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# Project Overview

An Event Ticketing System for the sale, management and validation of tickets for an Event Centre.

## PROJECT SPONSOR

The Project will be sponsored by the Chief Information officer (CIO) of the business.

## PROJECT TEAM MEMBERS

* The Product Owner
* The Business Analyst
* The Project Manager
* The Engineering team
* The Design Team
* The Project Stakeholders

# Business Need

Our Event Centre, PRIME EVENTS needs a ticketing software to allow them sell multiple tickets for different events, allowing customers to browse and purchase these tickets.

## BACKGROUND

The Event Centre is expanding its operations by moving to a bigger space with a many more facilities. As a result, they will be organizing a greater number of events and managing the sales of a lot more tickets than they currently do. Currently they print and distribute tickets manually which is tedious and takes a lot of time but has been easily manageable due to the low number of events and tickets sold. Since they are expanding operations and will be managing a large number of events and tickets, this will require an event ticketing software to effectively manage the sales of multiple tickets for all the events.

## BUSINESS OBJECTIVES

The main objective of this ticketing system is to facilitate the sale of tickets to customers but the specific objectives that the business wants to achieve are:

* **B0-1:** Multi-Event Support with Multiple ticket Categories. The business needs a system that will handle several events with multiple ticket categories simultaneously with unique configurations for each.
* **B0-2:** Automating Capacity Management. Set limits for ticket availability and track real-time sales to avoid overbooking
* **B0-3:** Offering dynamic pricing with promotions and discounts: Pricing adjustments based on different factors, options to include promo codes, early bird discounts, etc.

# Business Requirements

Automating Ticket Purchasing and Validation. This should include:

* Enable organizers to create manage and edit event details and ticket types
* Support multiple ticket types
* Deliver tickets through email with unique coded for validation
* Support secure and seamless processing
* Enable User accounts and authentication
* Real-time inventory management
* Implement ticket scanning and validation
* Report and Analytics on sales and revenue
* Ensure scalability and performance with high traffic volumes
* Ensure compliance with data protection laws and secure authentication mechanisms

# Business Value Estimates

## COSTS

* Initial Development Cost- $150,000
* Cost of Integration (CRM, Email and Payment)- $50,000
* Training Cost- $10,000
* Maintenance Cost- $100,000 (annually)
* **TOTAL COST OF OWNERSHIP** (15 years)- $1,710,000

## BENEFITS

This system aims to provide both tangible and intangible benefits to the business. The Intangible benefits include:

* Enhanced Customer Experience
* Brand Reputation and Loyalty
* Data-driven decision making
* Compliance and security
* Time saving
* Scalability
* Increased accessibility

However, the tangible benefits that the system aims to provide include:

* Increased revenue generation from ticket sales- $200,000 annually
* Cost savings from staffing and printing & Distribution- $120,000 annually
* Marketing and Efficiency gains- $50,000
* Fraud prevention- $50,000
* **TOTAL ANNUAL BENEFITS**- $420,000

Discount Rate- 8%

Therefore, the Net Present Value (NPV) over a 5-year period is estimated to be- **$289,198.10**

# System Requirements

The following table consists of the core requirements that this process must follow:

|  |  |  |  |
| --- | --- | --- | --- |
| ID | DESCRIPTION | TYPE | REFERENCE |
| BR-001 | The system must allow event organizers create events by specifying the title, date and time, description and location | Functional | Stakeholder Interview-Product owner |
| BR-002 | The system shall allow event organizers create multiple ticket types with different prices, quantities and discounts for each event | Functional | Stakeholder Interview-Product owner |
| Br-003 | Event organizers must have a dedicated dashboard to track ticket sales | Functional | Stakeholder Interview-Product owner |
| BR-004 | The system must display all available tickets to customers to select from | Functional | Interview with SMEs |
| BR-005 | The system shall allow users to search for specific tickets or events | Functional | User Interviews |
| BR-006 | The system should allow users to filter and browse search results to find tickets based on date, category or location | Functional | User Interviews |
| BR-007 | The system must display ticket/event details for users to view | Functional | User Interviews |
| BR-008 | The system should allow the users view all the available ticket categories with their offerings and pricing | Functional | User Interviews |
| BR-009 | The system must allow users to select the number of tickets they want to purchase | Functional | User Interviews |
| BR-010 | The system shall have a “cart” where users can add tickets that they want to purchase | Functional | User Interviews |
| BR-011 | The system shall allow users to add a maximum of 20 tickets to their cart | Non-functional | Stakeholder Interviews- IT department |
| BR-012 | When a ticket is selected, the system shall allow users to purchase the ticket | Functional | User Interviews |
| BR-013 | The system should allow users, put in a discount or referral code if applicable | Functional | Interview with SMEs |
| BR-014 | The system must allow users view and select an available payment method for their ticket purchase | Functional | Interview with SMEs |
| BR-015 | The system shall allow users put in a payment information for their preferred method | Functional | Interview with SMEs |
| BR-016 | The system must allow users confirm their payment details before finalizing the purchase | Functional | Stakeholder Interview-Product owner |
| BR-017 | The system must ask for permission to store user payment details | Functional | User Interviews |
| BR-018 | If the payment is not successful, the system shall inform the users with the accompanying error message and retry options | Functional | User Interviews |
| BR-019 | If the payment is successful, the system shall inform the user with an email confirmation, and provide the purchased ticket | Functional | User Interviews |
| BR-020 | Users must be able to register, log-in and manage their profiles | Functional | User Interviews |
| BR-021 | The system shall allow users select their preferred language | Functional | User interviews |
| BR-022 | The system shall allow users view all their purchases, including past purchases | Functional | User Interviews |
| BR-023 | The system shall generate a unique barcode for each purchased ticket | Functional | Stakeholder Interviews- IT department |
| BR-024 | The system must enable event staff to scan barcodes to validate tickets at the venue | Functional | Stakeholder Interviews- IT department |
| BR-025 | The system shall flag duplicate or invalid tickets during the validation process | Functional | Stakeholder Interviews- IT department |
| BR-026 | The system should support real-time updates of ticket availability | Non-functional | Stakeholder Interviews- IT department |
| BR-027 | When the limit for a particular ticket has been reached the system should stop the purchase of that ticket. | Non-functional | Stakeholder Interviews- IT department |
| BR-028 | When applicable, the system shall adjust pricing based on several factors for the users | Non-functional | Stakeholder Interviews- IT department |
| BR-029 | The system shall support three main languages- English, French and German | Non-functional | Stakeholder Interviews- IT department |
| BR-030 | The system must handle 3,000 concurrent users without performance degradation | Non-functional | Stakeholder Interviews- IT department |
| BR-031 | All sensitive user data must be encrypted using 256-bit encryption | Non-functional | Stakeholder Interviews- IT department |
| BR-032 | The system must implement multi-factor authentication (MFA) for admin access | Non-functional | Interview with SMEs |
| BR-033 | The system must be accessible to users with disabilities and comply with WCAG 2.1 Level AA standards | Non-functional | Interview with SMEs |
| BR-034 | The system should ensure consistent ticket validation even under heavy load | Non-functional | Stakeholder Interviews- IT department |
| BR-035 | If server restarts, event data and ticket inventory must remain accurate | Non-functional | Stakeholder Interviews- IT department |
| BR-036 | The system must integrate seamlessly with CRM system | Non-functional | Stakeholder Interviews- Product owner |
| BR-037 | The system must adhere to GDPR for user data protection | Non-functional | Interview with SMEs |

# Data Flow Diagram

