University of Pisa

SCUOLA DI INGEGNERIA

Corso di Laurea in Artificial Intelligence and Data Engineering

Task1 documentation

Candidati

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Anno Accademico 2019–2020

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1 Introduction

The **Cine-Valutami** application offers a search and consultation service in the field of cinema. When the application starts, the system requires authentication to use the service. The logged-in user can perform a search by entering the first characters of a film title in the search bar, obtaining a list of 10 films in the database. After that you can select one of the proposed titles or carry out a more in-depth search, adding characters. At the time of selection, the system allows you to view more information in the section on the right, including cover, title, director and rating. The user can leave a mark from 1 to 5 for the selected film. There is also a module for the system administrator, who will be redirected to an activity different from that of the user, in which he can view some statistics linked to the films and to the searches carried out by the users of the application, in particular: ranking of 10 most voted films, ranking of the 10 most sought after films. Besides, the system administrator can add new films to the application database or delete those already present, by searching by title.

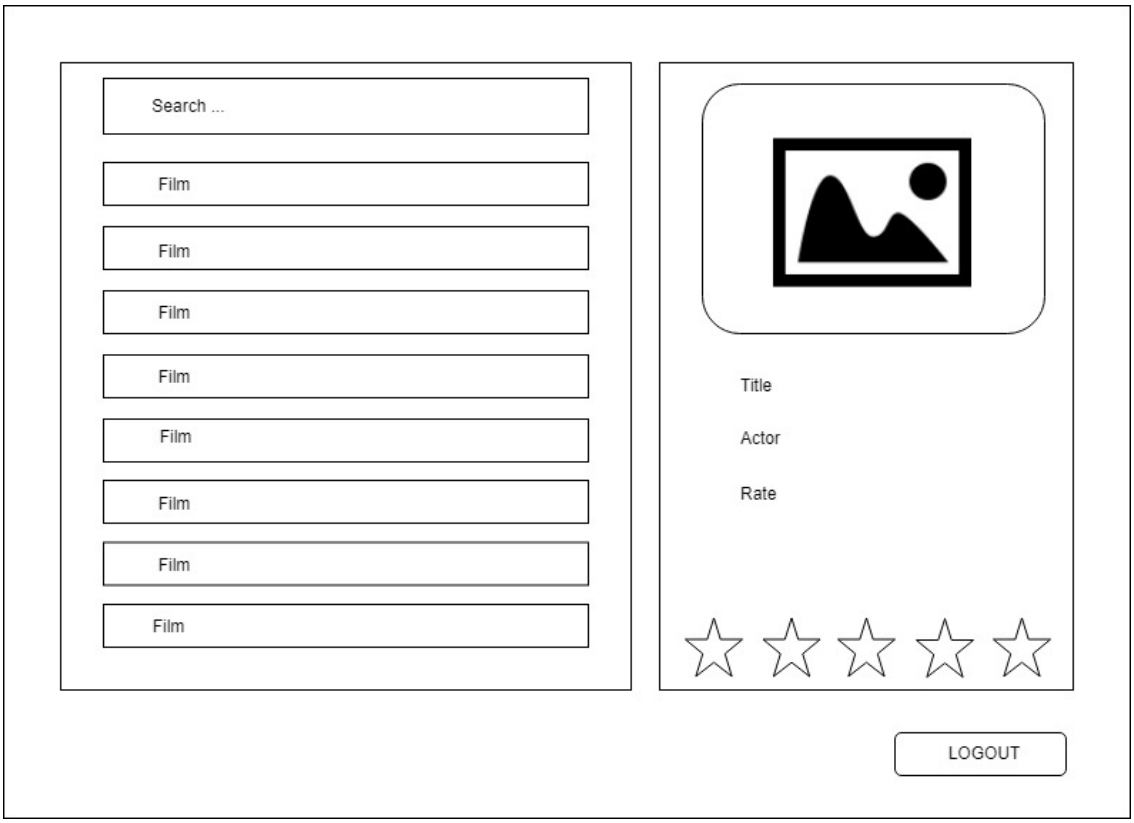

Figure 1: Mockup user

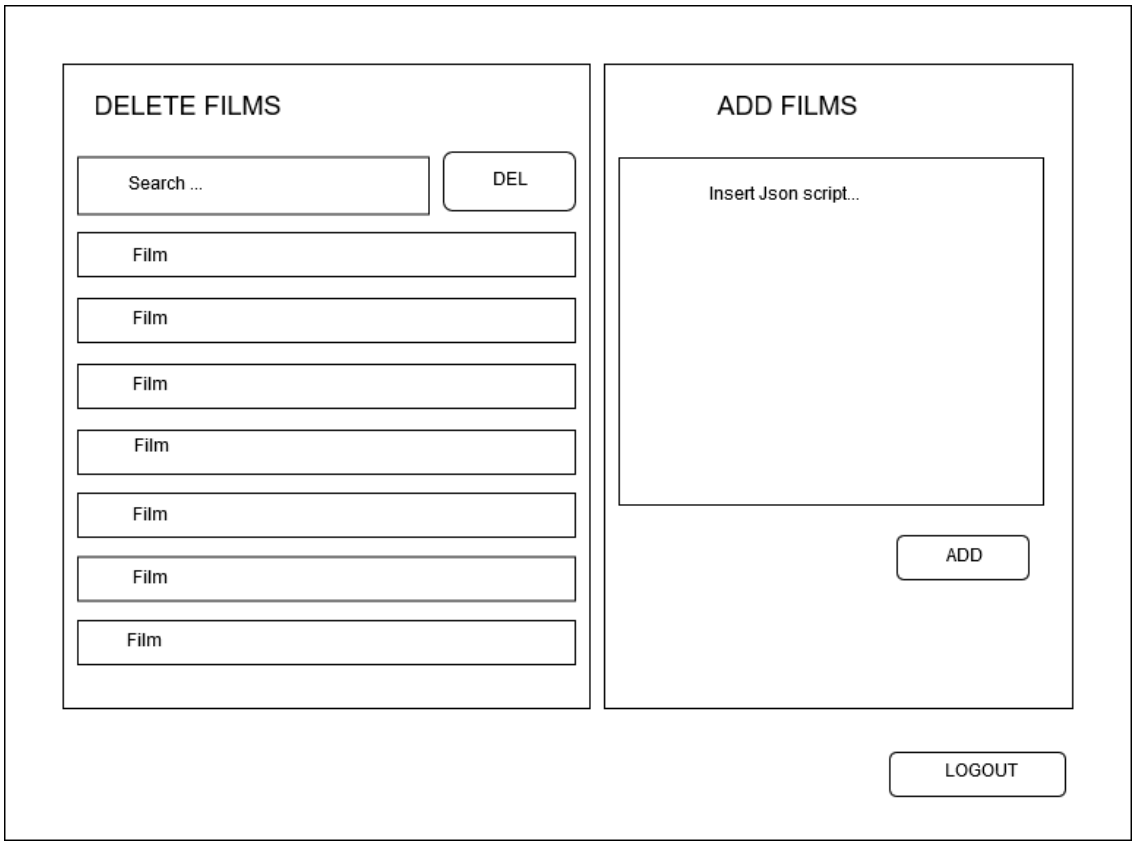

Figure 2: Mockup admin

2 Analysis and workflow

2.1 Requirements

2.1.1 Functional requirement

The system has to allow the user to carry out basic functions such as:

- To sign up into the system.
- To login into the system.
- To search for a film.
- To vote a film.
- For each year to view the country that produced more films.
- For each production house to view the genre more produced.
- To view the most movie voted.
- For each countries to view the most movie voted.

The system has to allow the administrator to carry out basic functions such as:

- To login into the system.
- To add a film.
- To update a film.
- To delete a film.
- To view a list of top rated films.
- To view the a list of the most searched films.
- To view the user most active in the application.

2.1.2 Non-functional requirements

- Usability, ease of use and intuitiveness of the application by the user.
- Avaliablility, with the service guaranteed h24, using replicas.
- The system should support simultaneous users.
- The system should provide access to the database with a few seconds of latency.
- Enforced consistency.

