**A PROPOSED WEB-BASED CINEMA BOOKING SYSTEM**

**FOR SM CINEMA GRAND CENTRAL**

A Project Proposal Presented to the

Faculty of Datamex College of Saint Adeline, Inc.

In Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Information Technology

By:

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**PROJECT PROPOSAL**

**INTRODUCTION**

With the growing demand for online services, efficient cinema ticket booking has become increasingly important for customer satisfaction and operational efficiency. Many existing booking systems rely on virtual waiting rooms like Queue-it, which, while preventing system crashes, often lead to long wait times, technical glitches, and uncertainty for users.

The Cinema Booking System is a web-based platform designed to improve the movie ticket reservation experience for both customers and administrators. It will offer online seat selection, movie browsing, and scheduling through a responsive and user-friendly interface. This project addresses common issues in existing booking systems, such as unresponsive layouts, limited user features, and inefficient handling of simultaneous seat reservations.

By enhancing both performance and usability, the system aims to provide a smoother experience for customers and better operational tools for administrators. The project aims to develop a working system that focuses on reliable seat booking, improved user interface design, and basic administrative control. It is designed to be practical, manageable, and suitable for a typical cinema operation environment, providing tangible benefits for both cinema-goers and operational staff.

**CLIENT INFORMATION**

This section provides essential information about the client organization for the Cinema Booking System project, including company background, current operations, and stakeholder contact details to establish project context and communication channels.

**Client Organization**

**** SM Cinema

Image 1. SM Cinema Screening Room

**Company Background**

SM Cinema is the largest cinema exhibitor in the Philippines. It operates under SM Lifestyle, Inc., a subsidiary of SM Prime Holdings, Inc. The company manages over 60 digital cinema branches nationwide and provides services such as online ticket booking, reserved seating, and mobile ticketing. SM Cinema serves millions of customers through both physical theaters and its online platform.

**Stakeholder Contact Information**

**Email**

customercare@smcinema.com

**Phone**

(+632) 8470 2222

**Address**

J.W. Diokno Boulevard, Pasay City, Metro Manila, Philippines

**PROJECT SCOPE**

**Deliverables and Expected Outcomes**

The project will deliver a web-based Cinema Booking System with core functionalities that allow customers to view movie listings, select screening times, and reserve specific seats.

It will also include an administrative dashboard where authorized personnel can manage movie schedules, view audit logs, and oversee reservation activity. The system will feature email-based ticket delivery and a responsive design suitable for desktop and mobile browsers.

**Inclusions**

The system covers a few key features. Customers can pick seats and book reservations through a straightforward webpage. They’ll have access to current movie listings and showtimes.

For admins, there’s a dashboard to handle schedules and monitor activity. The system will send ticket confirmations by email and maintain a log of admin actions for accountability. The webpage is built to be responsive, so it works smoothly on desktop browsers as well as mobile browsers, adapting to different screen sizes.

**Exclusions**

A few things aren’t part of this project. It won’t handle online payments or send SMS notifications. There’s no support for complex theater setups like multiple locations or special seating options such as VIP or recliner chairs.

Features like staff management or detailed analytics reports aren’t included either. Customers won’t have accounts, reviews, loyalty programs, or social features, and there won’t be a dedicated mobile app just a web-based system.

**Assumptions**

We’re working on the basis that the cinema already has a list of movies and schedules ready to go. Customers and admins should have reliable internet access to use the system. Staff managing the system will likely do so from desktop browsers, and we’ll have some sample movie data to use for testing and demos.

**Constraints**

The project has a limited development timeframe and requires complex integration of real-time seat availability tracking, which presents technical challenges within the given timeline.

**PROJECT APPROACH**

This project will follow the Agile methodology, using an iterative development cycle across four main phases over an eight-week period. Each phase will focus on completing a specific set of functional requirements, ensuring that features are working before proceeding to the next stage.

