Software Requirements Specification
for
CLub Event Management System

Prepared by:

Abdullah Al Sayem (202220742)
Asman Farhad (2031679642)
Shahriar Hossain Shezan (2013184642)

North South University
Software Engineering (CSE - 327)

5. October 2024

Contents

Chapter 1

Introduction

Clubs offer a dynamic environment for members to pursue their interests, learn new skills, and network with like-minded people. However, arranging club activities may be chaotic and difficult, especially when dealing with members, event organisers, and outside parties. This disorder can result in inefficiencies, time loss, and increased expenditures. A specialised Club Event Management System can help overcome these obstacles by providing a streamlined platform for event planning, member involvement, and successful communication..

From members and students seeking information on future events to organisers arranging activities and administrators supervising club operations, the Club Event Management System is intended to simplify these processes, increase participation, and promote overall club efficiency. By centralising event data, alerts, and registration, the system provides a streamlined experience for all club members, allowing them to focus on relevant activities rather than logistics. Finally, this approach intends to make event management easier, more efficient, and fun for all involved.

1.1 Purpose

This software requirements specification holds a comprehensive description of the Club Event Management System. The purpose of this document is to establish a clear contract between the stakeholders of this project to ensure common understanding of the system's purpose, scope, and constraints. This document outlines the system's along with all the detailed requirements (functional and non-functional) and all possible use cases. Consequently, this document aims to provide a clear roadmap for the development, implementation, and maintenance of a robust yet user-centric platform that allows clubs to efficiently plan events, engage members, and improve overall club operations.

1.2 Intended Audience

- Developers and Influential Individuals
- Project Testers
- Marketing Department

1.3 Intended Use

- **Developers and Influential Individuals**
  The primary target audience for this software requirement specification consists of developers and influential individuals involved in creating this club administration system from the ground up. With the

help of this SRS, developers can quickly determine the scale of the project, where to put more effort, what needs to be improved, and whether there is room for new features or functions.

- **Project Testers**
  For the purpose of development planning, this paper explains the features, qualities, performance, and design restrictions of the system.
- **Marketing Department**
  In that case, the target readership could include business owners, partners, project managers, supervisors, and all potential stakeholders. They can utilise this SRS to get an idea about what they are going to promote and what are the benefits of this project and how these features will aid the clients or users.

1.4 Product Scope

This project aims to deliver a solid event management system which can increase the involvement and participation in club activities and events. An event management system should be able to drive more attention and response to all kinds of events since they can be marketed well through a comprehensive user interface. Apart from enhancing club community engagement and satisfaction, this system should be able to improve the revenues from events and also encourage more events and activities in the future.

One of the main goals of this project is to streamline event planning, promotion, and management processes. This will allow the following objectives to be fulfilled as well:

- Facilitate seamless event discovery, registration, and attendance tracking.
- Provide actionable insights for strategic decision-making.
- Improve administrative efficiency and effectiveness in event coordination.

A broader business perspective can also be scoped within this project which enables the following goals to be achieved:

- The system should drive student retention and satisfaction through enhanced club experiences.
- The system should increase attendance and participation in club events and activities thus increasing revenue.
- The system should strengthen the club's reputation as a dynamic and engaging learning environment bolstering its rankings in the process.

1.5 Risk Definition

- For unstable network connection, help services can be disrupted.
- Too many server requests is not controllable for the server.
- Too many user at a same time can cause server traffic.

Chapter 2

Overall Description

The Club Event Management System provides a centralised platform enabling all possible stakeholders to plan and execute events with effective options for registration and management; it empowers students, faculty, and staff to easily discover and participate in a wide range of club activities through a well-structured search engine and friendly user interface. With features tailored to meet the diverse needs of all possible stakeholders, from academic event coordination to student club activities, the system aims to be a stable platform for all sorts of events to be discovered and shine on the campus.

