Online Event Management System

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1 Problem Analysis and Motivation

Organizations frequently rely on manual or semi-manual processes (paper forms, spreadsheets, unstructured emails) to manage day-to-day operations. Such approaches are error-prone, time-consuming, and hard to audit. An **Online Event Management System** provides:

- User Authentication: Secure login and registration for participants and organizers.
- Event Creation and Management: Organizers can create, update, and delete events.
- Event Browsing: Participants can easily search and view available events.
- Event Registration: Users can register for events with confirmation stored in the system.
- Participant Tracking: Organizers can view and manage registered participants.
- Database Integration: Secure storage and retrieval of user and event data.

2 Literature Review

Online Event Management Systems (OEMS) automate core processes such as event scheduling, participant registration, ticketing, and real-time updates, reducing administrative workload and minimizing human errors [1]. Task management in OMTS ensures smooth execution and timely completion of tasks [2]. Learning Management Systems (LMS) integration allows participants to access schedules, resources, and interactive content, enhancing engagement [3]. Overall, OEMS streamline administrative tasks and improve coordination among organizers.

3 Methodology

We follow an iterative, user-centered methodology.

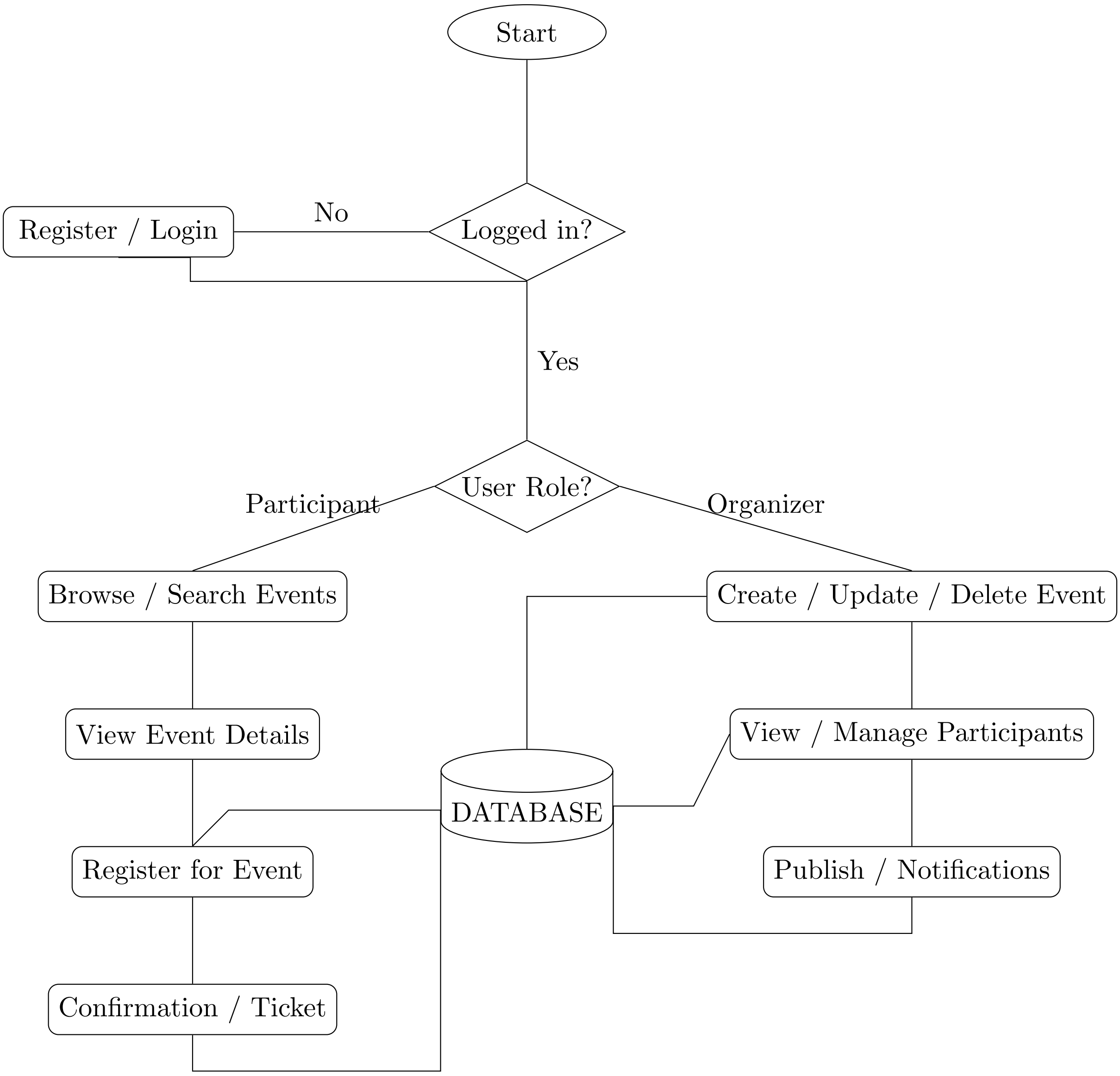

Figure 1: Event Management Flow Diagram

3.1 Requirement Analysis

