

Object-Oriented Programming

Workshop No. 1 - Object-Oriented Design

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Object-Oriented Programming APPLICATION: DISTRICINE

The client requests the development of an application that optimizes access to the films available within the framework of the creation of the university film club (Cine Club at Universidad Francisco José de Caldas).

This application will allow university students to schedule and attend different screenings on the various university campuses.

The main objective of the application is to allow users to:

- Consult movie schedules.
- Purchase tickets.
- View information about movies in the catalog.
- Watch trailers and promotions.
- Manage their account (purchase history, tickets, etc.).

In this way, the application can facilitate ticket generation and consultation of movie schedules efficiently and in real time, without the need to manually go to DistriCine facilities on different campuses.

1. FUNCTIONAL REQUIREMENTS

- **FR1:** The program must display a list of available movies and a short trailer.
- **FR2:** The program must display detailed information about each movie (title, genre, duration, rating, synopsis, poster, and trailer).
- **FR3:** The program must allow searching for available movies.
- **FR4:** The program must allow filtering movies by genre.
- **FR5:** The home page must display the cinema name and its logo.

2. NON-FUNCTIONAL REQUIREMENTS

- **NFR1:** The program must run on Windows.
- **NFR2:** The program must respond in less than 3 seconds.
- **NFR3:** The program must provide a simple and intuitive user interface.

3. USER STORIES

US1 – Client views list of movies

- **As:** user
- **I want:** to see the list of available movies
- **Acceptance criteria:** The main screen shows movies with posters and titles.

US2 – Client views movie details

- **As:** user
- **I want:** to view the information of a selected movie
- **Acceptance criteria:** The details show title, genre, duration, rating, synopsis, and a trailer.

US3 – Client filters movies by genre

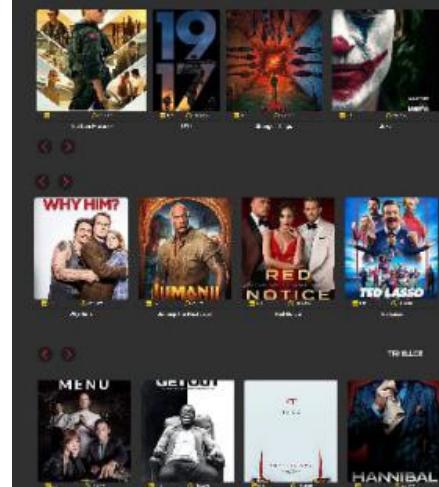
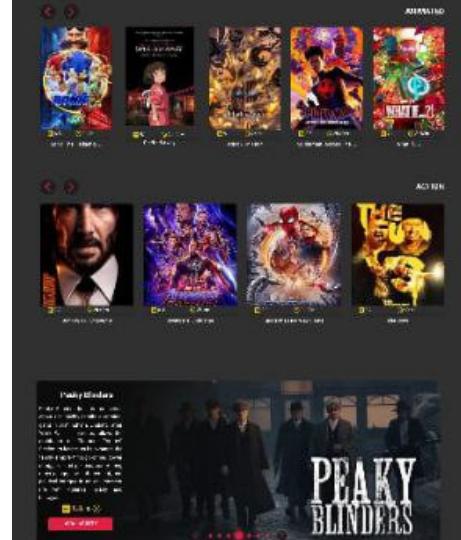
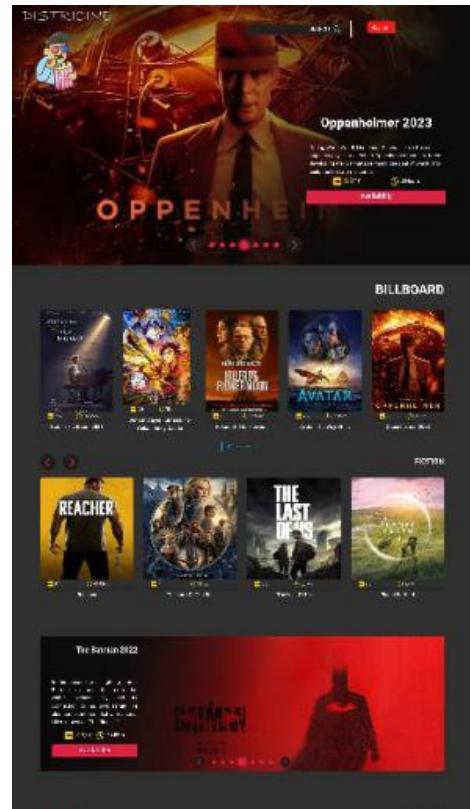
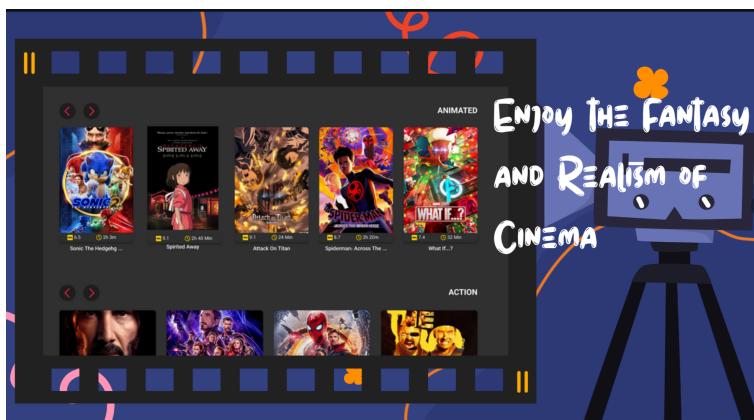
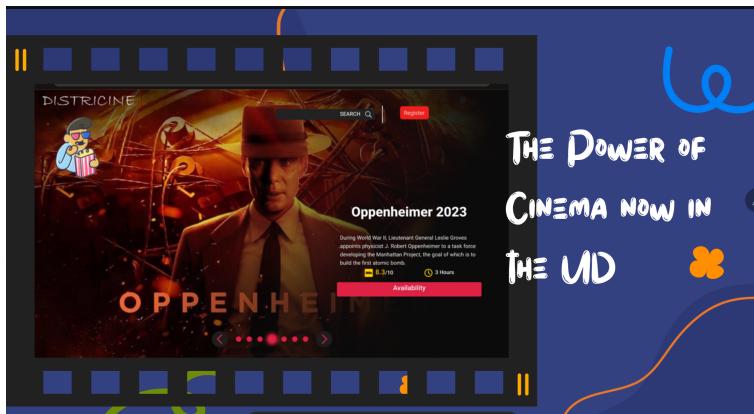
- **As:** user
- **I want:** to filter movies by genre
- **Acceptance criteria:** When selecting Thriller, only thriller movies are displayed.

