American International University Bangladesh

Department of Computer Science

Cinema app System

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Abstract

This report indicates the background information, objectives, scope, requirements and the components of the cinema management system. In the other words, this report is going to point out the functions required to fulfill the need of cinema management system. What is more, non-functional requirement will be considered to own suitable performance .In addition, this report has analyzed the risk and constraints of this system, such as technical feasibility, organizational feasibility and the limitations. The choice of development model will be explained in the following content. In order to provide a portable and modular system, the requirement of future development should be one of the factor to consider. The limitations includes cost, time control and security issues .Finally, this report has attached some reference information for finishing this project in the later stage. The reference can validate and support the content and argument of proposal.

Background Information

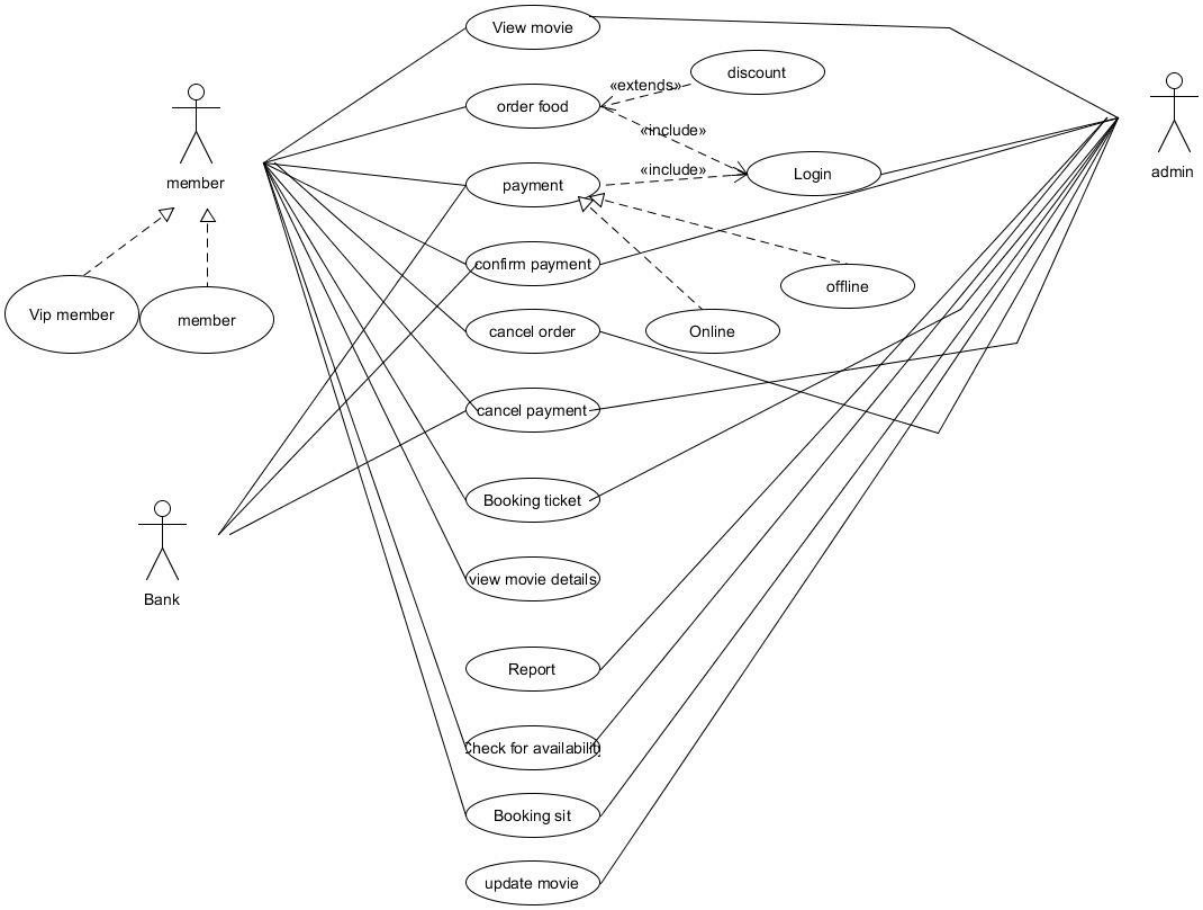
Nowadays, many people enjoy going to cinema to watch movie, especially the teenager. In the peak hour, customers are required to queue up and wait for a long period of time to buy tickets in person, which results in time wasted. Some customers may refuse to queue up for long time and prefer not to watch movie finally. Therefore, the sum of business is affected. There may be a potential loss in revenue. Increasing the number of staff in the reception and increase the number of queues seems to solve the problems but the human resource is not that flexible to increase during peak hour. In addition, for making a new transaction by staff, staff may have some careless mistakes such as inputting invalid data, wrong order during peak hour. The cinema start to think of providing online service to reduce the staff required and reduce the waiting time. In the short term, the human power required is decreased directly. In the long term, Provide convenience to customer can gain more business benefit. Objectives1.Providing online ticket reservation operation.2.The customer can reserve the movie through Internet or using mobile apps.3.Reduce the procedure of buying ticket and the number of queue for the customer in the cinema. Thus the waiting time is reduced.4.Provide a central database that keep the data so as to make the data consistent in different business process. This project targeted all cinema's customers who want to make a reservation with a more convenient way. They would be able to use their smartphone (Android phone, iPhone), tablet (iPad, Android tablet) or PC for the online reservation. Given some of the smartphone which contain NFC function, it is proposed that the system will support Octopus Card payment through NFC. Otherwise, credit card would be required for the payment. On the other hand, those staffs working in cinemas are also part of our targets. In the system we designed, they can manage and organize the movie timeslots and information. Moreover, an analytic report for the reservation would be provided, while any completed process in the reservation would be recorded. However, since such features are for administration purpose only, it can be accessed in desktop mode only. To conclude, the system includes the following features:

61.Easy pay: Just simplify the complicated payment with user-defined payment setting. Customers can make the reservation after they login the system by simplify process. (i.e. few buttons need to click during the reservation process)2.Easy access customer's record: Customers can review their own reservation status in the system clearly. They can click on record button for accessing the membership detail. 3.Get ticket with QR code: Instead login the system in the ticket dispensing machine, customers can take the tickets by providing QR code to the ticket dispensing machine.