The Online Event Management System aims to simplify event creation, registration, and participation for students and staff. Users should be able to sign up, log in, browse events, register, and view their registered events. Organizers should have functionality to add, update, or delete events. The system must ensure data security, maintain accurate event records, and provide a user-friendly interface. Both functional (event management, authentication, registration) and non-functional requirements (reliability, usability, performance) are considered.

3.2 System Design

Three-tier architecture:

- **Presentation Layer:** Provides the user interface for participants and organizers to interact with the system.

- **Application Layer:** Handles business logic, workflows, and processing of user requests.
- **Data Layer:** Manages secure storage, retrieval, and maintenance of event and user information in the database.

3.3 Development

Java will be used for both for both frontend (GUI) and backend logic, with MySQL as the database. Development will follow an iterative approach, where core features (authentication, event management, registration) will be implemented first, then followed by integration and refinement.

3.4 Testing

Testing will be conducted at both module and system levels. Unit testing will validate individual functions, while integration testing will ensure smooth interaction between components. User acceptance testing (UAT) will be performed to confirm usability and correctness.

3.5 Deployment

The final system will be deployed on a local machine or a lab environment, allowing demonstration of all features to users and evaluators.

3.6 Maintenance and Updates

After deployment, maintenance will involve big fixes, monitoring issues, improving performance, refining the user interface, adding new features and ensuring database consistency as new events and users are added.

