Online Event Management System

Muthu Raja B
Dept of Master of Computer Applications (MCA)
Dr. M.G.R Educational and Research Institute
Chennai, Tamil Nadu, India

Abstract- *The Online Event Management System is a web-based application developed to automate and simplify the process of managing events in educational institutions. Traditional event management methods using notices, spreadsheets, and manual communication often lead to scheduling conflicts, poor coordination, and inefficient record maintenance. The proposed system provides a centralized platform where Admins, Staff, Approvers, and Students can manage event-related activities efficiently.*

The system supports functionalities such as event creation, approval workflow, participant registration, QR code-based attendance tracking, feedback collection, and automatic certificate generation. The application is developed using Flutter for frontend development and REST APIs with MySQL database integration for backend processing and secure data management.

The system improves communication, reduces manual workload, enhances data accuracy, and provides a scalable solution for modern event management in educational institutions.

Keywords: Event Management System, Flutter, QR Attendance, REST API, MySQL, Event Registration

I. INTRODUCTION

Event management plays a crucial role in educational institutions for organizing seminars, workshops, technical events, cultural programs, and other academic activities. Traditional event management methods often rely on manual processes such as notices, spreadsheets, and verbal communication, which can lead to scheduling conflicts, poor coordination, and inefficient record management.

The Online Event Management System is developed to provide a centralized platform that automates the complete event management process. The system enables administrators, staff members, approvers, and students to interact efficiently through a secure and user-friendly interface. Staff members can create events, approvers can verify and approve event requests, and students can register and participate in events online.

The proposed system incorporates advanced features such as QR code-based attendance tracking, automated notifications, feedback collection, and digital certificate generation. Developed using Flutter, REST APIs, and MySQL, the application ensures secure data management, improved communication, and efficient event handling within educational institutions.

The primary objective of this system is to reduce manual workload, enhance operational efficiency, improve data accuracy, and provide a scalable solution for modern event management.

II. EXISTING SYSTEM

In many educational institutions, event management activities are performed manually using notices, spreadsheets, emails, and verbal communication. Event organizers are required to maintain separate records for participant registration, attendance tracking, event approvals, and certificate generation. This manual approach often results in scheduling conflicts, communication delays, data redundancy, and inefficient record management.

The approval process requires continuous interaction between staff members and authorities, making it difficult to track the status of events. Attendance is usually recorded using paper sheets, which can lead to errors, duplicate entries, and security issues. Additionally, generating certificates and preparing reports requires significant manual effort and time.

The existing system lacks automation, centralized data management, real-time notifications, and secure access control. Therefore, it is not suitable for efficiently managing large-scale events in educational institutions.

III. PROPOSED SYSTEM

The proposed Online Event Management System provides a centralized platform for managing institutional events efficiently. The system supports multiple user roles such as Admin, Staff, Approver, and Students, each having specific permissions and responsibilities.The adminmanages users, departments, venues, notifications, and overall system settings. Staff members can create and manage events, while

Approvers verify and approve event requests before publication. Students can browse available events, register for participation, mark attendance using QR codes, submit feedback, and download participation certificates.

The application is developed using Flutter for frontend development and REST APIs with MySQL database integration for backend processing. Advanced features such as QR code-based attendance tracking, venue clash detection, automated notifications, feedback collection, and digital certificate generation improve efficiency, reduce manual workload, and enhancecommunication among users.

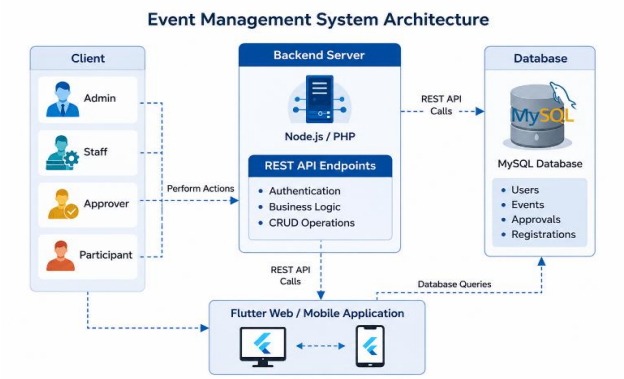

Figure 1: System Architecture Diagram of Online Event Management System

IV. METHODOLOGY

The Online Event Management System follows a client-server architecture where the frontend application communicates with the backend server through REST APIs. Flutter is used for frontend development, while MySQL is used as the database management system. The backend handles authentication, event processing, approval workflows, and database operations.

The workflow begins when staff members create an event by entering event details such as title, venue, date, and participant requirements. The created event is forwarded to the approver for verification and approval. Once approved, the event becomes visible to students and participants for registration.

Participants can register through the application and mark their attendance using QR code scanning. After the event is completed, users can submit feedback and download automatically generated participation certificates. The system also provides notifications and reports to improve communication and event monitoring.

This methodology ensures efficient event management, secure data handling, reduced manual effort, and improved coordination among all stakeholders.