Proposed Solution Technical Component

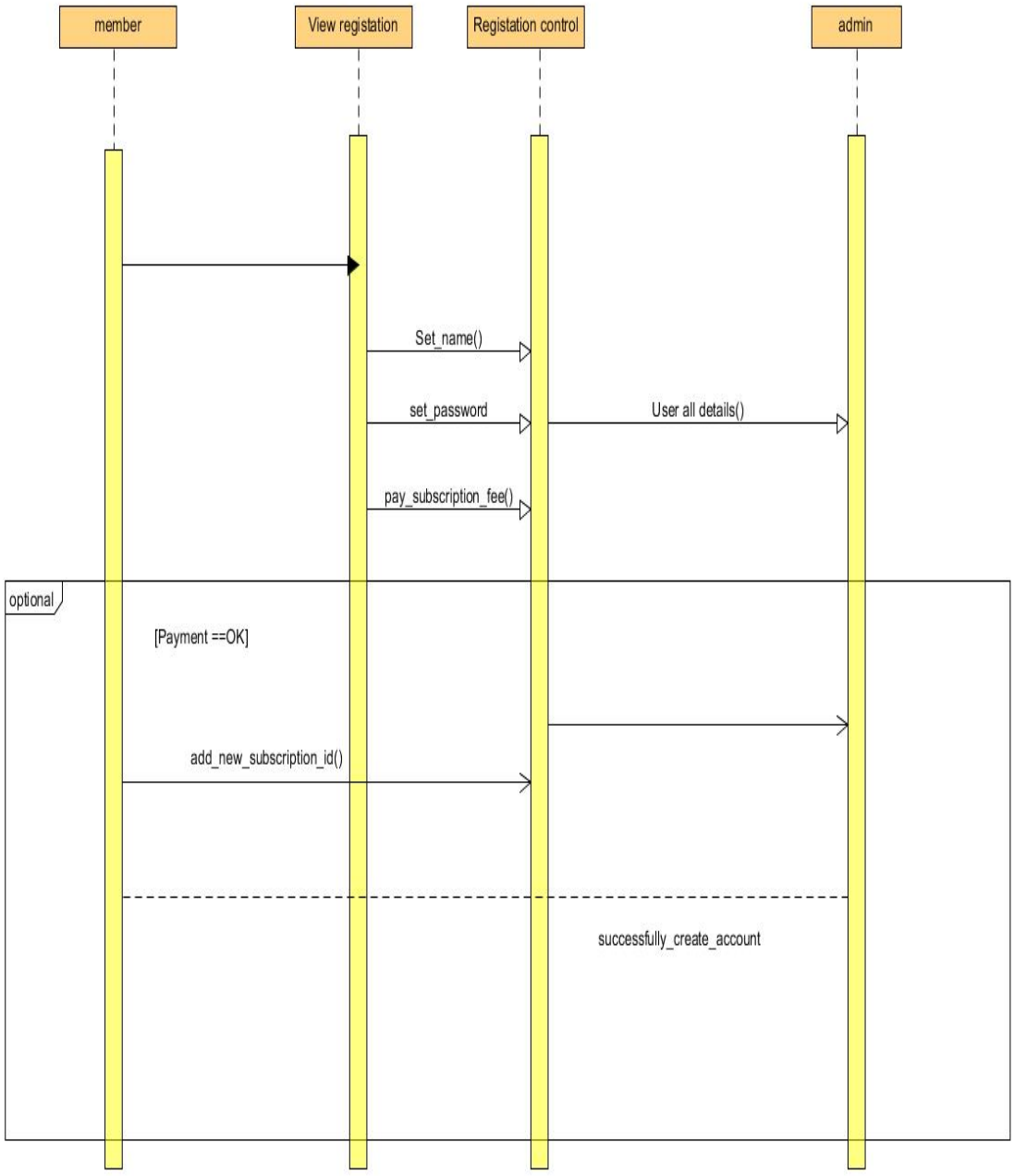
A web interface and mobile app interfaces We will provide a web interface and mobile interfaces for the customers to make reservation. They are not require to queue up in front of the reception to buy the tickets. The most time consuming part in the reservation process is searching the suitable seats of a movie. The web interface and the mobile interfaces can help customers to reserve tickets online immediately. The search function allows customers to simplify tickets reservation process. Also, the customers can settle their payment by octopus cards or credit cards .Ticket dispensing machine This machine allows the customers to collect the paid tickets. Customers are only required to provide the QR code or login to their account to verify their identity. They are not require to queue up at the reception in a whole reserving process. This can make the tickets retrieving operation smooth.Membership schemeThe customers must have their own accounts. They are required to activate their accounts using their own email. They may login to the system in order to collect the tickets.Release and manage movieThe managers can release a movie in a particular cinema. The managers are allowed to update the information of the movie, such as the price, release date, available timeslots.DatabaseThere will have a central database for storing information. The information include the customer information (e.g.Customer Name, Email, and DOB), the reservation information (e.g.Customer Name, Movie, Seats No.) and the movie information (e.g.Movie Name, Director, Running Time, Release date,Timeslots). For customer and manager, they will only review on their degree of information to prevent any security problems

