CEN 334 Introduction to Human Computer-Interaction

Project plan

Cinema Ticket Reservation System

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About

A cinema ticket reservation system is a software-based system that allows movie lovers to reserve tickets for movies in advance. This system is typically available online through the cinema's website or through a mobile app.

The cinema ticket reservation system allows users to browse available movies and projection time, select their preferred seats, and pay for their tickets electronically. The system may also offer additional features such as the ability to purchase concessions in advance, choose preferred seating options, and receive confirmation of the reservation via email or text message.

1. Functional Requirements

➢ **Registration** - Registration is very important due to audience tracking and analysis. It enables   a company to find the target clientele and adapt its offer to it. A user should   enter info, for example his gender, age, email address, password and most   importantly transaction number due to buying a ticket. After that, registration leads towards using the system. Unregistered customers cannot access the   system.

➢ **Login -** User should be able to open the page by entering a valid email address and password.

➢ **Movie Selection -** Scrolling down the list of the movies should be categorized and the "select" button should be visible. You will be able to see short description of a movie, main actors, duration of a movie and even small movie picture.

➢ **Time -** Movies almost always have multiple screenings. Customer should pick the one that suits him.

➢ **Seat Selection -** The customer shall be shown a 2D image of the seats from which the desired seats are selected.

➢ **Payment Processing -** Users should be able to make payments online for the reserved seats.

➢ **Reservation Confirmation -** Users should receive a confirmation of their reservation through email or text message.

➢ **Ticket generating -** System should be able to generate ticket within few seconds with code which will include (count) one more movie guest and decrease number of seats.

➢ **Add movies** - The system shall have a feature for admin to add movies and their details.

2. Nonfunctional Requirements

Security - The system uses SSL (secured socket layer) in all transactions that include any confidential customer information. The system must automatically log out all customers after a period of inactivity. The system should not leave any cookies on the customer's computer containing the user's password. The system's back-end servers shall only be accessible to authenticated administrators. Sensitive data will be encrypted before being sent over insecure connections like the internet.

Reliability - The system provides storage of all databases on redundant computers with automatic switchover. The reliability of the overall program depends on the reliability of the separate components. The main pillar of the reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Thus the overall stability of the system depends on the stability of container and its underlying operating system.

Availability - The system should be available at all times, meaning the user can access it using a web browser, only restricted by the downtime of the server on which the system runs. In case of an of a hardware failure or database corruption, a replacement page will be shown. Also in case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator. Then the service will be restarted. It means 24 X 7 availability.

Usability - The system should be user-friendly and easy to use for all types of users.

Performance - The system should be able to handle a large number of users simultaneously without any lag or system failure.

Maintainability - A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done.

Scalability - The system should be scalable to handle an increase in the number of users and reservation requests.

Accessibility - The system will be a web-based application it is going to be accessible on the web browser.

Back up - We will take a backup in our system database. In order to enable the administrator and the user to access the data from our system.

3. User group aimed at (User research)

There are several motivations that can relate users to the product of online cinema reservation:

Convenience: Online cinema reservation provides users with the convenience of reserving their seats in advance without having to physically visit the cinema. This is particularly beneficial for users who have busy schedules or limited time.

Choice: Online cinema reservation platforms allow users to browse through a wide selection of movies, screening times, and seat options, giving them more control over their cinema experience.