2.2 Use case

Actors

- User : this actor represents a user of the system
- Admin : this actor represents the administrator of the system

2.2.1 Use Cases Description

Event	UseCase	Actor(s)	Description
Log in, Log out	Login, Logout	Admin, User	The user logs in/out the application.
Display all the Films	Browse, Find, Display Films	User, Admin	The user chooses that he wants to view the list of Films. The system browses the data on the db and returns them on the interface.
View Statistics	View Statistic, View Top Rated Films, View Most Searched Films	Admin	The Admin clicks on button to view the statistics. The system browses on the db the informations used in the calculation and display the result.
Add a film	Add Film	Admin	The admin submits the Film informations. The system updates the db and the interface.
Update a film	Update Film	Admin	The admin selects the film and commits the new informations. The system updates the db and the interface.
Delete a film	Delete Film	Admin	The admin selects the film and submits the delete. The system updates the db and the interface.
View the film informations	Select Film, Display Info Film	User, Admin	The user selects the film. The system shows the film informations on the interface.
Vote a film	Vote Film	User, Admin	The user submits the vote on a selected film. The system updates the db and the interface.

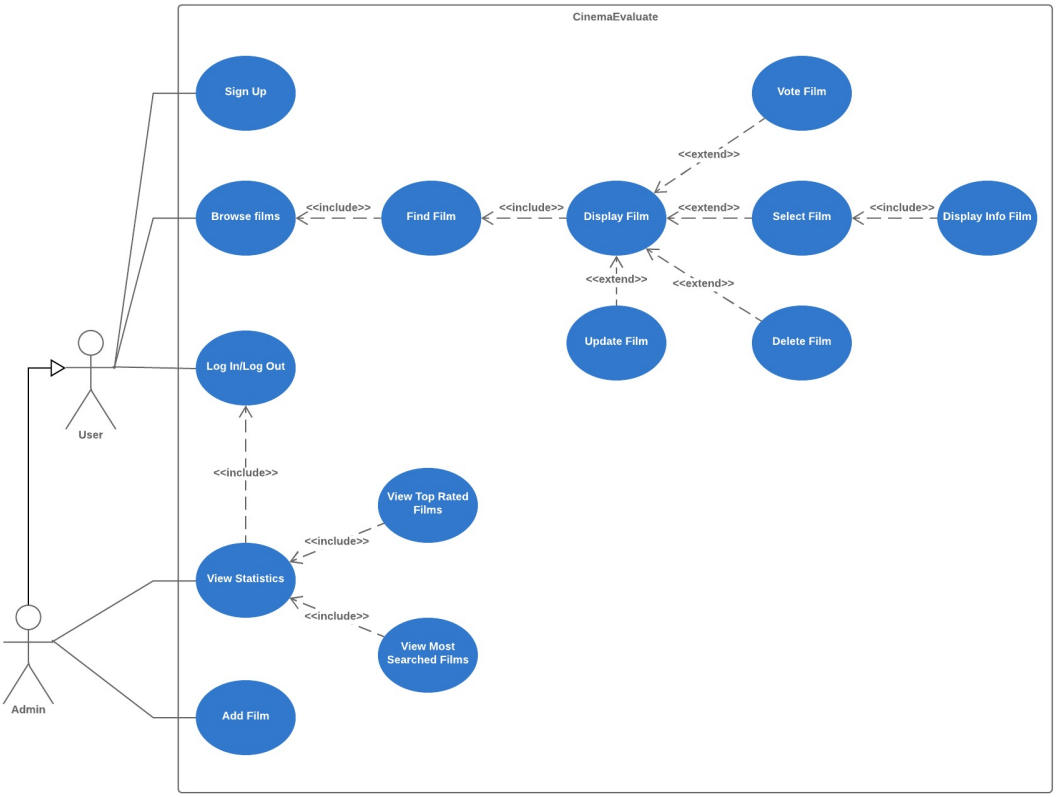

Figure 3: Use cases diagram

2.3 Class diagram

This diagram represent the main entities of the application and the relations between them.

