes valuable to others who share their views, values and taste.

There is an allure to watching movies specially in Blue Ray format in a home theater with a nice sound system or in the backyard or some remote area with no internet connection. With issues like the pandemic we now have, going out to movie theaters is not as popular anymore. Not everyone will always be connected to the internet to stream movies, having this alternative way to enjoy watching films with friends and family is appealing.

The anticipate development cost is at a minimum, the risk are low. There is nothing to steal, no PII data will be stored, aside from a username and password. This is not a high traffic application and can be hosted for free or minimal cost that can be shared by users. Registration is by invitation only.

**Target Users**

Any groups of individuals that want to share their video libraries or borrow from others. These typically are close friends, family members and neighbors of all ages and background who share a common love for movies. Typically, these users are within close driving distance as this is not a digital resource sharing app but a physical copy sharing app.

**Project Methodology**

A distributed micro service architecture will be used. The program will be written using HTML, CSS, JavaScript for the font end, Java for the REST APIs, Service Layer, Data Models and JPA layer backed by a relational database. This will be a multi-tiered deployment where the web-based client and backend tiers are not necessarily co-located.

**Main User Interaction**

The application is intended to be deployed as SaaS. The initial user has ability to self-register and create a “FlickCircle” where invitations are sent to friends, family and neighbors to register. Future plans include a mobile version.   
  
Users will mainly interact with the application using a web browser, and in the future, a mobile application. The web application will provide a registration page for each new instance of this web application. The first user becomes the owner/organizer of this instance. Additional users will be added via an email link sent by the organizer that contains a unique key that has a limited validity time period. Once registered, each user can add their own videos that they own into the application.

Video information don’t have to be enterer by hand, although an option. They are retrieved via public APIs that can easily be imported into this application. This will mitigate the daunting task of typing in all the information by hand for hundreds or thousands of videos.

**Minimum Viable Product**

The initial release will allow just one FlickCircle to be created per instance. There will be no co-location of multiple FlickCircles. This can be hosted on any server any server that is accessible via the internet and have a JVM or locally on a computer shareable via LAN or standalone computer.

**Minimum Data Captured**

The following tables will be created to support MVP features. No readable PII will be collected and displayed as users already know each other and should have contact information.

**Diagram

Description automatically generated**

USER(userId, username, email) – *email encrypted and not displayed – static default user created*MOVIE(imdbId, title, plot, rated, directorid, actorid, genre, rating, poster, runtime, type, year)star(starId, firstName, lastName)MOVIE\_STAR(starId, imbdid)DIRECTOR(directorId, firstName, lastName)RESERVATION(reservationId, userId, reservationDts, outDts, inDts)  
RESERVATION\_ITEMS(reservationId, movieId)

**Minimum Features**

The following initial features are highlighted following use case diagram:

Diagram

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**Minimum Features from Use Case Diagram**

1. **Search Video for Add –** use public APIs available on the web to search for a movie title that user own and retrieved all of its meta data
2. **Add Video to local DB –** have the ability to insert the movie’s meta retrieved from a WEB API and create a record locally with the additional owner info
3. **Search available Video to checkout –** search the local database for movies available in the current FlickCircle that is available to be checked out. If a video is already checked out or on reserve, the user will be informed
4. **Reserve –** ability to place a hold on a video that a user wants to borrow. Information on who owns the video and where to get if from is provided.