CLOUD COMPUTING

MoviesLounge

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1 Introduction

MoviesLounge involves implementing a live forum (or multichat) which covers various genres of movies.

In our app users have another feature so that they could rate the movies that they have seen and get recommendations based on that. The recommendation system is based on Machine Learning(besides the recommendations from other users) which will analyze the user's ratings on the website in order to suggest similar movies to the user's tastes.

There is also a trivia section on the site, which puts the user's knowledge about various topics from the movies. The experienced users could suggest new questions by contacting our team to review their suggestestions and potentially add them in the trivia section.

2 Case study

Chat platforms

Our chat platform has rooms for different genres in movies, so that users that are passionate about a specific genre can gather in one place and talk to each other about their favourite movies, new releases, etc. The chat platform could be used for getting recommendations directly from one user to another.

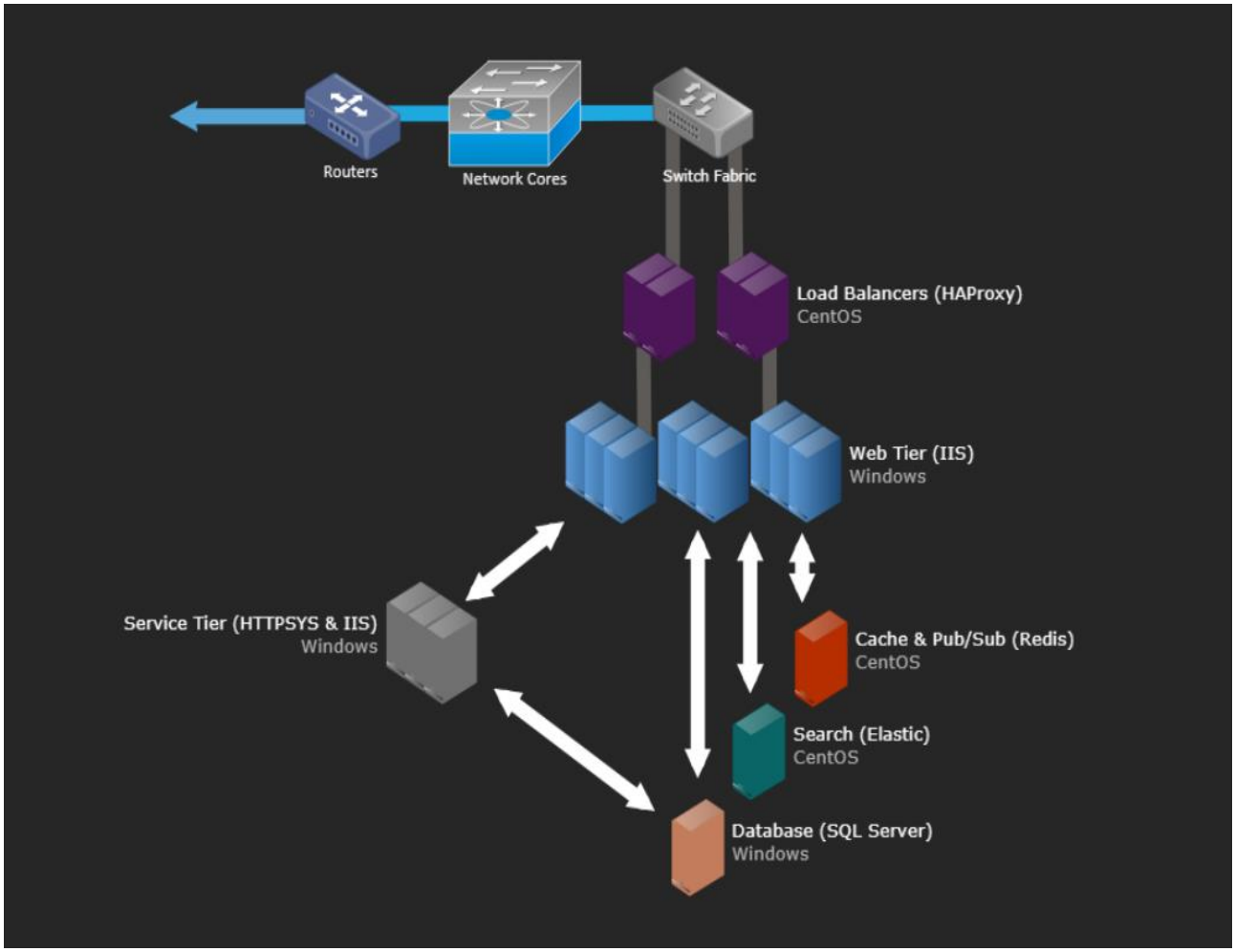
IMDB

IMDB is a similiar website regarding the movie rating part of our application, and it gave us the main idea for our project. We think that we can attract a lot of users that use IMDB or other rating websites because our site has more than just the rating and recommendation system, the users being able to talk directly to each other and discuss various topics regarding movies and test their knowledge.