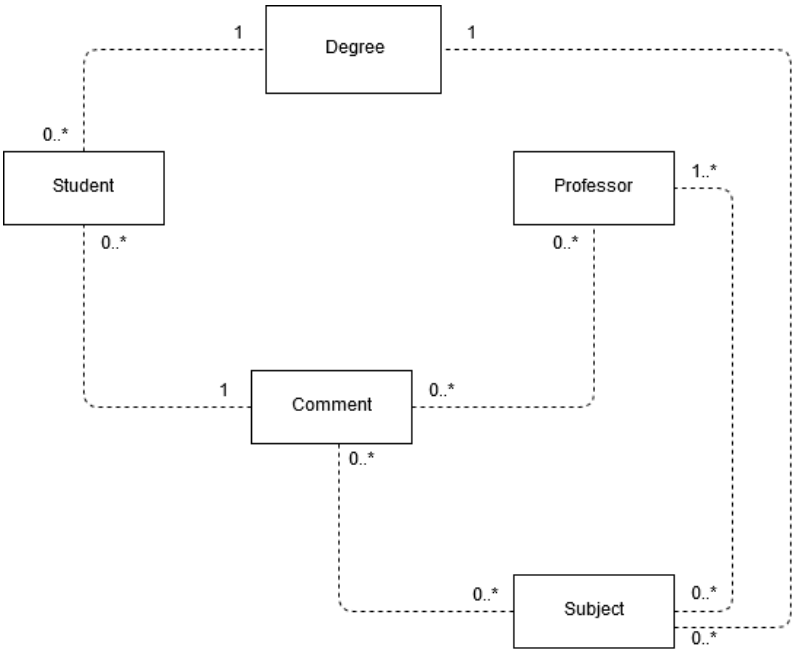

Figure 4: UML analysis diagram

3 Design

3.1 Software architecture

The application is designed over 3 different layers, see figure 5:

- Front-end
- Middleware
- Back-end

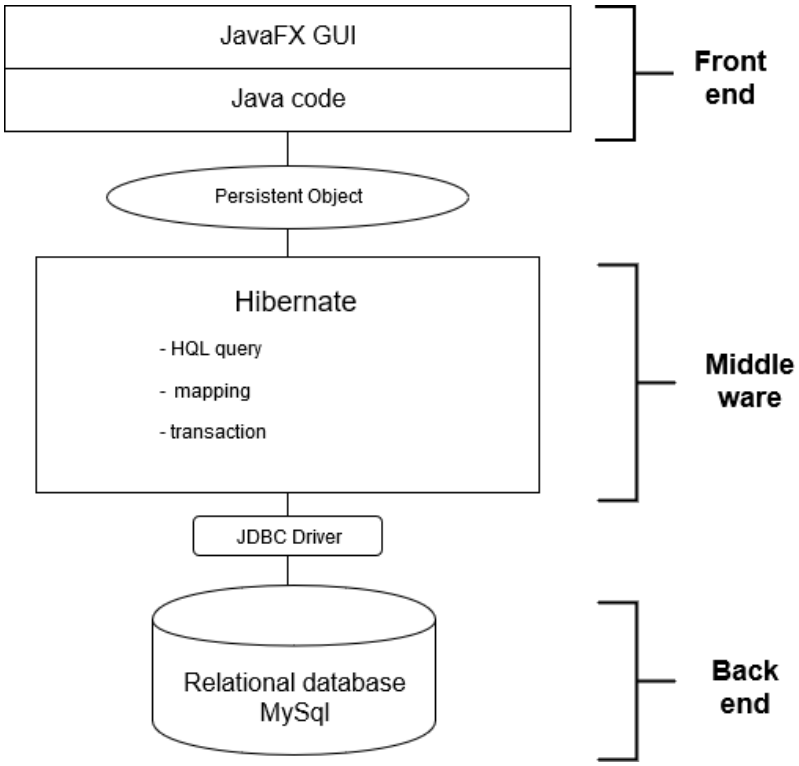

Figure 5: Software architecture diagram