Cost-effective: Online cinema reservation platforms often offer discounts and promotions, making it more cost-effective for users to book their tickets online than buy them in person.
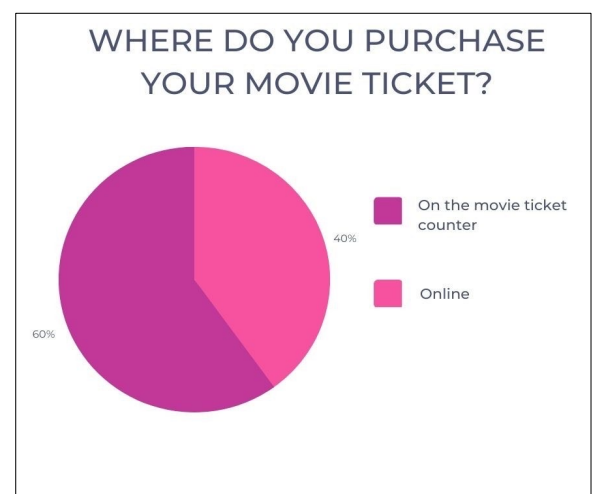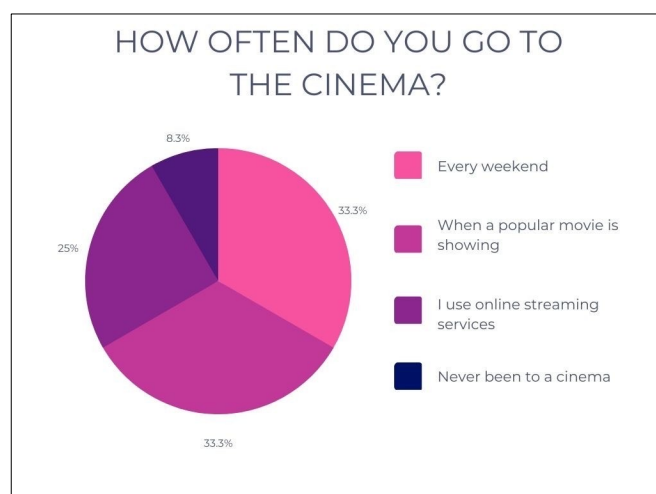
Time-saving: Users can easily compare movie schedules and seat availability across multiple cinemas, saving them time and effort.
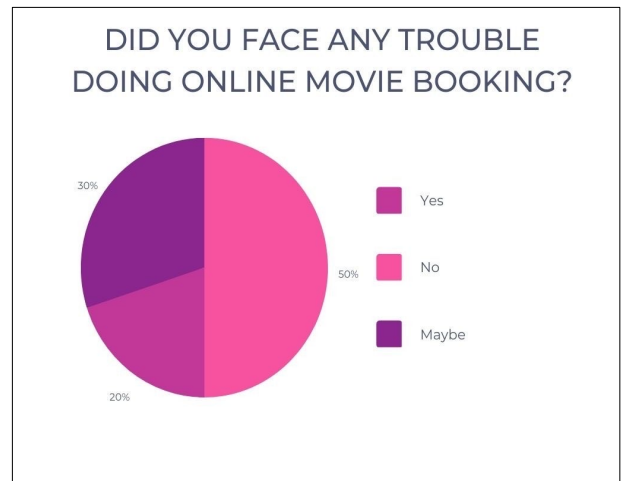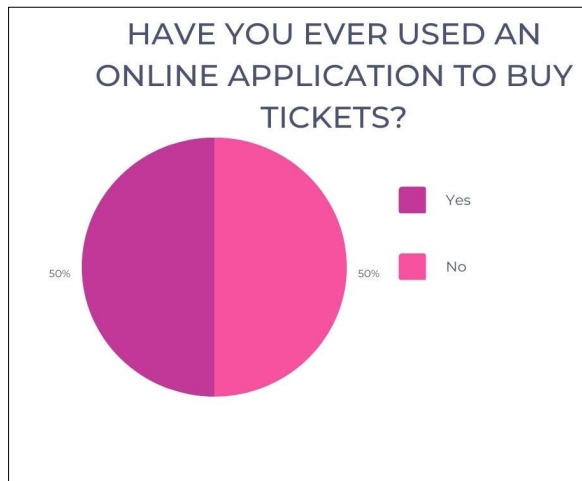
Enhanced experience: Online cinema reservation platforms may offer additional features such as movie trailers, reviews, and recommendations that enhance the user's overall cinema experience.

Social sharing: Users can share their movie plans and experiences with friends and family on social media, making it a fun and engaging activity.

By emphasizing these motivations, online cinema reservation platforms can appeal to a wide range of users and encourage them to use the service for their cinema booking needs.

3.1 User research:

HOW OFTEN DO YOU GO TO THE CINEMA?

- 33.3% Every weekend
- 33.3% When a popular movie is showing
- 25% I use online streaming services
- 8.3% Never been to a cinema

WHERE DO YOU PURCHASE YOUR MOVIE TICKET?