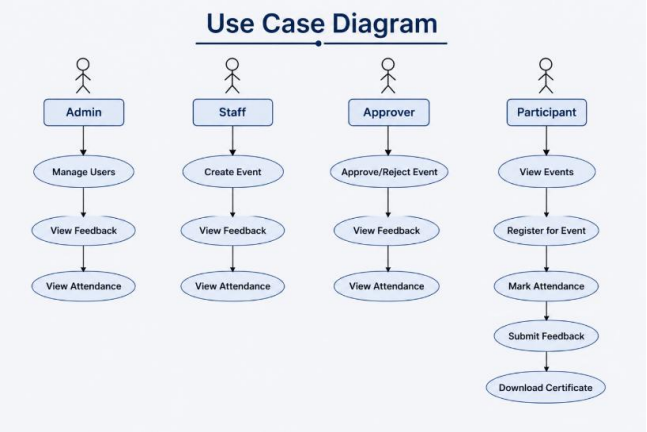

Figure 2: Use Case Diagram of Online Event Management System

V. RESULTS AND DISCUSSION

The Online Event Management System was successfully developed and tested in a real-time environment. The application provides separate dashboards for Admin, Staff, Approver, and Participants, ensuring effective role-based access control and workflow management.

The event creation and approval modules simplified the process of organizing institutional events. QR code-based attendance tracking improved attendance accuracy and reduced manual record maintenance. Automated notifications enabled users to receive updates regarding event approvals, registrations, and schedules.

The system was tested under different operating conditions, and all major modules performed successfully. User authentication, event management, attendance tracking, feedback collection, and certificate generation produced accurate results without significant errors.

Overall, the system improved communication, reduced paperwork, enhanced efficiency, and provided a scalable solution for managing events in educational institutions.

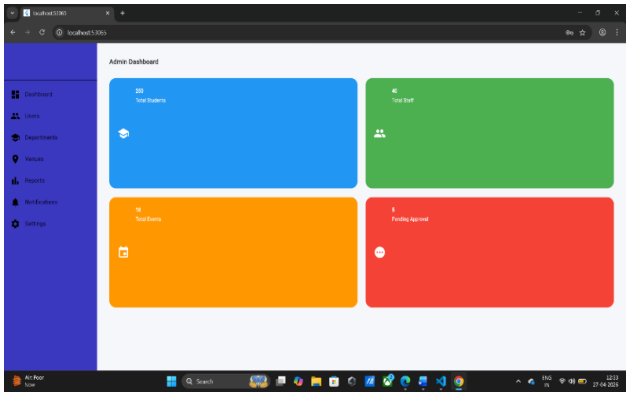

Figure 3: Admin Dashboard.

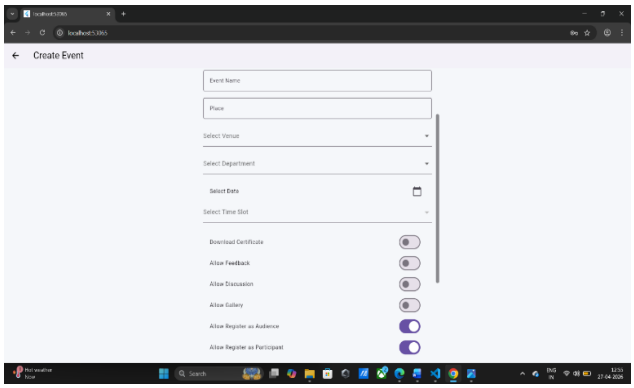

Figure 4: Event Creation Page.

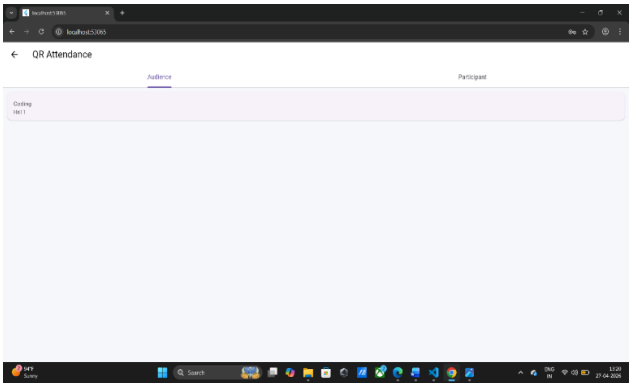

Figure 5: QR Attendance Module.

VI. CONCLUSION

The Online Event Management System was developed successfully to automate and simplify event management activities in educational institutions. The system provides a centralized platform for managing event creation, approvals, participant registration, attendance tracking, feedback collection, and certificate generation efficiently.

The implementation of QR code-based attendance tracking, automated notifications, and digital certificate generation reduced manual workload and improved operational efficiency. The system enhanced communication among administrators, staff members, approvers, and participants through a secure and organized workflow.

The application improved data accuracy, reduced paperwork, and provided a scalable solution for institutional event management. Future enhancements may include AI-based event recommendations, chatbot integration, advanced analytics, and mobile application deployment.

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