

Faculty of Engineering, Natural and Medical Sciences Department of Information Technologies

Software Project Management

CineLine - Online Cinema Reservation

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1. Product Vision

For movie lovers tired of long ticket lines, limited seating options, and the disappointment of sold-out shows, CineLine offers the perfect solution. Our online cinema reservation system is designed to transform the way you enjoy movies, making it easy to browse screenings, reserve your favorite seats, and book tickets—all from the comfort of your home. Say goodbye to wasted time at the counter and hello to a stress-free, convenient experience with real-time seat availability and hassle-free booking.

CineLine is not just a platform for moviegoers; it's a valuable tool for cinema operators too. Users can explore detailed information about movies, book seats instantly, and make secure payments from any device. Plans change? No problem. The system allows for quick modifications or cancellations, offering unmatched flexibility. For cinemas, CineLine acts as a promotional powerhouse, showcasing upcoming films and events while increasing customer engagement. Plus, with personalized recommendations, the platform keeps audiences coming back for more.

Our mission at CineLine is to bridge the gap between movie fans and theaters, making the booking process simpler and the moviegoing experience more enjoyable. By focusing on convenience and satisfaction, CineLine eliminates the frustrations of traditional ticketing methods and helps cinemas boost attendance and engagement. It's your one-stop destination for discovering, reserving, and enjoying the magic of the big screen.

2. Product Roadmap

DATE	October 2023	January 2024
NAME	Online Cinema 1.0	Online Cinema 1.1
GOAL	Launch the platform and gather initial users.	Attract moviegoers and collect initial feedback.
FEATURES	Register cinema and moviegoers.Create cinema profiles.List available movies and schedules.	Enable user account creation.Filter movies by date, genre, and cinema.Book movie tickets.
METRICS	50 cinemas and 500 users registered on the platform.	1,000 tickets booked on the platform.

DATE	May 2024	July 2024
NAME	Online Cinema 1.2	Online Cinema 1.3
GOAL	Build trust and engagement among users.	Expand revenue with premium features and frequent users.
FEATURES	 Add user reviews for movies and cinemas. Enable seat selection during booking. Implement notifications for bookings and reminders. 	 Offer subscription packages for frequent moviegoers. Introduce promotional offers and discounts. Create analytics for cinemas (e.g., ticket sales data).
METRICS	80% positive user feedback and increased bookings.	10% increase in ticket sales through premium features.

3. Product Backlog

Our product backlog prioritization for the Online Cinema Reservation System is designed to ensure the development of features that deliver maximum value to both the business and the end users. We have carefully categorized each feature based on two critical factors: Business Value and User Impact.

By aligning the business benefits, such as increased user engagement and revenue generation, with features that enhance the overall user experience, we aim to create a product that meets strategic objectives while delighting users.

To provide clarity and transparency, our backlog includes a detailed breakdown of each item, highlighting its business importance and its impact on the user experience. This prioritization allows us to focus on delivering features that are most essential to our goals, such as seamless ticket booking, intuitive user interfaces, and effective customer engagement tools.

Feature	Role	Business Value	User Impact
1. Sign up as a cinema enthusiast	User	5	5
2. Continue using the app with Google account	User	5	5
3. Continue using the app with Apple account	User	5	5
4. Return to the front page	User	4	4
5. Choose a city	User	5	5
6. Set a date to watch a movie	User	5	5
7. View movie details	User	5	5
8. View available projections	User	5	5
9. View movie trailer	User	4	5
10. View upcoming	User	4	5

movie releases			
11. View available seats	User	5	5
12. View ticket price while choosing seats	User	4	5
13. Display message for taken seats	User	4	4
14. View ticket price and payment options	User	5	5
15. Confirmation popup for payment option	User	4	4
16. Proceed to payment details	User	5	5
17. Receive Confirmation for Bought Tickets via Email	User	5	5
18. Cancel ticket booking	User	4	4
19. Request a Refund for Cancelled Tickets	User	3	4
20. View Available Snacks and Drinks	User	3	4
21. Rate watched movie	User	4	4
22. Leave a Comment for a Movie	User	4	4
23. View Purchase History for Movies	User	4	4
24. View Available Cinema Cards	User	3	3
25. View Points on My Cinema Card	User	3	4

4. User Stories

Epic 1. User Authentication

1.1. User Story 1 - Sign-Up as a Cinema Enthusiastic

As a user, I want to sign up on the CineLine platform, so that I can create a profile and access its features.