4. MOCKUPS

[https://www.figma.com/design/oEZotW0T5FcUkjDXcMD9ob/Movies---Tv-Shows-Website--Cinema
node-id=0-1&t=ZIB7p2rdofcI7SBU-1](https://www.figma.com/design/oEZotW0T5FcUkjDXcMD9ob/Movies---Tv-Shows-Website--Cinema-node-id=0-1&t=ZIB7p2rdofcI7SBU-1)

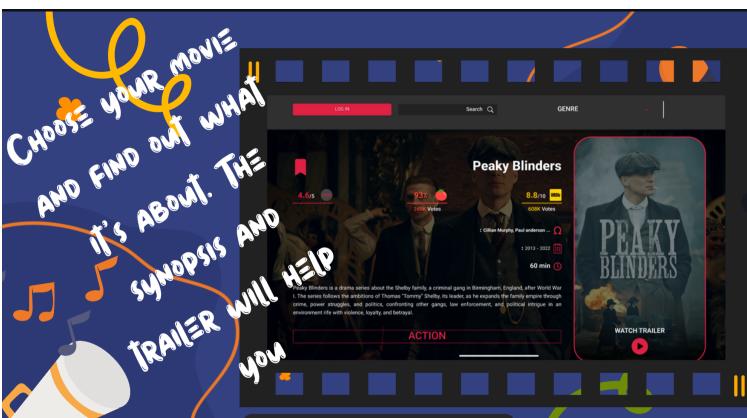
Mockup 1

The login, registration, and search options are located in the upper left corner, as this facilitates user actions. Additionally, we usually move our eyes from right to left, allowing better exploration of the program. As one of the program's main objectives is to allow the user to schedule their cinema attendance, the top banner—which covers a wide area—shows the latest release or the movie that the cinema will screen.