Success or failure ?

Based on everthing presented so far, we think that there is a very good possibilty for this application to be a success, because it combines a number of things that ensure realiability, quality and good user experience, also there is nothing quite similiar on the market that encapsulates all the features that our application has.

3 Technical Details



Developer:

- HTML5
- Microsoft SQL Server
- C# using ASP.NET Model-View-Controller

Marketing:

- Google AdMob
- Google Analytics

Marketing Approaches:

- Hosting advertisement services
- Advertisement

4 Cloud Solutions

Cloud with JavaScript/.NET:

Both Microsoft and Google cloud platforms offer support for many programming languages such as Python, JavaScript, Java, C# etc. As of now we chose JavaScript or C# as the main languages for our application because there are many resources and the languages provide easy access to all the services we are utilizing and makes the use of them much simpler. The error-handling is not as time consuming thus allowing us to focus on developing.

Our team has more experience with these languages compared to the others making this an easy choice over the others, also the process of building the application will run smoothly.

Azure Active Directory:

For faster registration and login we use Azure Active Directory, which provides login services using the Google Mail account. Since Google already verifies if the user is a real person the service comes very helpful to managing our users.

Azure DevOps & Pipelines:

Every versioning platform has its perks, we decided to go with Azure DevOps because it is easy to use and a very great user experience and also works perfectly with Azure Pipelines, which are essential for the life cycle of the application. Azure DevOps allows us to have a great control over the entire application and the deployment.

Firebase:

Real-time data handling is crucial for our application, so a reliable and fast database that is not very hard to manage and understand is perfect. We chose FireBase because we think is our best option, it is a very popular choice among developers and other applications.

The functions provided for data handling are very easy to use, maintain and understand, leading to clean code that could be easily modified without altering the rest of the code.

Azure Functions:

Azure Functions are a very powerful tool that can help in many ways such as building the api in a way that doesn't always have to be online but only when we request from it.

Azure Machine Learning:

We are using machine learning algorithms to recommend new movies to our users based on their past ratings, we know how many movies there are and how hard it is sometimes to decide on what to watch next so we decided to have a recommendation system just for the user. There could be recommendations based on the rooms that the users spent the most time on.