Use Case diagram

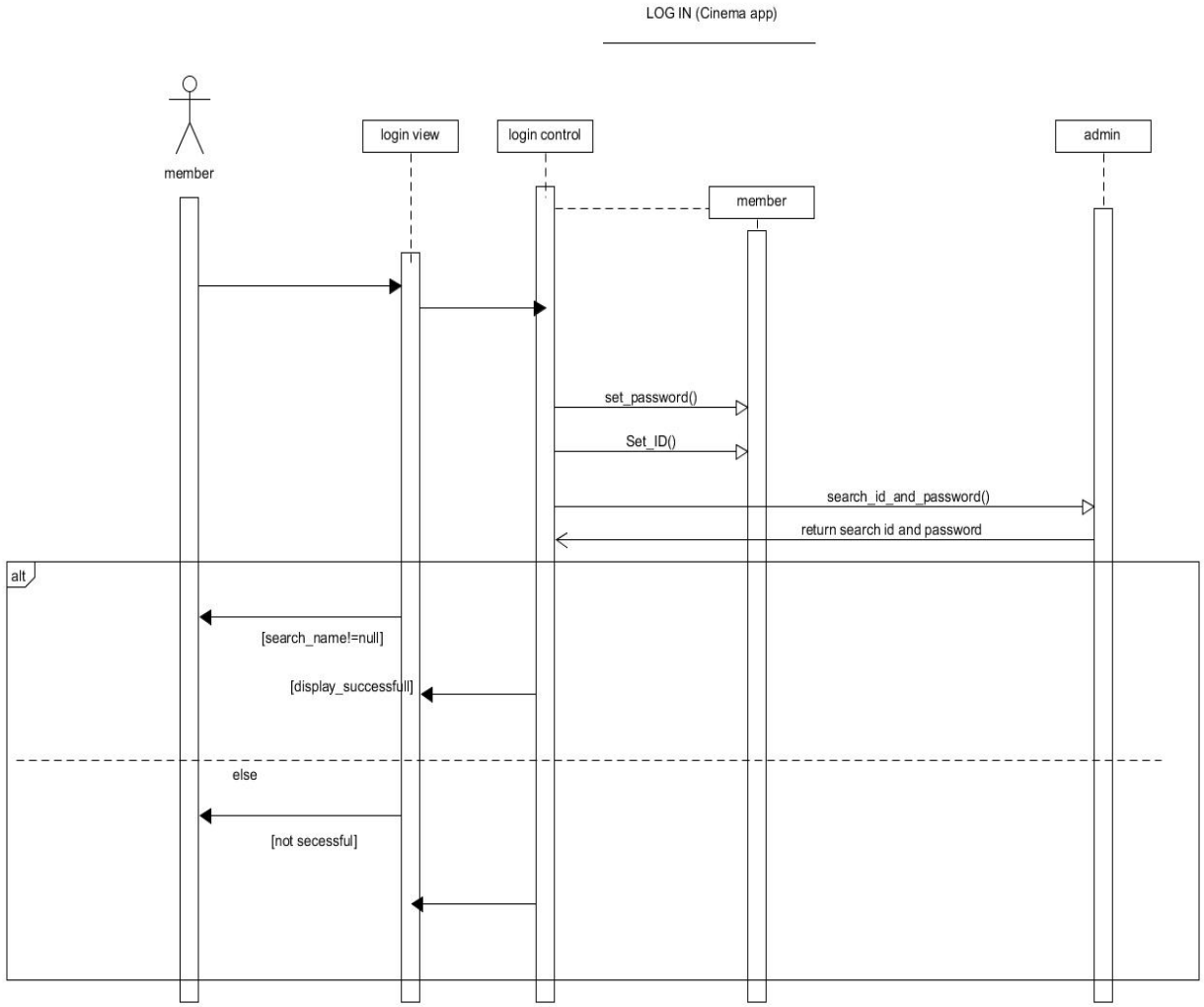


Sequence Diagram (Register Account)