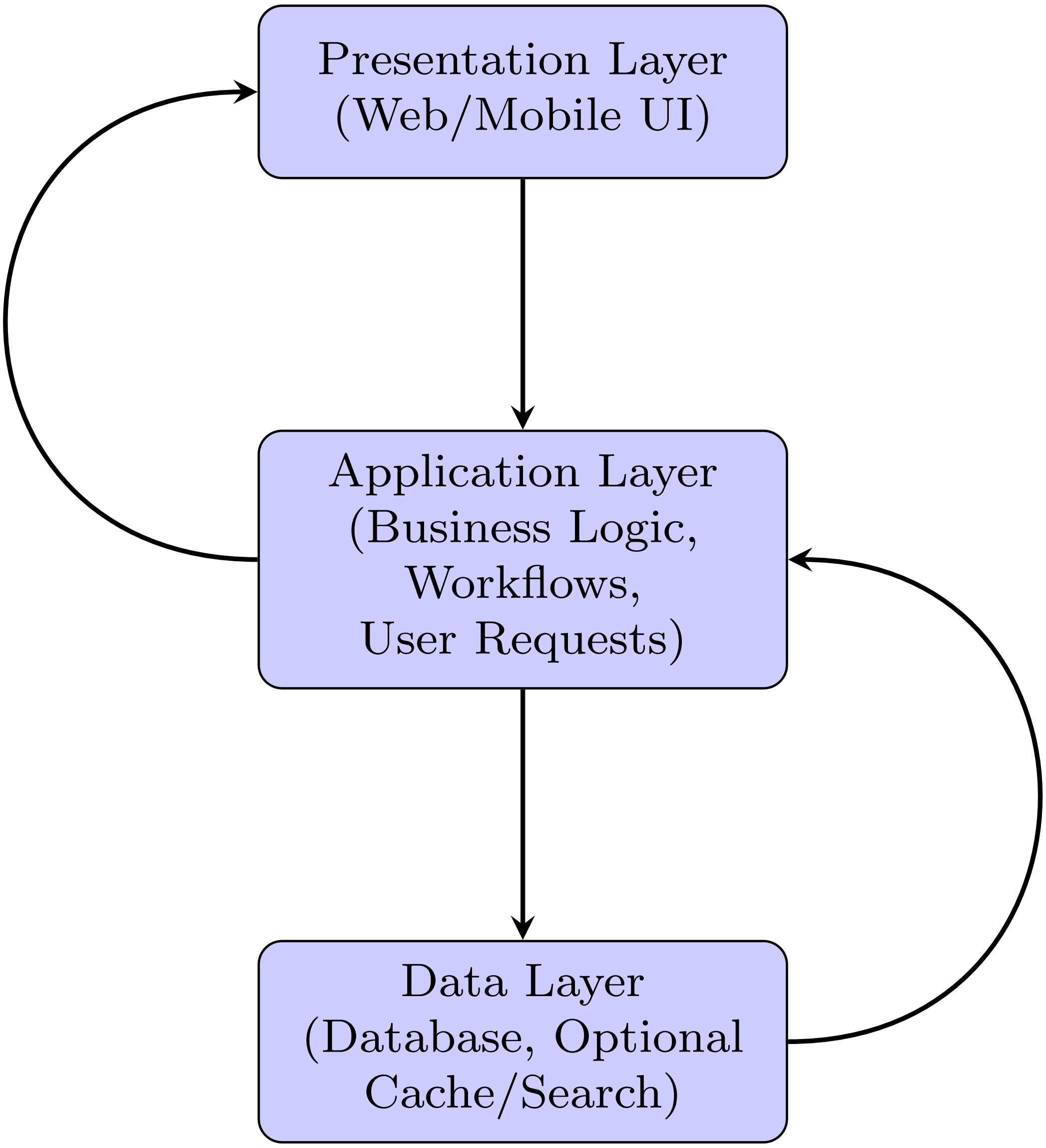

Figure 2: Three-Tier System Architecture of OEMS

4 Feasibility Study

4.1 Economic Feasibility

- The system will be developed using freely available technologies such as Java and MySQL, so there are no additional software costs.
- The only resources required are computers and internet access, which are already available.
- Minimal user training will be required since the interface will be simple and user friendly.

4.2 Technical Feasibility

- The required tools (Java, JDBC, MySQL, NetBeans/Eclipse) are readily available and supported.
- The system will be able to handle event data efficiently with a relational database.
- The design will allow for future scalability if more features are added.
- The interface will be simple and intuitive, making it technically realistic for both developers and users.

4.3 Operational Feasibility

- The system integrates well into the existing process of managing university events by replacing manual registration with an automated system.
- It reduces errors in participant tracking and speeds up event coordination.
- Users will find it convenient, reliable, and easy to adopt in real scenarios.

5 Main Phases

1. Project proposal and planning.
2. Requirement specification.
3. SDLC model selection.
4. DFD modeling.
5. UML: Use case, sequence, class diagrams.
6. Development (coding).
7. Software testing and UAT.

6 Project Task Schedule

Task No.	Task Description	Duration	Timeframe
1	Requirement Analysis	1 week	Week 1
2	System Design (UI/Database/Architecture)	2 weeks	Week 2–3
3	Frontend Development (HTML, CSS, JS)	2 weeks	Week 4–5
4	Backend Development (PHP/Java/Python)	3 weeks	Week 6–8
5	Database Implementation (MySQL)	1 week	Week 7
6	Integration (Frontend + Backend + DB)	2 weeks	Week 9–10
7	Testing (Unit, Integration, UAT)	2 weeks	Week 11–12
8	Deployment (Cloud Server)	1 week	Week 13
9	Maintenance & Updates	Ongoing	Post-Deployment