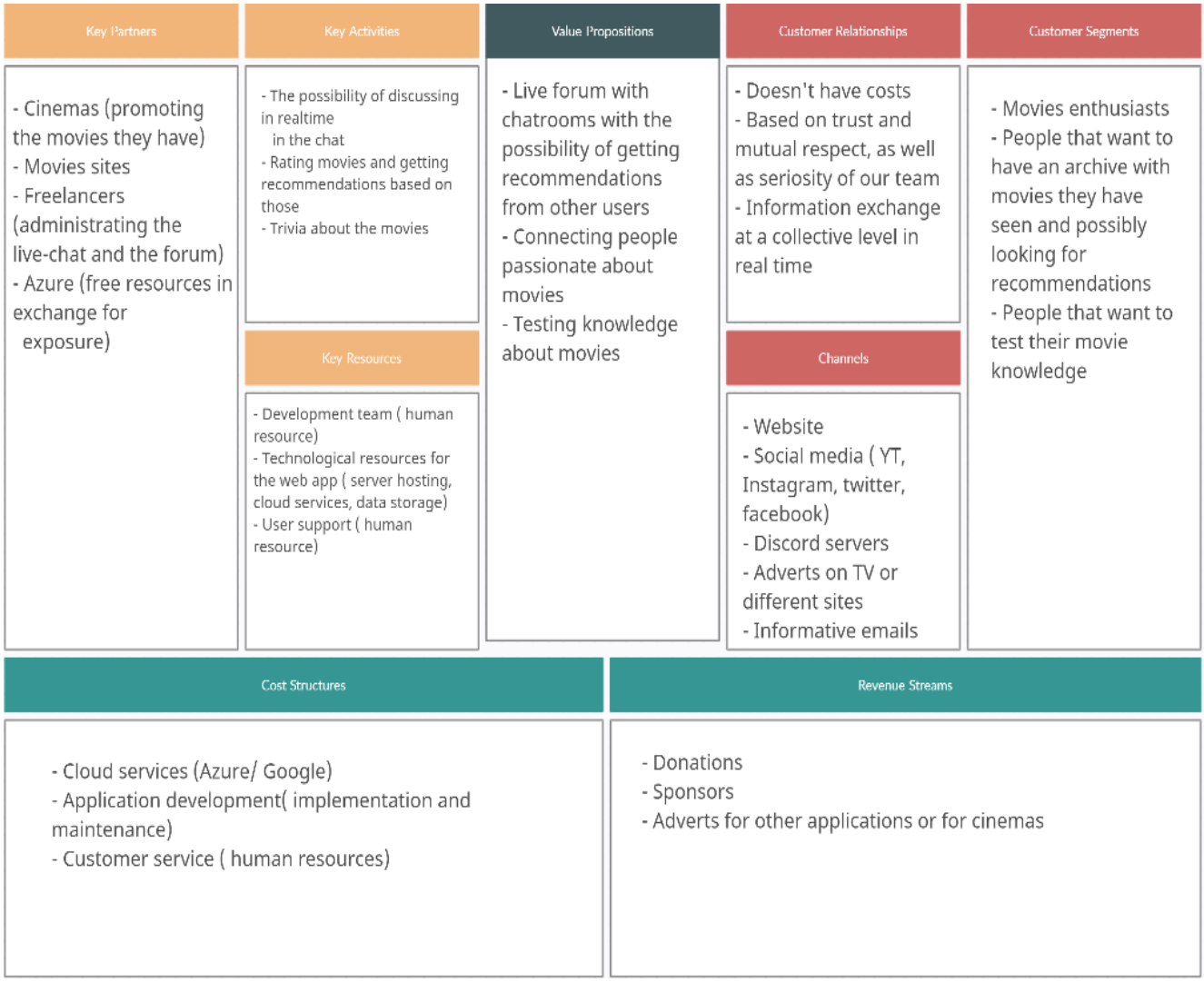
CDN:

Out application targets users all around the globe so the use of Azure CDN is a powerful solution, we can cache static objects loaded from Azure Blob storage, a web application, or any publicly accessible web server, by using the closest point of presence (POP) server. It allows faster load times, saving bandwidth and speed for our application improving the user experience.