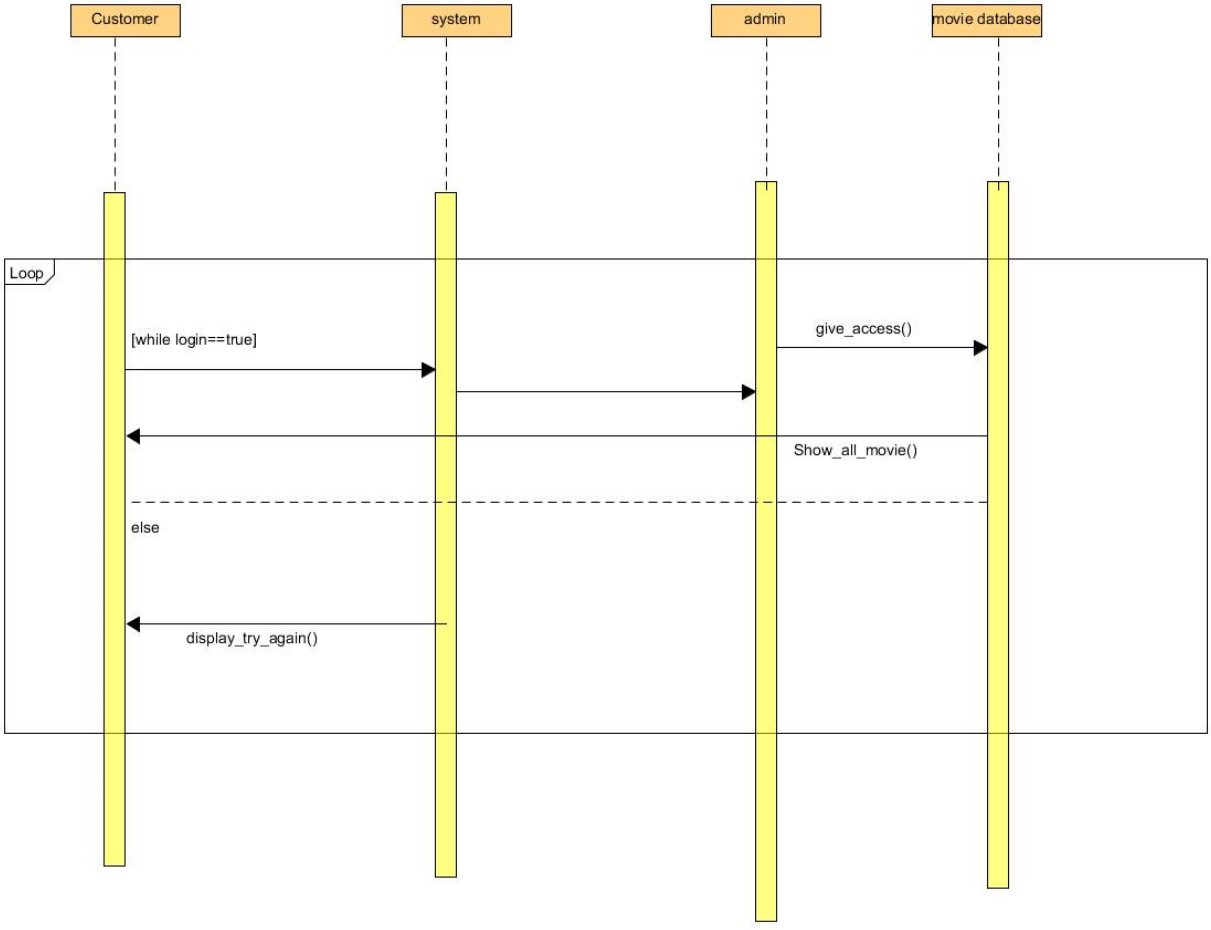
Register Account



Sequence Diagram (Log IN)

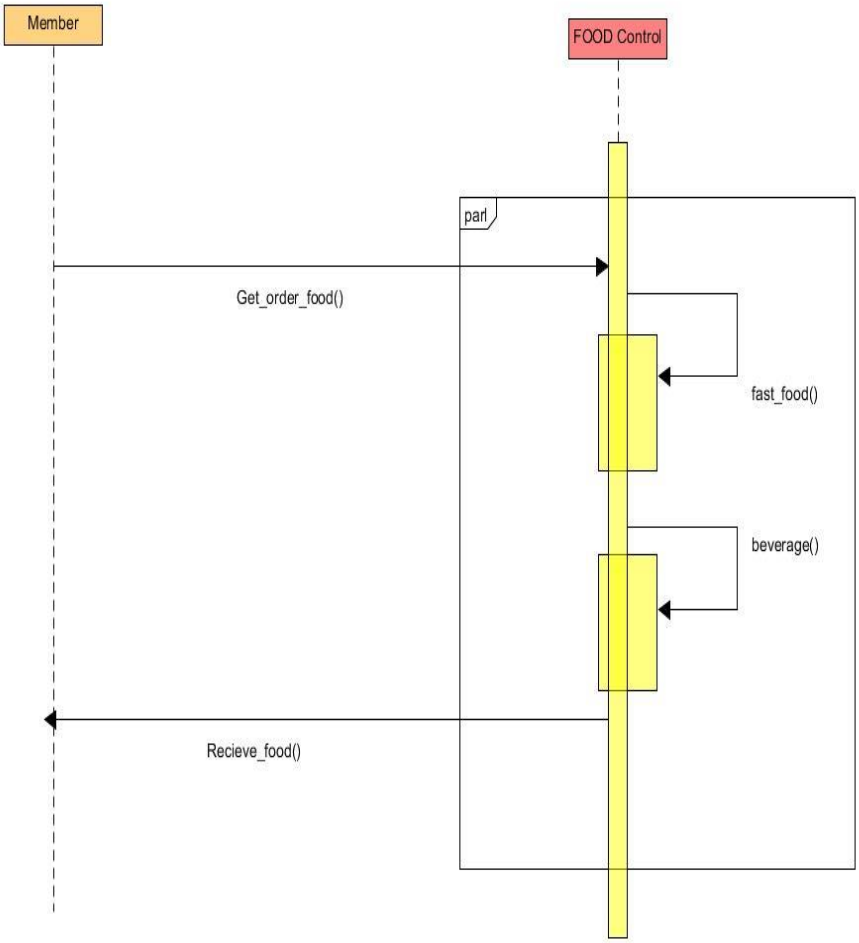


Sequence Diagram (View Movie)