Acceptance Criteria:

- 1. The user selects the Sign Up option on the main page.
- 2. The user enters the following required information:
 - o First Name
 - o Last Name
 - o Email Address
 - Password
 - o Gender
- 3. After providing all required details, the user clicks the Sign Up button.
- 4. If the entered data is valid, the user is redirected to the Home Page.
- 5. If the entered data is invalid, the system prompts the user to correct the input.

1.2. User Story 2 - Continue Using App With Google Account

As a user, I want to log in to the CineLine platform using my Google account, so that I can quickly access my profile without creating a new account.

- 1. The user selects the Continue with Google option on the main page.
- 2. The user is prompted to enter:
 - o Email Address or Phone Number
 - Password
- 3. After entering the correct credentials, the user clicks the Next button.
- 4. If the credentials are valid, the user is redirected to the Home Page.
- 5. If the credentials are invalid, the system prompts the user to try again.

1.3. User Story 3 - Continue Using App with Apple Account

As a user, I want to log in to the CineLine platform using my Apple account, so that I can easily access my profile without signing up.

Acceptance Criteria:

- 1. The user selects the Continue with Apple option on the main page.
- 2. The user is prompted to enter:
 - Email Address
 - o Password
- 3. After entering the correct credentials, the user clicks the Sign In button.
- 4. If the credentials are valid, the user is redirected to the Home Page.
- 5. If the credentials are invalid, the system prompts the user to try again.

1.4. User Story 4 - Return to Front Page

As a user, I want to be returned to the front page where available movies are displayed if I click "No" on the confirmation popup, so that I can start the booking process over from the beginning.

Acceptance Criteria:

- 1. If the user clicks No on the confirmation popup, the app returns them to the front page where they can see available movies and start the process again.
- 2. The movie selection and booking process are reset, allowing the user to choose a new movie and continue from the beginning.

Epic 2. Movie Selection

2.1. User Story 5 - Choose a City

As a user, I want to select the city where I will watch a movie, so that I can automatically view the cinema and its available screenings for that location.

- 1. After logging in, the user is presented with an option to select a city.
- 2. The system displays a list of available cities: Banja Luka, Sarajevo, Mostar, and Zenica.
- 3. The user selects a city from the list.
- 4. Upon selection, the system automatically assigns the cinema associated with the chosen city.

5. The user is redirected to the cinema's Movies Page, displaying the available movies and screenings for that location.

2.2. User Story 6 - Set a Date to Watch a Movie

As a user, I want to select the date on which I plan to watch a movie, so that the app can show me the movies available on that specific day.

Acceptance Criteria:

- 1. After selecting a city, the user is presented with a Calendar Icon in the corner of the app.
- 2. The user clicks the Calendar Icon, and a calendar widget appears, allowing the user to choose a specific date.
- 3. The user selects the desired date from the calendar and clicks the Confirm button.
- 4. The system processes the selected date and retrieves the list of movies available on that day at the assigned cinema.
- 5. The app displays the Movies Page with movies and screening times available on the chosen date.
- 6. If no movies are available on the selected date, the system displays a message: "No movies are available on this date. Please select another date."

2.3. User Story 7 - View Movie Details

As a user, I want to see detailed information about a movie, so that I can decide whether I want to watch it.

- 1. On the Movies Page, the user is presented with a list of movies available on the selected date.
- 2. Each movie in the list displays a Poster Thumbnail and the movie's title.
- 3. The user clicks on a movie to view its details.
- 4. The system opens a Movie Details Page showing the following information:
 - o Poster: A larger version of the movie's promotional poster.
 - Length: The runtime of the movie (in minutes).
 - Main Actors: A list of the lead actors in the movie.
 - Genre: The genre(s) the movie belongs to (e.g., Action, Comedy).
 - Country: The country where the movie was made.
- 5. The user can navigate back to the Movies Page to view details of other movies.