Nevertheless, students can benefit from access to detailed and structured event information and easier registration processes, along with an active discussion board to resolve confusion and allow for promotion. Faculty members can efficiently organise academic events and engage with students effectively. Event organisers will find a diverse set of tools to facilitate all possible ways to organise and execute events to the fullest. Administrators will gain insights into past events which will enable strategic planning and proper resource allocation. This system ultimately aims to make the process of coordinating events easier and less stress-inducing through its user-friendly interface and comprehensive feature set.

2.1 User Classes and Characteristics

Users for this system can be categorised into a diverse user base, including Students, Event Organizers, club members , guests and Administrators. The system will allow different access permissions applied to different user roles:

- Administrators
- Event organizers
- Club members
- guests
- Students

2.2 User Needs

The System will serve as a centralised platform to facilitate the planning, promotion, and participation in a variety of club-organized events, including:

- Sports tournaments
- Cultural events

- Religious events
- Flash Mobs
- Concerts
- Seminars
- Theatre Dramas
- Job Fairs
- Competitive Events
- Club Recruitments
- Club Meetings
- Workshops

Nonetheless, the system will help administrators and club members run these events more efficiently, improving communication, coordination, and overall event experience. Additionally, the system will provide secure access to all users, as well as robust authorization mechanisms to maintain data privacy and integrity. Club members will be able to submit comments on events, which will assist organisers to refine and improve future club activities.

2.3 Operating Environment

- DBMS: PostgreSQL(SQL) or MongoDB(NoSQL)
- Web Development Framework: React and ExpressJS
- Authentication Service Provider: clerk.com
- Email Service Provider: nodemailer
- Calendar Service: Built-in and integrated external systems
- Hosting Provider: not yet decided

2.4 Constraints

- Programming Languages: JavaScript (React for front-end, Node.js/Express for back-end).
- Database: Use PostgreSQL or MongoDB.
- Timeline: Complete the project within 12 weeks.
- Hosting: Deploy on a cloud platform like AWS, Heroku, or Google Cloud
- Browser Compatibility: Support Chrome, Firefox, Safari, and Edge.
- Authentication: Implement secure user authentication (OAuth 2.0 or JWT).
- Compliance: Adhere to local data protection regulations.
- Team Size: Limit to 3-5 developers.
- Budget: Focus on essential, low-cost tools and services.
- Notifications: Use cost-effective email/SMS services.
- Data Access: Access to existing member data is required.

2.5 Assumptions

Some critical assumptions for this event management system are as follows:

- The system has access to a club member database to verify member IDs and manage user profiles.
- External applications (e.g., Zoom, WhatsApp) will handle audio/video calls and instant messaging.
- Administrators have the highest authority with a dedicated dashboard to manage events, memberships, and system settings.
- Users can sync event schedules with external calendar services, such as Google Calendar, for added convenience.
- Users are expected to have a reliable internet connection for optimal system performance and real-time notifications

Chapter 3

Requirements

3.1 Functional Requirements

The functional requirements for this project have been outlined below according to user stories deemed worthy.
User story-1: As a new user, I want to be able to create my profile.
Requirements:

- The system must provide a registration form with fields for entering essential information such as full name, NSU email address, password, and other required details.
- The system must provide email verification to ensure the validity of the user's email address by sending a verification email with a unique code.

User story-2: As an existing user, I want to be able to log in to my account.
Requirement:

- The system must allow users to enter their accounts by entering their NSU email and password.
- The system must verify their accounts.

User Story-3: As an admin, I want to manage, view users/ user's identification.
Requirement:

- System must provide an interface within the admin dashboard or control panel where admins can manage and view user accounts and identification details.
- System must display a list of registered users with options to "View", "Edit", "Suspend", or "Delete" user accounts.

User story-4: As an admin, I want to approve an event's post, event's update
Requirement:

- The system must provide an approval queue or dashboard where admins can review pending event posts and updates awaiting approval.
- The system must provide options for admins to take action on event posts, such as "Approve," "Reject," or "Request" for further information from the event organisers.