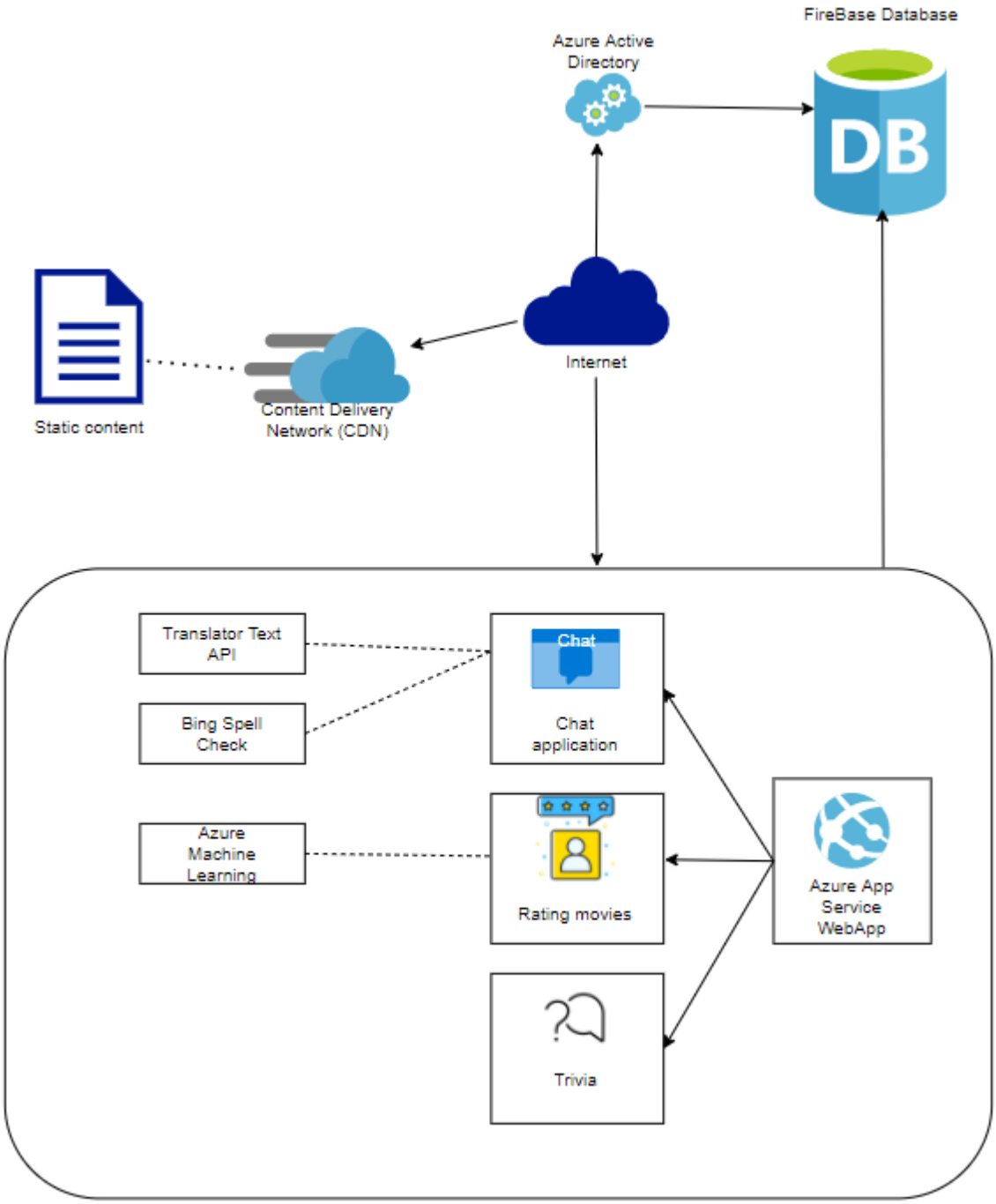
Translating, word-ban:

The users can come from all over the world and some of them may not speak English that well, so we decided to use a tranlation service to ensure everybody can use the chat. Another issue can the the harassment, slurs or swears that are not permitted for our website and we will not tolerate such behaviour.