2.4. User Story 8 - View Available Projections

As a user, I want to see the available projections for a selected movie, so that I can choose the screening time that suits me best.

Acceptance Criteria:

- 1. On the Movie Details Page, there is a button labeled "Projekcije".
- 2. The user clicks the "Projekcije" button to view available projections for the selected movie.
- 3. The system retrieves and displays a list of available projections for the movie on the chosen date.
- 4. Each projection entry includes the details of Screening Time (e.g., 18:00, 20:30).
- 5. The user can choose a screening time by clicking on a specific projection, which redirects them to the Seat Selection Page.
- 6. If no projections are available for the selected movie and date, the system displays a message: "No projections are available for this movie on the selected date."

2.5. User Story 9 - View Movie Trailer

As a user, I want to watch a trailer for the selected movie, so that I can decide if I want to book tickets for it.

Acceptance Criteria:

- 1. On the Movie Details Page, the user sees a "Watch Trailer" button.
- 2. When the user clicks the button, the system plays the movie trailer.
- 3. The user can close the trailer and return to the Movie Details Page.
- 4. If a trailer is not available, the system displays a message: "Trailer not available."

2.6. User Story 10 - View Upcoming Movie Releases

As a user, I want to see a list of upcoming movie releases, so that I can plan which movies I want to watch.

Acceptance Criteria:

1. The system provides a dedicated "Upcoming Movies" section accessible from the main menu or home page.

- 2. The list displays the movie titles, release dates, and optional details such as genres or brief descriptions.
- 3. Users can scroll through or search for specific upcoming movies.
- 4. The user can return to the previous page at any time without taking further action.

Epic 3. Ticket Booking

3.1. User Story 11 - View Available Seats

As a user, I want to see the available seats in the hall where the film is being projected, so that I can easily identify which seats are free and which are already taken.

Acceptance Criteria:

- 1. After selecting a projection, the user is redirected to the Seat Selection Page.
- 2. The Seat Selection Page displays a visual representation of the cinema hall's seating arrangement.
- 3. Seats are color-coded as follows:
 - Available Seats: Highlighted in one color (e.g., white).
 - Taken Seats: Highlighted in a different color (e.g., grey).
- 4. The user can hover over or click on a seat to view additional details such as seat number and row number.
- 5. The user can select one or more available seats by clicking on them.
- 6. If the user attempts to select a taken seat, the system displays a message: "This seat is already reserved. Please choose another seat."
- 7. After selecting the desired seats, the user clicks the Next button to proceed to the payment or confirmation page.

3.2. User Story 12 - View Ticket Price While Choosing Seats

As a user, I want to see the price of the tickets I'm buying while choosing my seats, so that I can confirm the total cost of my ticket purchase before proceeding.

- 1. On the Seat Selection Page, the user can see the following details at the top of the page:
 - o Projection Name: The movie title.
 - Projection Time: The time the movie starts.
 - Cinema Hall: The name or number of the hall where the movie is being shown.
 - Ticket Price: The price per ticket for the selected movie.

- 2. As the user selects available seats, the Total Price for the selected seats is dynamically displayed next to the seat map.
 - The Total Price is calculated based on the number of selected seats and the individual ticket price (e.g., "2 seats selected Total: \$20").
- 3. If the user deselects a seat, the Total Price is updated to reflect the current selection.
- 4. If the user hovers over or clicks on any seat, the seat's price is highlighted, ensuring transparency about the cost for each seat.
- 5. The Projection Details (including movie name, time, hall, and ticket price) remain visible while the user selects seats and scrolls through the seating arrangement.
- 6. Before confirming the seat selection, the user can review the total price and ensure it matches their expectations.
- 7. The user can proceed to the payment or confirmation page by clicking the Next button once they are satisfied with their selection and total price.

3.3. User Story 13 - Display Message for Taken Seats

As a cinema enthusiast, I want to see a message saying "The seat is already sold" if I click on a seat that has already been taken, so that I know that seat is unavailable and can choose another one.