User Story-5: As an Admin, I want to delete an event.
Requirement:

- The system must display a list of existing events with options to delete individual events.

User story-6: As an event organizer, I want to create, and update events.
Requirement:

- System must provide a user-friendly form for event organisers to create new events. Field will Include event details such as event name, description, date, time, location, category, club name, organiser information,
- System must display an update option for existing events to update and edit existing event details as needed. And this update request will be sent to the admin for approval.

User Story-7: As an Event organiser, I want to be able to manage guest lists.
Requirement:

- System must provide event organisers with a dedicated interface to manage guest lists, allowing them to view, add, edit, and remove guests from the list.

User story-8: As an Event organisers, I want to chat to other users regarding the events' matters.
Requirement:

- System will allow a chat functionality within the event management interface that allows organisers to communicate with other users regarding event-related matters.

User Story-9: As an user (Admin/ Event organiser/ Student/ faculty), I want to participate in events.
Requirement:

- System must display an "Attend" option for existing events to attend the events.
- System must provide a user-friendly registration process for users to sign up for events they wish to participate in after clicking the "Attend" option.
- System must send confirmation emails to users upon successful event registration.

User story-10: As an user (Admin/ Event organiser/ Student/ faculty), I want to search events.
Requirement:

- System must Provide a search bar displayed on the website interface.
- Allow students to enter keywords such as event names/club name/ event host's name/ event topics etc.

External Functional Requirements
1. Integration with Member Management Systems:
The system should integrate with the existing club member database to authenticate and validate new member registrations, ensuring only verified members have access to the system and events.
2. User-Friendly Interface:
The system will feature an intuitive and easy-to-use interface that follows the latest UX trends. It should be accessible and engaging for all user roles (e.g., administrators, event organizers, and members) across desktop and mobile devices.
3. Calendar Synchronization:
Users should have the option to sync events with personal calendars (e.g., Google Calendar, Outlook), enabling them to receive timely reminders and easily stay updated on upcoming club activities.
4. Social Media Sharing:
The system should allow users to share event details on social media platforms (e.g., Facebook, Instagram, Twitter, LinkedIn) to increase event visibility and attract more participants. This feature will help promote events within the users' networks and enhance club engagement.

3.2 Non Functional Requirements

Performance:

- Response Time: The application should respond to user interactions within a very short timeframe, ensuring quick data retrieval.
- Scalability: The app should be able to handle a large number of concurrent users.
- Mobile Responsiveness: The app should have a responsive web interface that works seamlessly across desktop and mobile devices

Reliability:

- Availability: The app should be available and accessible to users with minimal downtime for maintenance or service interruptions.
- Fault Tolerance: The app should gracefully handle errors, failures.

Security:

- Secure and protection of data: Personal information, such as member details, should be securely protected. The system will employ industry-standard data protection measures to prevent unauthorized access.
- Secure and protection of data: Personal information, such as member details, should be securely protected. The system will employ industry-standard data protection measures to prevent unauthorized access.
- Authentication and Authorization: System will verify user identities and enforce access controls based on user roles and permissions.
- Encryption: The system should encrypt sensitive information such as passwords and personal details.

Maintainability:

- Proper documentation highlighting major design decisions and system architecture for ease of use. A proper documentation will allow for less mistakes when developing new feature additions and support ongoing maintenance.

Scalability:

- The system should be able to handle an increasing number of users and concurrent events especially during large club events

Usability:

- Proper use of the latest and most effective UX design trends
- Goal to make the user interface as intuitive as possible giving a memorable user experience.

Appendices

Appendix A

Glossary

SRS: A software requirements specification (SRS) is a description of a software system to be developed. The software requirements specification lays out functional and non-functional requirements, and it may include a set of use cases that describe user interactions that the software must provide to the user for perfect interaction.