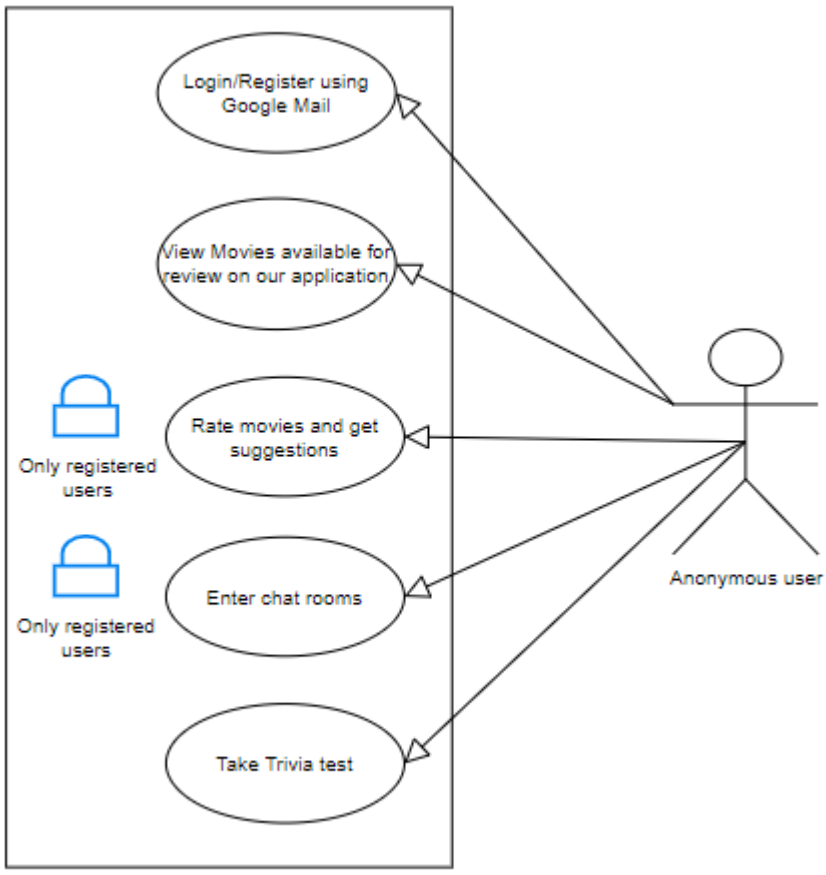
5 Business canvas

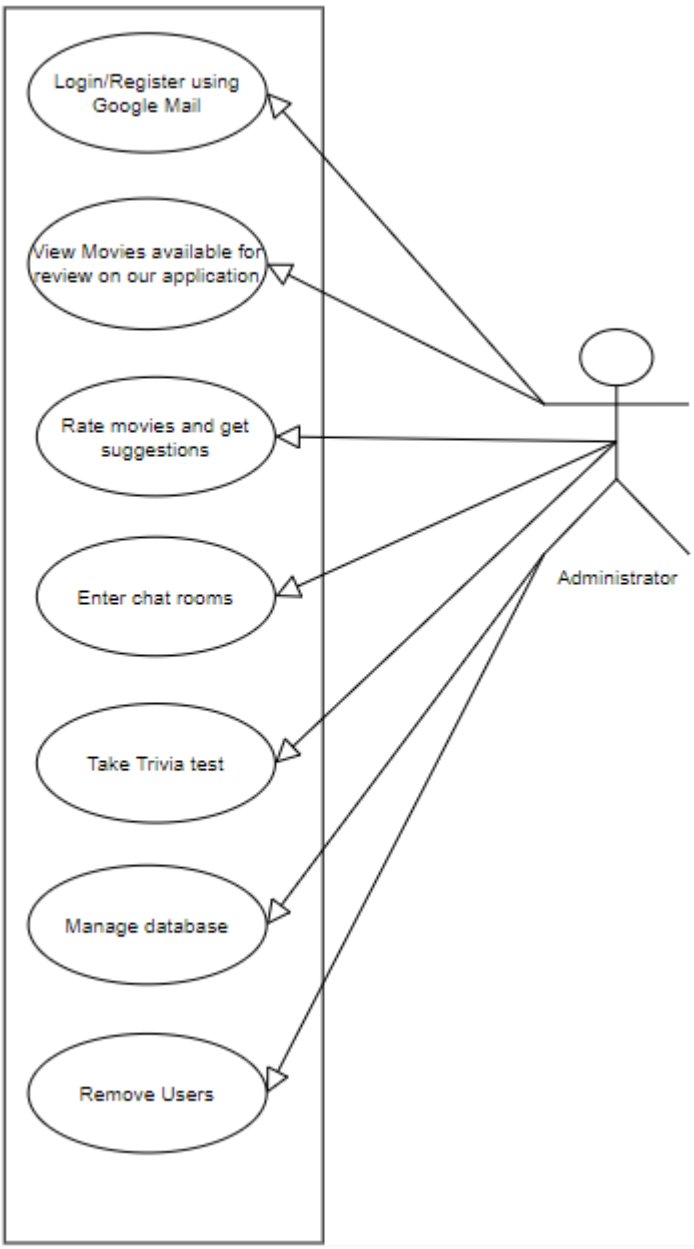


6 Architectural diagram



7 Usecase diagrams


Login/Register using Google Mail
View Movies available for review on our application
Rate movies and get suggestions
Only registered users
Enter chat rooms
Only registered users
Take Trivia test
Anonymous user


Login/Register using Google Mail
View Movies available for review on our application
Rate movies and get suggestions
Enter chat rooms
Take Trivia test
Manage database
Remove Users
Administrator

8 Apis

FireBase:

FireBase API is exactly what we need and creating and editing documents is fool-proof. Real-time data handling is important for the application, we chose an API that is easy to use and understand, compared to other APIs we decided this one better suits our application.

Translator Text Api:

Can easily detect multiple languages and translate accurately, so it is an easy choice.

Bing Spell Check:

Easy to use from any programming language that can make HTTP requests and parse JSON.