Acceptance Criteria:

- 1. On the Seat Selection Page, if the user clicks on a seat that has already been taken, the system displays a message:
 - Message: "The seat is already sold" in a prominent location on the screen.
- 2. The message is displayed immediately after the user clicks a taken seat and remains visible until the user selects a different seat.
- 3. The Seat Selection Page remains interactive, allowing the user to continue choosing available seats.
- 4. The taken seats are visually distinguished by a different color (e.g., red) to make it clear they are unavailable.
- 5. The system ensures the user is unable to select any taken seats, providing this error message as feedback.

Epic 4. Seat Selection

4.1. User Story 14 - View Ticket Price and Payment Options

As a user, I want to see the total price of my tickets and have the option to choose a payment method, so that I can complete my ticket purchase easily and securely.

Acceptance Criteria:

- 1. After selecting seats, the Total Price for the tickets is displayed at the top of the Payment Page.
 - The Total Price reflects the number of selected seats and the price per ticket (e.g., "Total: \$30 for 3 seats").
- 2. The user is presented with a selection of payment options below the total price, which may include:
 - Credit/Debit Card
 - o PayPal
- 3. Each payment option has a clear button or link that the user can click to select their preferred method.

4.2. User Story 15 - Confirmation Popup for Payment Option

As a user, I want to see a popup asking "Do you want to continue?" after selecting a payment option, so that I can confirm my choice before proceeding.

Acceptance Criteria:

- 1. After selecting a payment option, a popup appears with the message: "Do you want to continue?"
- 2. The popup has two buttons:
 - Yes: Proceed to payment details.
 - No: Close the popup and return to the front page where available movies are shown.
- 3. The popup is modal, preventing further interaction until the user responds.

4.3. User Story 16 - Proceed to Payment Details

As a user, I want to continue to the next step for entering payment details if I click "Yes" on the confirmation popup, so that I can complete my ticket purchase.

- 1. If the user clicks Yes on the confirmation popup, the app redirects them to the next step to enter payment details (e.g., credit card information or payment provider login).
- 2. The system ensures that the payment options and fields are displayed clearly for user input.

4.4. User Story 17 - Receive Confirmation for Bought Tickets via Email

As a user, I want to receive a confirmation email for my purchased tickets, so that I have a record of my booking and can easily reference it later.

Acceptance Criteria:

- 1. After completing the ticket purchase, the system sends a confirmation email to the user's registered email address.
- 2. The email includes the following details:
 - a. Movie Title
 - b. Date and Time of the Screening
 - c. Cinema Location
 - d. Number of Seats Purchased
 - e. Total Price
 - f. Booking Reference Number
- 3. The email is sent immediately after the purchase is confirmed.
- 4. The email is clearly formatted and easy to read, providing all necessary details for the user.

Epic 5. Cancellations and Refunds

5.1. User Story 18 - Cancel Ticket Booking

As a user, I want to cancel my ticket booking before payment, so that I can change my movie or seats if needed.

- 1. The user sees a "Cancel Booking" button on the Seat Selection or Payment Page.
- 2. When the user clicks the "Cancel Booking" button, a popup appears with the message: "Are you sure you want to cancel your booking?"
- 3. The popup has two options:
 - a. Yes: Cancels the booking and takes the user back to the front page where available movies are displayed.
 - b. No: Closes the popup and keeps the user on the current page.
- 4. If the user clicks Yes, all selected details like movie, seats, and payment options are cleared.
- 5. The user can start the booking process again from the front page.

5.2. User Story 19 - Request a Refund for Cancelled Tickets

As a user, I want to be able to request a refund if I cancel my tickets, so that I can get my money back for the canceled booking.

Acceptance Criteria:

- 1. If the user cancels a ticket booking, the option to request a refund is displayed on the confirmation page.
- 2. The system asks the user to confirm their refund request.
- 3. After confirmation, the system processes the refund request and displays a message: "Your refund request has been submitted."
- 4. The system ensures that the user is notified via email or app notification when the refund is approved or rejected.
- 5. The refund process adheres to the cinema's refund policy.

