Introduction

A vintage movie store, called Vintage Movies, has approached us to design and implement a database for their store. The goal of the database is to keep track of the necessary information digitally, such that their customers may view and rent available movies without having to go to the store physically.

Definitions

User: our customer, this is someone who is attempting to or is interested in renting/buying vintage movies from the store. They may, or may not have an account.

Account: this allows customers to access more features of the application. It is created when a user chooses to sign up with their email, and with an associated password. Users may sign into their accounts. It is necessary for a user to have an account associated with the store before any purchases can be made.

Manager: this is someone who has the right to manage the database of movies. This could be an appointed manager, or the store owner.

Problem Definition

History of the problem

Over the years, rental stores of movies have become a thing of the past. However, what happens to these movies? Are they lost? Kept? Discarded? Vintage Movies aims to provide a catalogue of these movies, including DVDs, VHS tapes, and other formats so that they may be accessible to the public.

Why is this problem interesting?

It is interesting in the sense that we need to develop a solution to an old formula. Typically, movie watchers would go to their local rental store, either find the movie by themselves or ask a clerk. The question that begs to be answered is how we can modernise this interaction using new technologies to make the process more efficient, and effective.

When and why does this problem occur?

The problem is ongoing, and likely will never stop as cataloguing films is likely to never stop being a relevant service, so long as people watch movies. We still produce mass quantities of physical media each year, and one may wonder what happens to the media after it has expended its usage.

Is the problem already solved? What is done now?

Streaming services tend to solve a part of the issue, but they do not solve the entirety of the issue. This is due to the nature of these subscription services. Typically, they own a contract to host films and shows, or they own the rights to the media. They also are purely in digital form, and there is no real way to rent or order physical copies of the media from these services.

Similar systems

A system like Netflix, allows users to stream the content they have rights to. However, there is no way of owning/buying or renting physical media from Netflix. Other sites, like Disney+ are very similar, and may work in collaboration with other services. Amazon Prime is slightly different, as it functions very similarly to the aforementioned services, with the added functionality of allowing people to have multiple subscriptions to different services. However, these are all entirely digital solutions.

Improvements to existing systems

Our system does not aim to replace anything within the current digital media, rather the goal is make the renting and buying of physical media easy, as this functionality is entirely lacking from modern digital streaming services. This not only provides a home for these older medias, but also helps preserve vintage films.

Proposed Solution

What does this project achieve?

The project for the web app will resolve the issue of customers renting movies remotely by connecting the customer to a service that allows them to lookup, store, rent and buy movies at will.

What will the project produce?

As a result of this project, a system of applications that connects the clients of each application to a main movie database is produced. There are two main products, a front-facing web application for users, and a more rear-facing version of the application for managers.

Details of the features of the products

In general, the system of applications connected to the movie database will together be able to store and record info about the movies as well as manage customer accounts and their purchases.

Users will be able to use their account to store movies to rent or buy later, they will be able to see available quantities and prices of movies, and, if they choose to do so, buy or rent the media and have it delivered to them. Any purchases have to be made via a user account, which stores information previously given to the application, and contains a list of a user’s purchase history. If a user does not have an account, they still are allowed to view the

inventory of the store, as the store exists physically as well. So, this product acts in two parts, one being a methodology for users to buy and rent movies with their respective accounts, and the other being an informative inventory display of what the physical store has in stock.

Managers of the store will be able to adjust quantities and prices of current movies, add movies to the database, and remove movies from the database. They will also be able to view the purchase history of a customer, in the event where a customer needs assistance or there is some other issue.

Motivation

Why do we need your solution?

The need for our solution arises from the changing landscape of movie consumption. With the decline of traditional movie rental stores, there's a gap in the market for a platform that caters specifically to vintage movies in physical formats like DVDs and VHS tapes. There's a clear need for a platform that allows users to effortlessly access and enjoy vintage movies. Our solution addresses this gap by providing easy access to an extensive collection of classic films, along with a system for enhanced user account management, purchase history, and overall customer experience. We incorporate a modern database system to ensure that users can access, rent, and purchase physical copies of movies with the same ease as any other digital platform. Our solution is designed to streamline the extensive labour work for store managers in vintage movie shops by incorporating efficient inventory management. This enables inventory updates, and price adjustments, and provides insights into customer preferences, bringing efficiency and ease for customers and store workers.

What makes your project unique?

While streaming services only provide digital content, our platform emphasises the unique experience of owning or renting physical copies of vintage movies. We stand out by seamlessly blending the world of vintage movies with the efficiency of modern technology. Our platform incorporates a database system that ensures easy management of user accounts, personalised movie history, and a vast inventory of movies. The system is unique because of the user-friendly digital features we offer with physical copies of movies for both the user and the store workers.

Conclusion

Summary

In conclusion, the project addresses the problem of managing, renting and buying physical videos, helping to clear up the issue of the handling of these videos more seamlessly with modern technology. The problem is essentially the physical counterpart to the digital movie streaming question handled by modern streaming services. Especially crucial is the handling of older movies. In essence, this is the main reason for this project, rooted in finding a use for the countless number of older movies and other videos that exist

mainly in physical formats, that are otherwise out of use. The project's goal in working towards a solution for this problem is two main applications, one for customers and one for managers. Each allows clients on both sides to access a main video database and control aspects of it with respect to their role, that is purchasing and account managing for the customers and administering the database for the managers. This system of applications solves the aforementioned problem by providing a software based way to purchase and rent physical media in a similar way to streaming services allow digital purchases.

Timeline

Course work timeline

1. February 5th — Begin work on ERD diagram.
2. February 12th — Finish ERD diagram, and hand-in.
3. February 26th — The initial (logical) relational model
4. March 12th — The initial draft design of the functional (programming) part of the project and the Web design
5. Last week of classes — Demonstration of the complete implementation.
6. Last day of the classes (April 9th) — Final report

Development timeline

1. February 5th — Begin work on frontend.
2. February 26th — Begin work on backend, frontend should largely be complete by this time.
3. March 25th — Feature freeze for both backend and frontend.
4. April 7th — Finished frontend & backend.
5. Ongoing — Work on final report in parallel with development and intermediate progress reports.

References

1. Netflix. https://www.netflix.com/
2. Disney+. https://www.disneyplus.com/
3. Amazon Prime. https://www.primevideo.com/mystuff/watchlist/all/ref=atv_mys_wl_tab