**GROUP PROJECT**

**CMU-SE 214 ACIS**

**Online Ticket Booking**

*Date: 14/09/2024*

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# **1.** **Team Organization**

## **1.1.** **Team information**

Table 1: Team information

|  |  |  |
| --- | --- | --- |
| No. | Name | Email |
| 1 | Từ Hoàng Phi Long | phi.long2362005@gmail.com |
| 2 | Cao Thanh Sơn | soncao113@gmail.com |
| 3 | Huỳnh Nguyễn Xuân Huy | xuanhuyhng@gmail.com |
| 4 | Trần Minh Nhật | minhnhat2108@gmail.com |

## **1.2.** **Work assignment**

Table 2: Team work assignment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Title** | **Start Date** | **End Date** | **Assignee** |
| 1 | Introduction | 05/10/24 | 4/12/24 | Nhật |
| 2 | Project Problem Definition | 06/10/24 | 5/12/24 | Nhật |
| 3 | Current Status of Art | 07/10/24 | 6/12/24 | Long |
| 4 | Engineering Approach | 08/10/24 | 7/12/24 | Long |
| 5 | Task and Deliverable | 09/10/24 | 8/12/24 | Sơn |
| 6 | Project Management | 10/10/24 | 9/12/24 | Sơn |
| 7 | Constraints | 11/10/24 | 10/12/24 | Huy |
| 8 | Conclusion | 12/10/24 | 11/12/24 | Huy |

**Persona** Online Movie Ticket Booking App Persona Scenario:

1. **Persona 1: Young movie enthusiast** **Full Name:** Từ Hoàng Phi Long **Age:** 20 **Occupation:** University student **Tech-savvy Level:** High **Interests:** Watching new releases, exploring cinema technology, valuing convenience and speed. **Requirement:** Seeking a platform to easily book tickets, choose seats, and make secure payments without hassle. **Usage Scenario:** Phi Long frequently goes to the cinema with friends. Before, he had to queue for tickets or risk sold-out shows. With the app, he can browse showtimes, select preferred seats, and complete the booking in seconds. This convenience has transformed his cinema experience.

**Functional Requirements**

* Secure Login/Logout.
* Browse and search for movies and showtimes.
* Real-time seat selection and availability.
* Booking confirmation and e-ticket generation.
* Payment integration with various methods.
* User profile and booking history management.
* Notifications for upcoming showtimes and offers.

**Non-functional Requirements**

* **Security:** Implement two-factor authentication (2FA) and data encryption.
* **Performance:** Process seat booking and payment within 5 seconds.
* **Scalability:** Support thousands of simultaneous users during peak times.
* **Availability:** Ensure 99.9% uptime.
* **Usability:** Simple and intuitive interface for all ages.
* **Compatibility:** Optimized for iOS, Android, and web platforms.

# **2.** **Introduction**

The Online Movie Ticket Booking app revolutionizes how movie enthusiasts experience cinema. As entertainment demand rises, our platform eliminates traditional barriers by offering a seamless ticketing process. Users can browse showtimes, pick seats, and secure tickets instantly. Designed for the Vietnamese audience, this app is a modern solution that emphasizes convenience, speed, and security.

# **3.** **Project Problem Definition**

## **3.1.** **Business needs**

Cinema-goers face challenges like long queues, sold-out shows, and inconvenient booking processes. A digital solution simplifies access to entertainment.

## **3.2.** **Business values**

The app embodies convenience, security, and user-centric design, setting a new standard in movie ticket booking.

## **3.3.** **Business goals**

* Streamline ticket booking for Vietnamese cinema-goers.
* Enhance user experience with personalized features.
* Support cinemas in increasing ticket sales and audience engagement.

## **3.4.** **Project Solution**

A robust app enabling real-time booking, secure payments, and seamless integration with cinema systems, delivering a superior experience to users and theater operators.

# **4.** **Current Status of Art**

This section reviews existing technologies and platforms in the entertainment sector, including trends in online ticketing, security measures, and user interface designs. It highlights the advancements and limitations of current solutions, positioning this app as a modern alternative.

# **5.** **Engineering Approach**

## **5.1.** **System Context Diagram**

Figure 1. System Context Diagram

## **5.2.** **System Context Description**

### **5.2.1.** **User**

End-users who interact with the application to browse movies, book tickets, and make secure payments.

### **5.2.2.** **Admin**

System administrators responsible for managing user accounts, overseeing system performance, and ensuring security.

##### **5.2.3. Banking or Financial Services**

Cinema staff who manage booking data, seat availability, and movie schedules.

##### **5.2.4. Store Owners**

Merchants and businesses that accept payments through the application, benefiting from its financial management capabilities.

##### **5.3.1. Technical Constraints**

Limitations related to software and hardware requirements, including compatibility and performance issues.

##### **5.3.2. Environmental Constraints**

Factors related to the deployment environment, such as network availability and data storage regulations.

##### **5.3.3. Other Constraints**

Additional constraints including legal and compliance requirements, and user accessibility issues.

### 6. Tasks and Deliverables

#### 6.1. Tasks

* Design and development of core functionalities.
* Implementation of security features and AI integration.
* Development of user interface and experience.
* Testing and quality assurance.

#### 6.2. Deliverables

* Finalized application with all core features implemented.
* User documentation and support materials.
* Completed testing reports and quality assurance documentation.

### 7. Project Management

#### 7.1. Cost/Budget

A detailed budget plan covering development costs, resources, and any additional expenses required for the project.

#### 7.2. Schedule

A project timeline outlining key milestones, deadlines, and deliverable dates to ensure timely completion.

### 8. Constraints

#### 8.1. Economic

Considerations related to financial resources and budget constraints impacting the project's execution.

#### 8.2. Environmental

Factors affecting the deployment and operation of the application in different environments.

#### 8.3. Ethical

Ethical considerations related to user data privacy, security practices, and responsible AI usage.

#### 8.4. Public Health, Safety, and Welfare

Impact on public health and safety, ensuring the application promotes well-being and adheres to relevant regulations.

#### 8.5. Cultural

Cultural factors influencing user experience and acceptance of the application in the Vietnamese context.

#### 8.6. Sustainability

Long-term sustainability of the application, including maintenance, updates, and environmental considerations.

### 9. Conclusion

A summary of the project’s achievements, impact, and future directions, emphasizing the significance of Thanh in advancing financial technology and improving user experience.

### 10. References

A list of all sources, research papers, and references used in the development and documentation of the Thanh banking project.