Epic 6. Enhanced User Experience

6.1. User Story 20 - View Available Snacks and Drinks

As a user, I want to see available snacks and drinks at the cinema, so that I can decide what to buy during my visit.

Acceptance Criteria:

- 1. After selecting a movie or projection, the user is presented with a "Snacks and Drinks" option.
- 2. When the user clicks the option, the system displays a list of available snacks and drinks.
- 3. Each item in the list includes the name, price, and a brief description (e.g., "Large Popcorn Combo").
- 4. The user can browse the list and view all available options.
- 5. The user can return to the previous page at any time without making any selection.

6.2. User Story 21 - Rate Watched Movie

As a user, I want to rate the movie I watched, so that I can share my opinion and help others decide whether to watch it.

- 1. The system provides a rating option on the booking history page for movies the user has watched.
- 2. Users can rate a movie on a scale of 1 to 5 stars.

- 3. After submitting a rating, the system confirms that the rating has been successfully recorded.
- 4. Users can view their own rating when revisiting the booking history.
- 5. Ratings submitted by users contribute to the movie's overall rating, which is visible to others.

6.3. User Story 22 - Leave a Comment for a Movie

As a user, I want to leave a comment for a movie I watched, so that I can share my thoughts and experiences with others.

Acceptance Criteria:

- 1. The system provides a comment option on the booking history page for movies the user has watched
- 2. Users can write and submit a comment in a text box provided for each movie.
- 3. After submitting a comment, the system confirms that the comment has been successfully recorded.
- 4. Users can view their own comments when revisiting the booking history.
- 5. Submitted comments are visible to other users alongside the movie's details.

Epic 7. User Account Management

7.1. User Story 23 - View Purchase History for Movies

As a user, I want to see a list of my purchases for films on my profile, so that I can keep track of the movies I've watched and the tickets I've bought.

- 1. The system provides a "Purchase History" section on the user profile page.
- 2. The purchase history displays a list of movies the user has bought tickets for, including:
 - a. Movie name
 - b. Date and time of the show
 - c. Number of tickets purchased
 - d. Total amount paid
- 3. Users can view detailed information about a specific purchase by selecting it from the
- 4. The purchase history is updated in real-time as new transactions are completed.

7.2. User Story 24 - View Available Cinema Cards

As a user, I want to see the different cinema cards available, such as student cards or family cards, so that I can decide if I am eligible for discounts or special offers.

Acceptance Criteria:

- 1. The user can view a list of available cinema cards on the app's "Cards" or "Offers" page.
- 2. The list includes details of each card, such as eligibility criteria (e.g., student, family) and benefits (e.g., discounts, special offers).
- 3. The user can click on each card to view more information.
- 4. The system displays whether the user qualifies for a particular card based on their profile (e.g., student status).

7.3. User Story 25 - View Points on My Cinema Card

As a user, I want to see the points I have accumulated on my cinema card, so that I can track my progress and redeem rewards.

- 1. The user can view their accumulated points on their profile page or a dedicated "Rewards" section.
- 2. The points are clearly displayed, showing the current balance.
- 3. The system updates the points in real-time after each eligible purchase or action.
- 4. The user can see a history of how points were earned (e.g., by purchasing tickets or snacks).
- 5. The user can also view how many points are needed for specific rewards or discounts.

5. Product Backlog Estimation

The product backlog items for the Online Cinema Reservation system are assessed based on their implementation complexity, using the Fibonacci sequence (1, 2, 3, 5, 8, 13) as an indicator. A reference story is chosen (e.g., "Choose a City" with complexity 5), and other tasks are evaluated relative to this story.