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| --- | --- | --- |
| Phase | Timeline | Key Activities |
| Phase 1 | Week 1-2 | Backend setup implement core models for movie listings and booking |
| Phase 2 | Week 3-4 | Seat selection logic and booking confirmation system |
| Phase 3 | Week 5-6 | Frontend interface development and integration with backend APIs |
| Phase 4 | Week 7-8 | Admin features, email notification system and deployment preparation |

Table 1. Project Development Phases and Timeline

Incremental testing and basic technical documentation will be maintained throughout the development process to support stability and academic evaluation.

**PROJECT TIMELINE**

The project is planned over an eight-week development cycle, divided into four main phases. Each phase builds upon the last, with critical dependencies between backend completion and frontend integration.

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Timeline | Key Milestones & Deliverables | Dependencies |
| Phase 1 | Week 1-2 | * System design and DB schema planning * Backend setup * Models for movies, showtimes, reservations * Initial backend testing |  |
| Phase 2 | Week 3-4 | * Seat selection logic * Booking workflow * Email logic planning | Phase 1 backend completed |
| Phase 3 | Week 5-6 | * User interface * Frontend-backend integration * Email notification system * Mid-development testing | Phases 1–2 APIs done |
| Phase 4 | Week 7-8 | * Admin dashboard * Final bug fixes and docs * Prepare for deployment and final demonstration | All prior phases completed |

Table 2. Agile Development Phase Timeline and Deliverables

**PROJECT RESOURCES**

The following resources and technologies have been allocated for the successful development and implementation of this project.

**Hardware**

* **CPU**: Intel Core i3 or AMD Ryzen 3
* **RAM**: 4GB DDR4
* **Storage**: 256GB SSD or HDD
* **Display**: 1366x768 resolution minimum
* **Network**: Ethernet or WiFi connection
* **Browser**: Chrome, Firefox, Safari, or Edge (latest version)

**Software and Tools**

* **Code Editor:** Visual Studio Code
* **Version Control:** Git and GitHub
* **Database:** PostgreSQL

**Programming Languages**

* Python
* JavaScript
* HTML
* CSS

**RISK MANAGEMENT**

**Potential Risks and Mitigation Strategies**

**Time Constraints**

The limited development period may restrict the ability to implement additional or complex features.

*Mitigation:* A phased development plan will be followed, with core functionality prioritized in the early stages.

**Solo Development Responsibility**

All tasks depend on a single developer, significantly increasing the impact of any potential delays or unforeseen challenges.

*Mitigation:* Tasks will be organized weekly, with version control and regular progress tracking to maintain momentum.

**Complex Seat Selection Logic**

Handling reservation logic and concurrency may introduce technical difficulties.

*Mitigation:* The logic will be divided into manageable parts and tested early with simulated edge cases.

**Limited Testing Opportunities**

Lack of real users may limit feedback and reveal fewer usability issues.

*Mitigation:* Local scenario testing and peer code reviews will be used to identify issues proactively.

**Learning Curve (Frontend Development)**

Creating interactive components like seat selection may be challenging despite prior JavaScript experience.

*Mitigation:* Development will begin with basic UI elements, gradually progressing to dynamic components, supported by documentation and tutorials when needed.

**Email Integration Complexity**

Setting up third-party email services may involve delivery or configuration issues.

*Mitigation:* A basic SMTP setup will be used initially, with fallback to logging if needed.

**PROJECT GOVERNANCE**

**Project Oversight and Decision Making**

The developer is solely responsible for planning, execution, and quality control throughout the development lifecycle.

All technical and design decisions are guided by project goals, development best practices, and timeline constraints. Progress is reviewed weekly using task lists and version control tools to ensure consistent delivery and alignment with the project scope.

**Roles and Responsibilities of Stakeholders**

The developer fulfills all roles typically involved in small-scale software development, including project manager, developer, and tester.

Client expectations are interpreted based on established standards for cinema booking systems to ensure the system aligns with common industry functionality and usability goals.

**APPENDIX**

**Reference Website -** https://www.smcinema.com