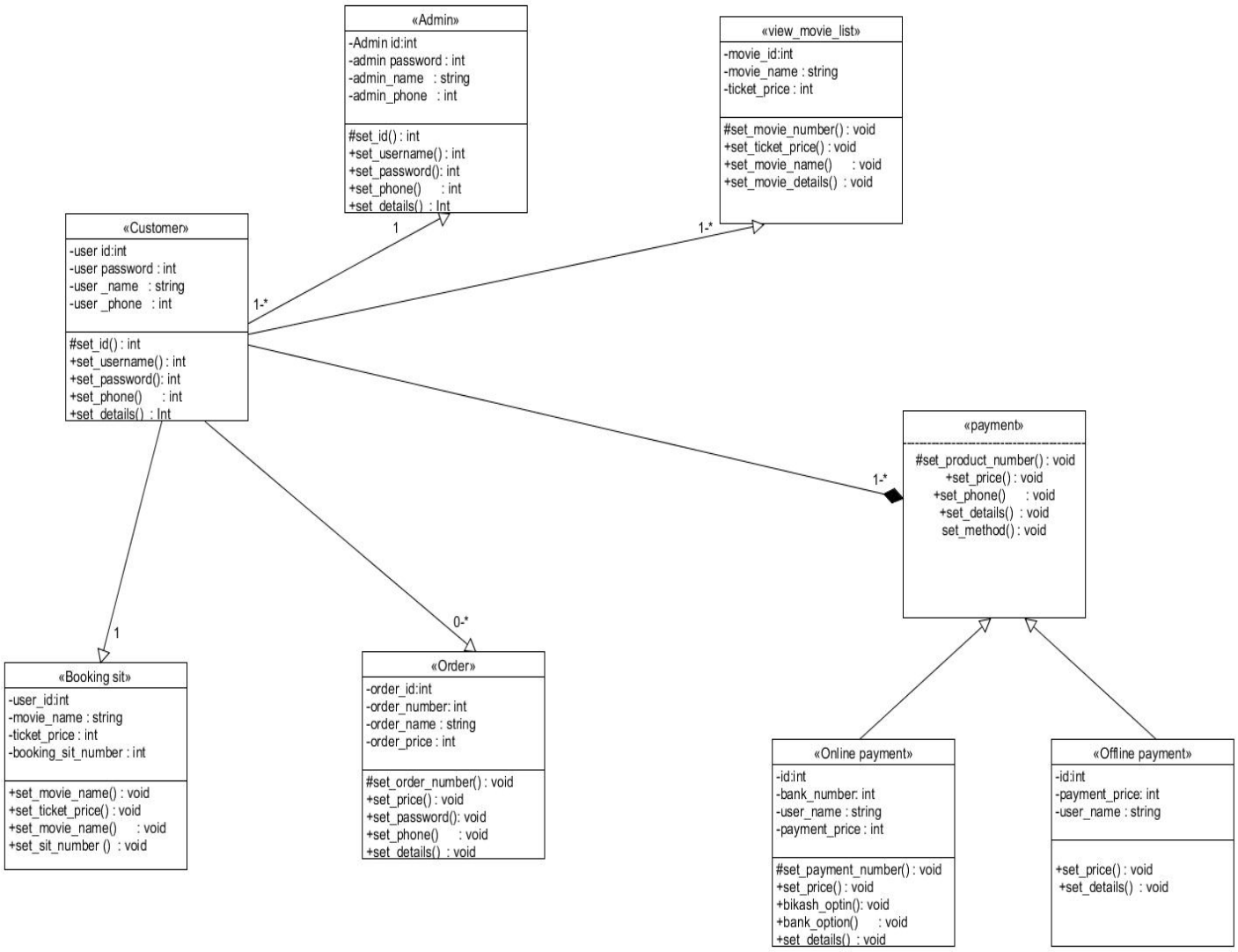


Sequence Diagram (Order)