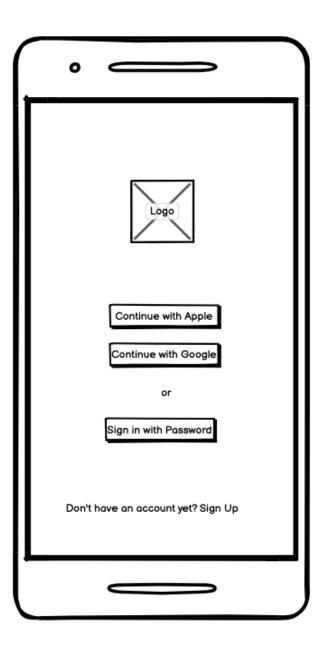
1	2	3	5	8	13
Sign Up as a Cinema Enthusiast	Continue Using App with Google	Choose a City	View Movie Details	View Available Projections	
	Continue Using App with Apple	Set a Date to Watch a Movie	View Available Seats	View Ticket Price While Choosing Seats	
	Return to Front Page	View Ticket Price and Payment	Confirmation Popup for Payment	Proceed to Payment Details	
	Cancel Ticket Booking	View Movie Trailer	View Available Snacks and Drinks	View Upcoming Movie Releases	
	Rate Watched Movie	Leave a Comment for a Movie	View Purchase History for Movies	Display Message for Taken Seats	
			View Available Cinema Cards		
				View Points on My Cinema Card	
				Receive Confirmation via Email	
				Request a Refund for Cancelled Tickets	

6. Wireframes

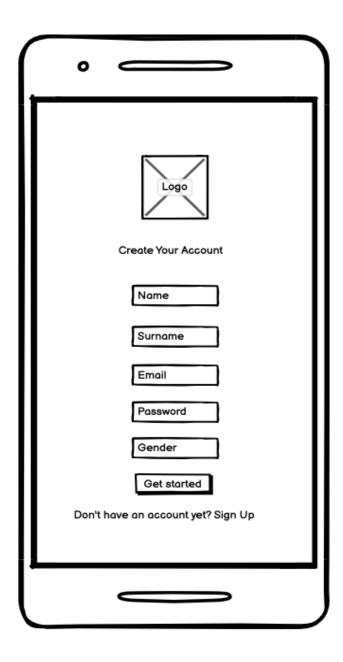
1.Landing Page

2. Sign Up Page

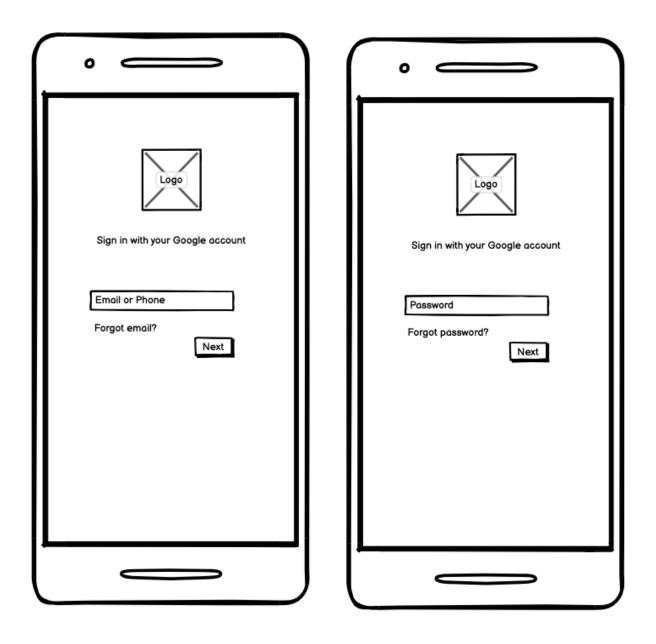




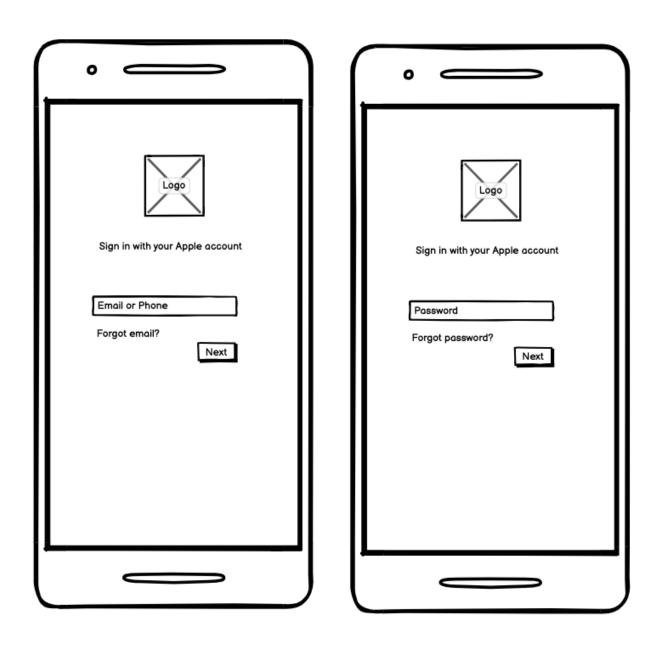
3. Sign UpPage (Entering Data)