Table 1: Project Task Schedule for OEMS

7 Work Plan (Gantt Chart)

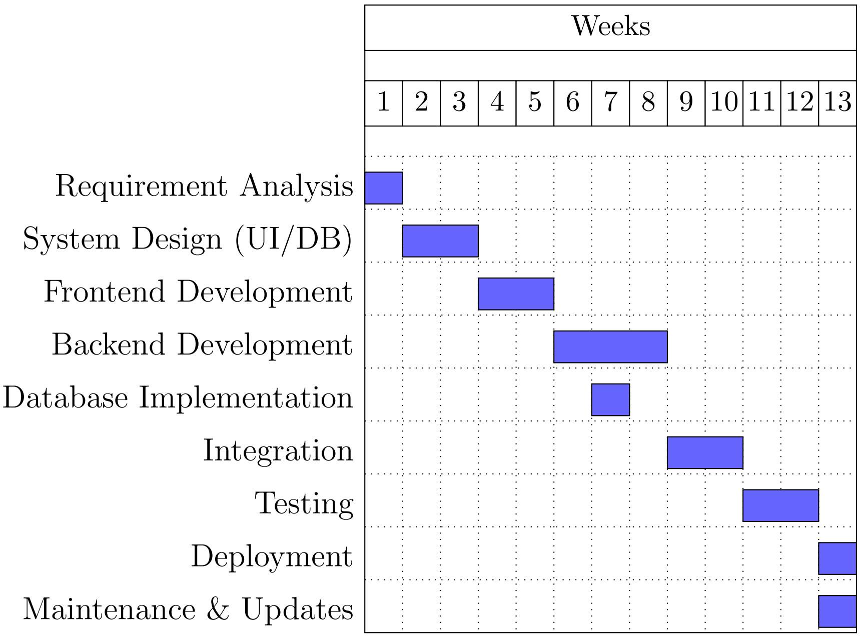

Figure 3: Project Development Timeline

8 Budget Details

Item	**Qty**	**Cost (BDT)**	**Notes**
Computer	3	48,000	–
Internet	3	6000	–
Software	–	–	Java and MySQL are freely available technologies
Online Assets	–	2000	For UI design and others
Student Efforts	3	5,000	–
Training & Documentation	–	1000	–
USB Drives/Backup Storage	2	2000	–
Printing/Reports	–	1000	–
Miscellaneous (transport, etc.)	–	1000	–
Contingency	–	5000	Risk/overheads
Total		**71,000**	

Table 2: Budget Details of Online Event Management System (BDT)

9 Conclusion

This proposal presents the motivation, methodology, feasibility, development phases, schedule, and budget for the Online Event Management System. By following a user-centered and iterative approach, the project aims to streamline event management through secure authentication, efficient event handling, and reliable data storage. The system is designed to improve efficiency, reduce manual errors, and enhance the overall experience for both organizers and participants.

References

[1] Delivery Manager, Pragmatyc, Nagpur, India, and Student, Information Technology, St. Vincent Pallotti College of Engineering and Technology, Nagpur, India, "Online Event Management System: A Critical Review of Research Findings," *ResearchProspect*, May 2024. [Online]. Available: https://cdn.researchprospect.com/literature-review/Critical/Undergraduate/Event-Managment/Online-Event-Management-System.pdf. [Accessed: 18-Aug-2025].

[2] IRE Journals, "Online Task Management System (OMTS)," *IRE Journals*. [Online]. Available: https://www.irejournals.com/formatedpaper/1700856.pdf. [Accessed: 18-Aug-2025].

[3] V. M. Bradley, "Learning Management System (LMS) Use with Online Instruction," *ERIC*. [Online]. Available: https://files.eric.ed.gov/fulltext/EJ1286531.pdf. [Accessed: 18-Aug-2025].

Contribution of Team Members

The responsibilities of the team members were divided to ensure equal contribution:

- **Jibon Kumar Roy:** Feasibility Study, Literature Review, Project Task Schedule, References
- **Farhan Bin Masud:** Methodology, Budget Details, Work Plan (Gantt Chart)
- **Nirupama Yeasmin Nisa:** Problem Analysis and Motivation, Main Phases, Conclusion

All team members collaboratively discussed system design, contributed to debugging, and participated in report writing and presentation preparation.