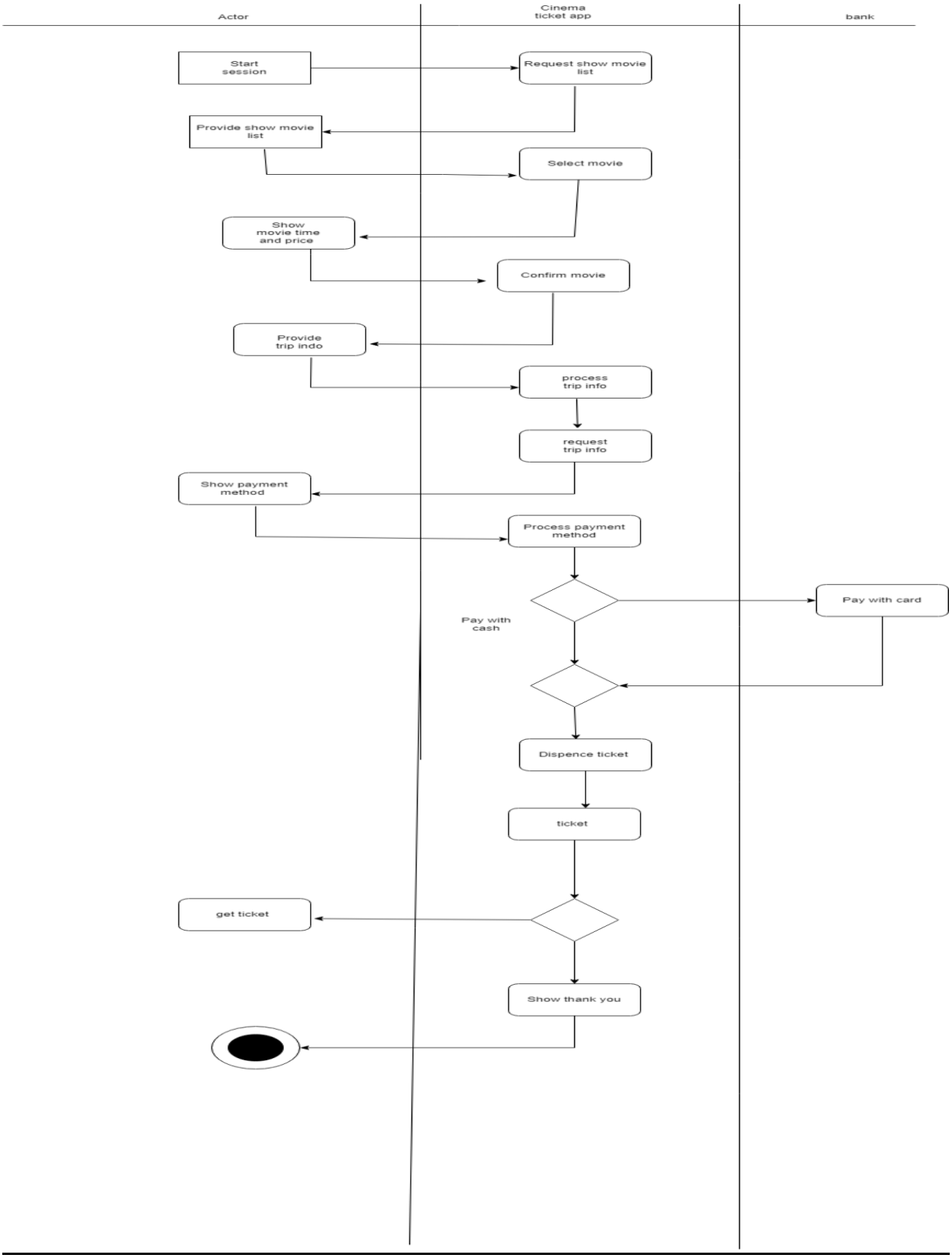
Order Food



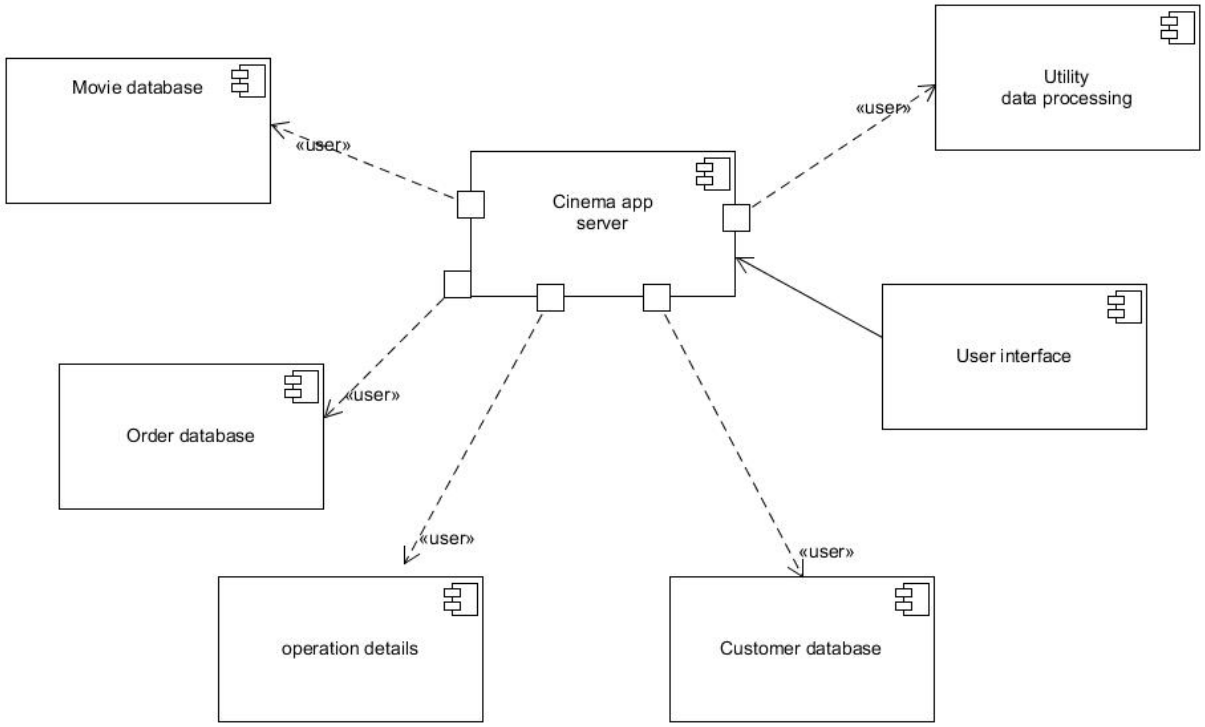
Class Diagram



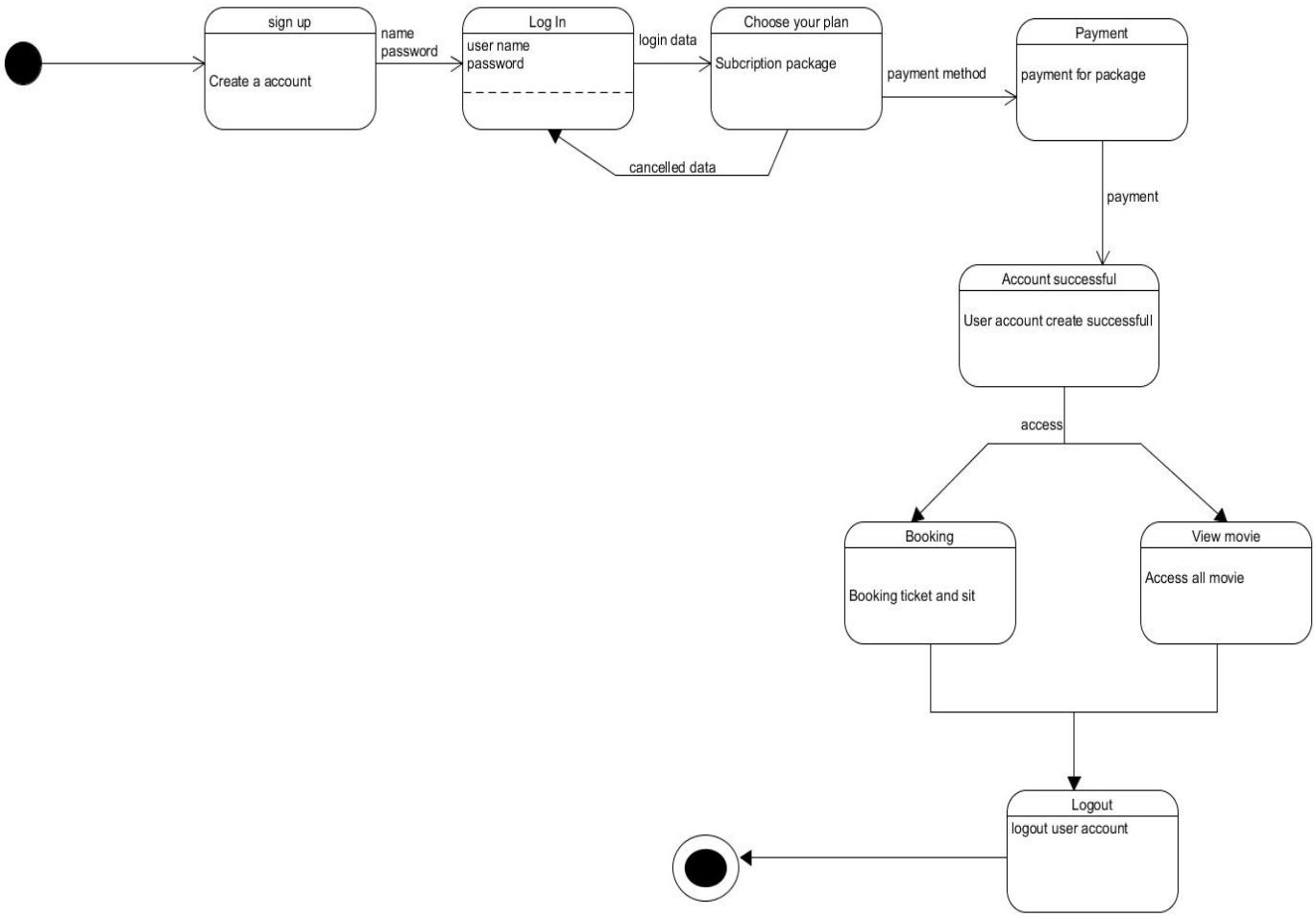