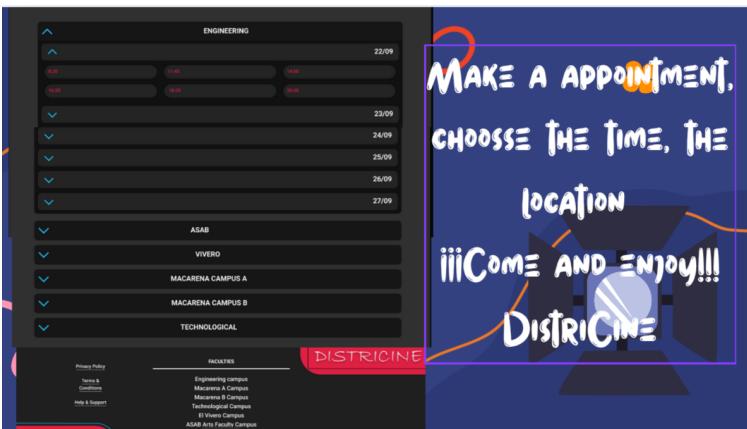


Mockup 2

When the user clicks on a selected movie, they are directed to this page where the movie poster and a synopsis are displayed. Regarding the rating or voting system, this feature allows the user to form an idea about the movie. The trailer provides a preview of the film, generating impact and attraction for the user. This section also shows available dates and times: here the user can see the days the film will be shown, if scheduled, along with the exact times so that the user can plan accordingly.



This screenshot displays a detailed movie page for 'Peaky Blinders'. At the top, it shows a rating of 4.6s, 927k votes, and a 6.8/10 score. Below the synopsis, there is a 'WATCH TRAILER' button. The page lists several cast members: Joe Cole (John Shelby), Tom Hardy (Alfie Solomons), Helen McCrory (Helen Ward), Paul Anderson (Albert Shelby), and Cillian Murphy (Tommy Shelby). On the right, a sidebar titled 'FACULTIES' lists various academic departments with their respective dates: Engineering (22/09, 23/09, 24/09, 25/09, 26/09, 27/09), ASAB, VIVERO, MACARENA CAMPUS A, MACARENA CAMPUS B, and TECHNOLOGICAL. At the bottom, there is a footer with links to 'Privacy Policy', 'Terms & Conditions', 'Help & Support', and information about 'Engineering campus', 'Macarena Campus', 'Technological Campus', 'El Vivero Campus', and 'ASAB Art Faculty Campus'.



5. CRC CARDS

User	
Responsability	Colaborator
Register	Pay
Login	Catalog (Movies)
Read Catalog	Reservation
Handle trouble reservations	

Movie	
Responsability	Colaborator
Show info	Schedule
	Ticket
	Catalog (Movies)

Headquarters	
Responsability	Colaborator
Show info	Movie theater
Show Movie theater	
	Movie theater

Movie Theater	
Responsability	Colaborator
Show info	Schedule
Manage capacity	Headquarters

Schedule	
Responsability	Colaborator
Show info	Movie theater
	Cine Theater
	Ticket

Ticket	
Responsability	Colaboration
ID	Time
Price	Movie
Seat	
ID-Time	
ID-Movie	
Amount	

The diagram illustrates the relationships between three system classes: Reservation, Payment, and Resenation. Each class is associated with a set of 'Collaborators'.

Class	Collaborators
Reservation	<ul style="list-style-type: none"> • ID • Cast • Date • Request Method • Reservation • ID - User
Payment	<ul style="list-style-type: none"> • Collaborator • Reservation • Decay
Resenation	<ul style="list-style-type: none"> • Collaborators • User • Ticket • Payment

6. REFLECTION

During the design process of DistriCine, one of the main challenges was defining the scope of the application. Initially, the idea included many features such as seat reservation, snack purchasing, and advanced account management. However, due to time constraints and the workshop's focus, the scope was reduced to viewing the movie catalog, basic ticket management, and user account functions.

This simplification made it possible to clearly identify the essential system requirements, main user interactions, and core classes, while ensuring the project remained feasible. Designing the mockups helped visualize how users would interact with the system, making the flow more intuitive. Overall, this stage allowed me to understand the importance of balancing ambition with practicality in software design.

Referencias

- [1] Official Figma Documentation. (2025). *Figma Design and Prototyping Tool*. Retrieved from: <https://help.figma.com>
- [2] Cine Colombia. (2025). *Official Website*. Retrieved from: <https://www.cinecolombia.com>