4. Sign InPage (with Google Account)

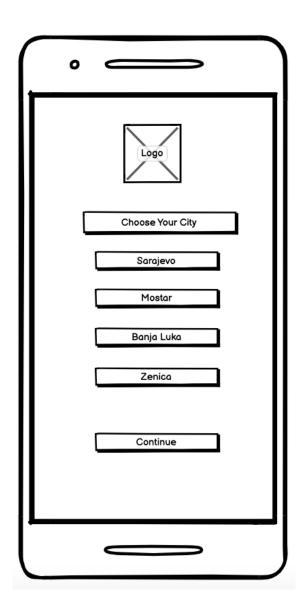


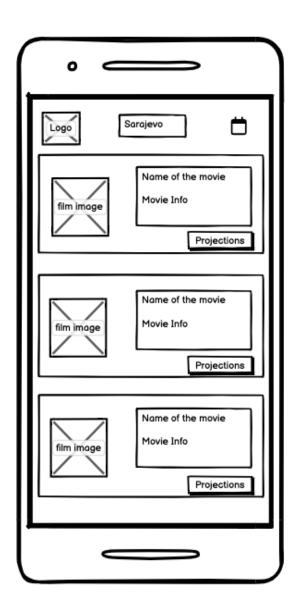
5. Sign InPage (with Apple Account)



6. Choose Your City

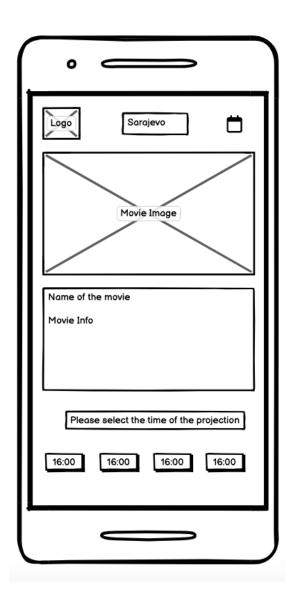
7. Main Page (available movies)

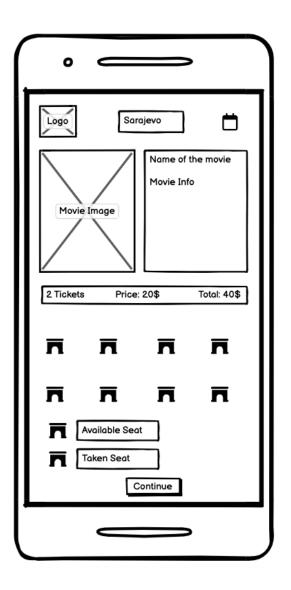




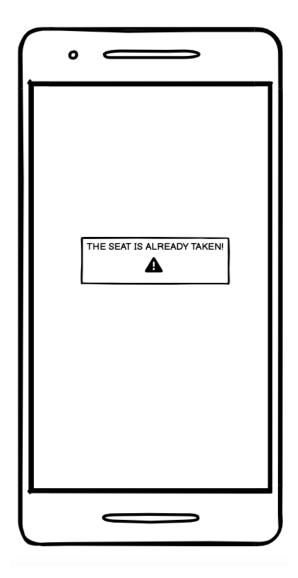
8. Projection Information Page

9. Seat Selection Page





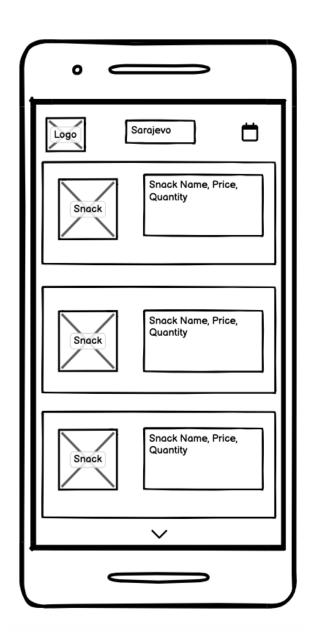
10. Seat Selection Page (alert message) 11. Movie Trailer Page