Activity Diagram



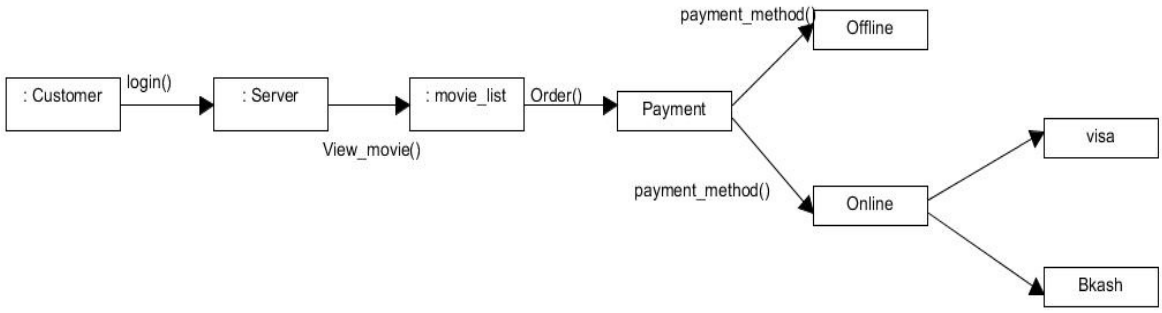
Component diagram



State diagram

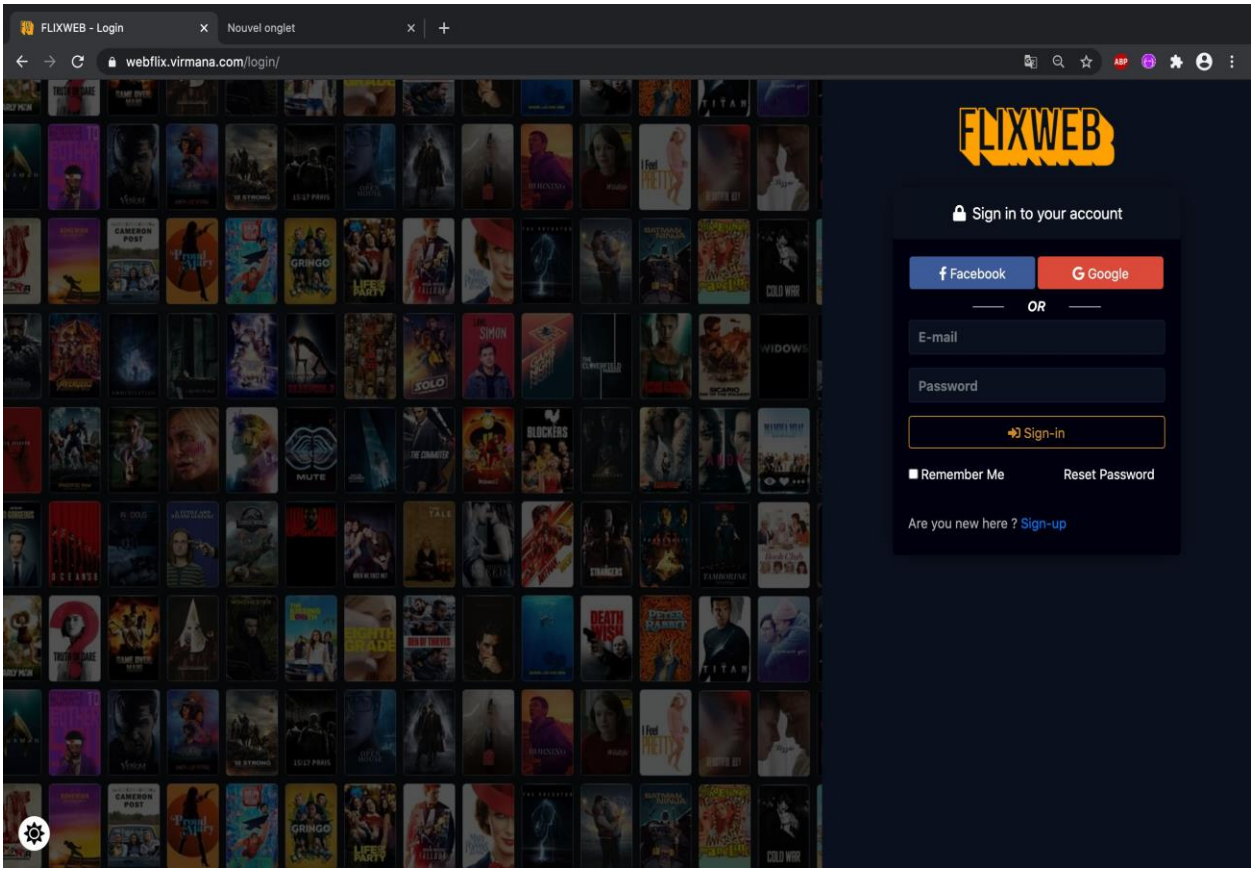