- 60% On the movie ticket counter
- 40% Online

HAVE YOU EVER USED AN ONLINE APPLICATION TO BUY TICKETS?

- 50% Yes
- 50% No

DID YOU FACE ANY TROUBLE DOING ONLINE MOVIE BOOKING?

- 30%
- 50% Yes / No / Maybe
- 20%

3.2 User persona:

Bio

Ema is a 23-year-old marketing manager who is passionate about her career and enjoys staying active by practicing yoga and hiking. She is also an avid reader an enjoys traveling. Emily values her independence and enyoys discovering new things.

Ema
Marketing manager

AGE	23
GENDER	FEMALE
STATUS	SINGLE
EDUCATION	IBU
LOCATION	Sarajevo

Empathetic | Independent | Organised
Puntual | Practical

"You are never too small to make a difference"

Personality

Creative
Adventurous
Independent

Goals

- She loves watching movies and wants to be able to easily and conveniently reserve tickets for the movies she wants to see.
- She is also interested in discovering new movies and being able to see trailers and read reviews before making a decision

Frustrations

- Emily has had negative experiences in the past where she has had difficulty finding the movie she wants to see or the showtime she wants is sold out.
- She values her time and dislikes the websites that are difficult to navigate or that the take too long to load.

Motivations

- Movies and bookd
- Job
- Money

Interests

- Cycling
- Fashion
- Reading
- Travelling

Influences

- Blogs
- Economic
- Movies
- Social

Frequently used apps

NETFLIX   Instagram
airbnb   Google Maps

4. Inovations aimed at

There are several innovations aimed at cinema city reservations that have emerged in recent years. Here are a few examples:

- **Mobile Apps:** Many cinema chains have developed mobile apps that allow customers to reserve seats and purchase tickets directly from their smartphones. These apps often offer features like seat selection, real-time showtimes, and even food and beverage orders.

- **Online Reservation:** Many cinemas offer online reservation systems through their websites. This allows customers to select the movie, the date and time, and the seats they want to reserve.

- **Virtual Reality:** Some cinemas have started using virtual reality technology to give customers a more immersive reservation experience. For example, they may allow customers to "explore" the cinema before making their reservation or use VR headsets to get a preview of the movie they're interested in seeing.

- **Seat-Sensing Technology:** Some cinemas have implemented seat-sensing technology that allows them to track which seats are occupied and which are available in real time. This technology can be used to optimize the seating arrangement, ensuring that the maximum number of seats are filled while maintaining social distancing requirements.

- **AI-Powered Reservation Systems:** Some cinemas have started using artificial intelligence (AI) to optimize the reservation process. These systems can analyze customer data to make personalized recommendations, predict which movies will be popular, and even adjust ticket prices based on demand.

Overall, these innovations aim to make the cinema reservation process more convenient, efficient, and enjoyable for customers.

5. Description of interface design

Having in mind that our app will be used by wide age group, we are going to design it in a way that it will be easy to use whether you're 8 or 70 years old. Design should be visually appealing, user-friendly and efficient.

Homepage will be designed to provide clear view of available movies, available projections and dates in order for users to search quickly through movies based on their preferences.

Users will also have personalized accounts where they'll be able to change personal infomation, also check on tickets they bought and eventual expiration dates.

In addition our interface will feature real-time seat selection, allowing users to see which seats are available and make their selection with just a few clicks

The interface should provide multiple payment options, such as credit cards, e-wallets or in person payment. After the reservation is complete, interface will display confirmation page that summarizes booking details (movie selection, projection, seats, number of seats, price, payment etc.). We will also include personal feedback that will give users a chance to share their experience with other current or future users.

Also, admin page will be included for managing movies, show times and users. Admin will be able to edit existing movies, add new ones and so on.

To conclude, our user interface will be designed to prioritize simplicity while providing enjoyable experience for our users.

6. Timetable

WEEK	PLANNED ACTIVITY
0	Project Proposal
1	Project Plan
2	Requirements Specification
3	Wireframe Design and Design Standards
4	Login/Register
5	Profile, Offers, Orders
6	Customer/Courier roles
7	Multi-factor authentication
8	Payment Methods
9	Usability Specification
10	Bug Fixing
11	Deployment/Release