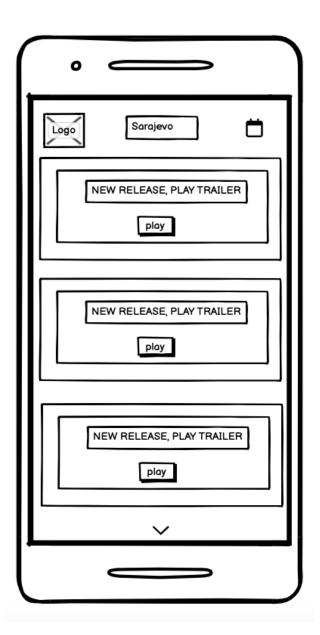




12. Snacks Page

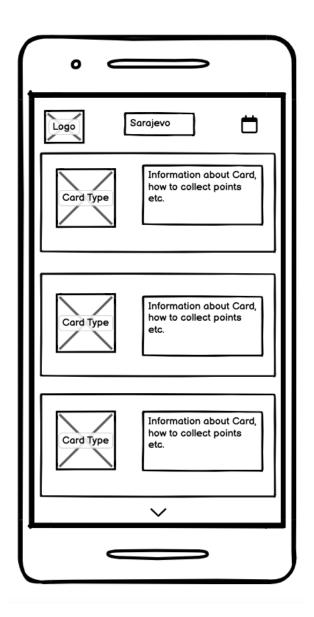
13. New Releases Page

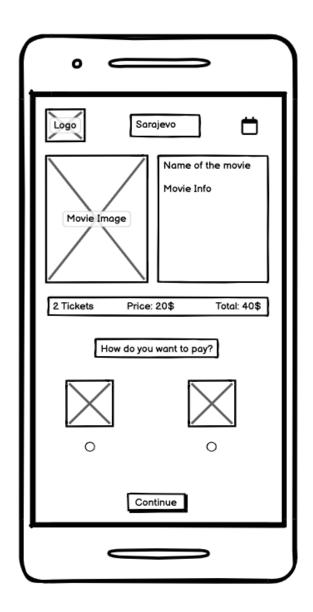




14. Cinema Cards Page

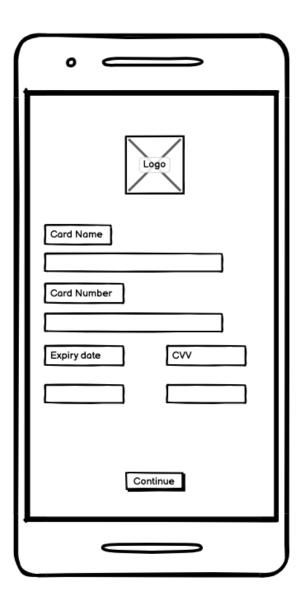
15. Payment Page

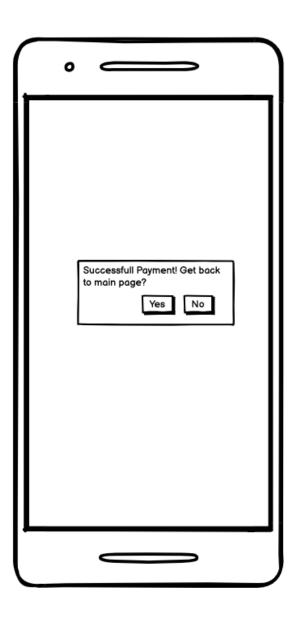




16. Card Details Page

17. Successful Payment alert





18. Points Page

19. Rate a Movie