Collaborated Diagram

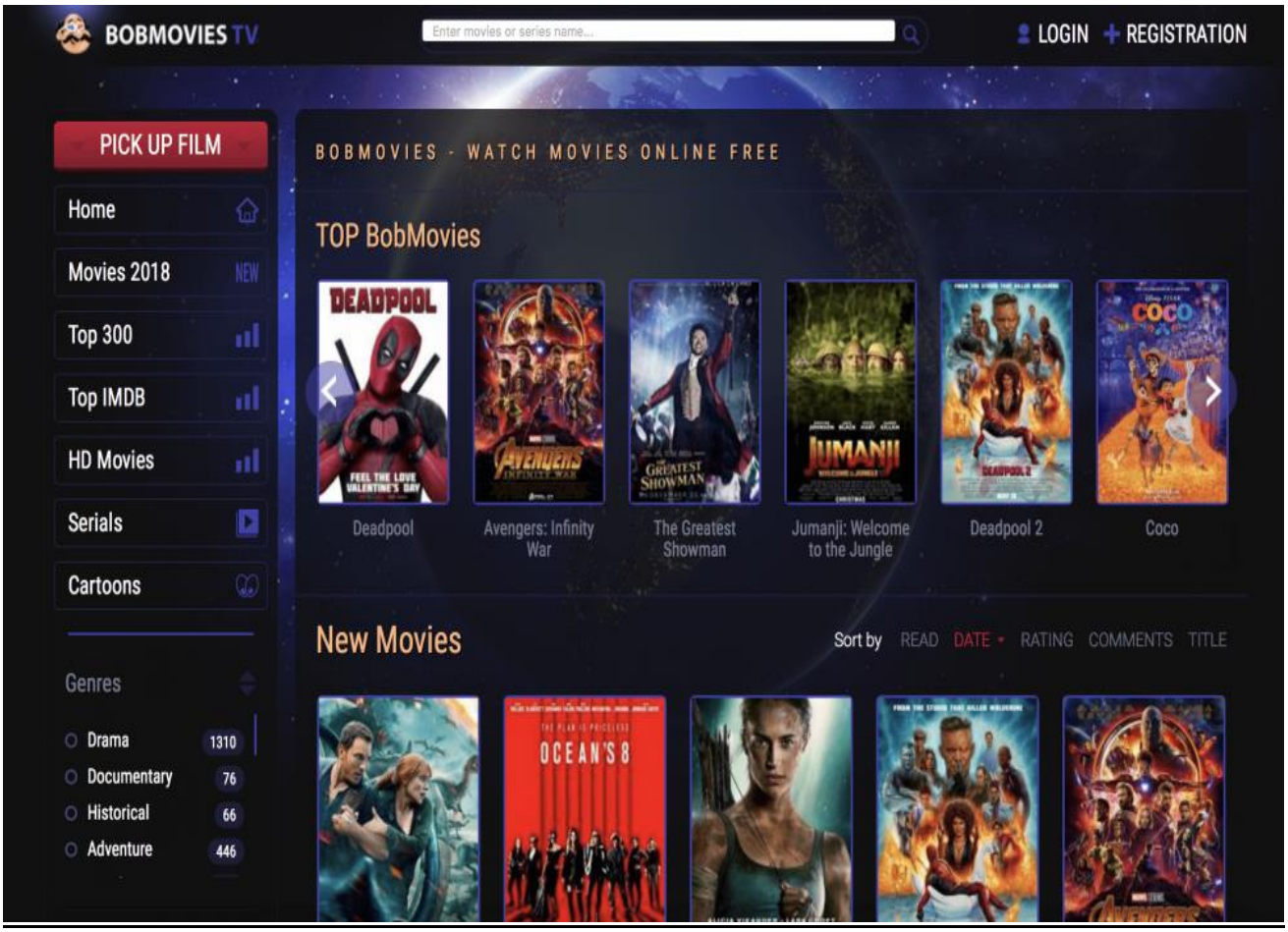


System Prototype

Login



View Movie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