CLASS AND COURSE COMMITTEE MEETING MINUTES SUBMISSION – AUTOMATION

Syed Fazil S, Adhithya M

[1]Studuent, Dept. of Artificial Intelligence and Data Science, Anna University, IN
[2]Studuent, Dept. of Artificial Intelligence and Data Science, Anna University, IN

---***---

Abstract - *The Class and Course Committee Meeting Minutes Submission – Automation project aims to streamline and digitize the submission and management of meeting minutes for academic courses. Traditionally, maintaining and tracking CCM minutes has been a manual process prone to errors, delays, and inefficiencies. This project introduces a web-based platform that automates the workflow, providing a structured and centralized system for faculty, Heads of Departments (HoDs), and administrators. Built using React.js, Node.js, Express.js, and MongoDB, the system enables role-based access control, where Admins can create tasks, faculty can submit minutes, and HoDs can review and approve submissions. The platform features dynamic forms with dropdowns, date pickers, and validation, ensuring accuracy in data entry. Secure data handling practices, including input validation, environment variables for sensitive data, and proper error handling mechanisms, are incorporated to maintain data integrity. Additionally, automated email notifications via Nodemailer keep stakeholders informed about submission statuses, approvals, and pending tasks, thereby improving communication within the institution.*

One of the key features of this system is the automated generation of CCM minutes in PDF format, ensuring a structured and professional record of meetings. A dashboard with analytics and reporting tools allows administrators to monitor submission statuses, identify pending tasks, and generate summary reports. Faculty members can track their past submissions, while HoDs can review historical approvals, ensuring transparency and accountability. The responsive frontend design, coupled with a structured MongoDB backend, provides an intuitive and seamless user experience across different devices. The implementation of secure APIs and access control ensures that only authorized users can perform specific actions. This project not only reduces the administrative workload but also enhances accuracy, efficiency, and organization in academic institutions. By eliminating the challenges associated with manual tracking, the Class and Course Committee Meeting Minutes Submission – Automation system offers a scalable and effective solution for educational institutions looking to modernize their academic governance processes.

Key Words: *Nodemailer ,node.js ,react.js ,role based ccess,mongodb , dynamic forms , dropdowns, date pickers*

1.INTRODUCTION

The Class and Course Committee Meeting Minutes Submission – Automation project is designed to modernize and streamline the process of documenting and managing Class and Course Committee (CCM) meeting minutes in academic institutions. Traditionally, the submission and approval process for CCM minutes has been manual, leading to inefficiencies, data entry errors, and difficulties in tracking submissions. This project provides a web-based platform that automates the workflow, ensuring accuracy, transparency, and real-time accessibility of meeting minutes for all stakeholders, including faculty, Heads of Departments (HoDs), and administrators. Built using React.js, Node.js, Express.js, and MongoDB, the system offers role-based access control, allowing Admins to create and manage tasks, faculty to submit minutes, and HoDs to review and approve them. Additionally, automated email notifications, deadline tracking, and PDF generation of finalized minutes significantly improve efficiency in managing academic records.

By integrating secure and dynamic forms for submission, this system ensures data consistency and minimizes human errors. Faculty members can submit meeting minutes through a user-friendly interface, while HoDs receive real-time notifications for pending approvals. Admins can monitor submission statuses, extend deadlines, and generate reports through an interactive dashboard. The system also implements secure authentication and input validation mechanisms, preventing unauthorized access and ensuring the integrity of submitted data. With features such as submission history tracking, automated deadline management, and exportable reports, this project provides a comprehensive solution for academic institutions to handle CCM minutes efficiently.

1.1 Background of the Work

The Class and Course Committee (CCM) meetings play a crucial role in academic governance, allowing faculty members and HoDs to discuss curriculum updates, student performance, and other key academic matters. However, managing and tracking the submission of meeting minutes has traditionally been a time-consuming and error-prone process. The absence of a centralized system often results in delays, missing records, and inefficiencies in reviewing and approving minutes. Faculty members have to manually submit documents via email or physical copies, making it difficult to maintain an organized record of submissions. Furthermore, tracking pending approvals and sending reminders is cumbersome, often leading to missed deadlines and unapproved records.

With the increasing need for digital transformation in academic administration, an automated submission system for CCM minutes provides a structured approach to managing academic records efficiently. By eliminating the manual tracking process and implementing a secure web-based system, educational institutions can enhance productivity, ensure data consistency, and improve compliance with submission deadlines. This project addresses these challenges by introducing a robust and centralized platform that allows stakeholders to submit, review, and approve meeting minutes seamlessly.

1.2 Motivation and Scope of the Proposed Work

The motivation behind this project arises from the need to reduce the administrative burden associated with manually managing CCM minutes. Educational institutions often face delays in processing meeting records, resulting in a lack of accountability and difficulties in retrieving historical data when needed. A dedicated automation system can significantly improve efficiency by providing real-time tracking, automated reminders, and secure storage of meeting minutes. Furthermore, role-based access control ensures that only authorized users can perform specific actions, thereby enhancing security and preventing data manipulation.

The scope of this project includes developing a full-stack web application that provides a seamless experience for faculty, HoDs, and administrators. Faculty members will be able to submit meeting minutes through structured forms, which will be stored in a centralized database. HoDs will receive automated notifications whenever a submission requires approval, allowing them to review and provide feedback before finalizing the minutes. Administrators will have access to a dashboard with analytics tools, enabling them to monitor submission trends, identify bottlenecks, and generate reports for academic planning.

This system is not just limited to managing CCM minutes but can be extended to handle other academic administrative tasks, such as meeting scheduling, attendance tracking, and document management. The project's robust backend ensures scalability and flexibility, allowing it to be adapted for broader applications in academic institutions. By leveraging modern web technologies, this project provides a scalable, efficient, and secure solution to academic governance challenges, paving the way for digitized and paperless administration in educational institutions

METHODOLOGY

The methodology for this project follows a structured approach to automate the submission, review, and approval of Class and Course Committee Meeting (CCM) minutes. The system is designed to streamline academic documentation through a web-based platform, ensuring efficient tracking, secure storage, and real-time notifications. The workflow integrates data collection, role-based access control, and automated reporting, providing a seamless experience for faculty, Heads of Departments (HoDs), and administrators.

1.1 System Architecture

The system architecture consists of a frontend user interface, a backend server, and a database for secure storage and retrieval of meeting minutes. The frontend is developed using React.js, providing an intuitive dashboard where faculty members can submit their reports and track their approval status. The backend, powered by Node.js and Express.js, handles form submission, approval workflows, and notification triggers. A MongoDB database stores meeting details, including submission timestamps, approval status, and revision history, ensuring transparency and easy accessibility. Automated reminders are incorporated to notify users of pending approvals or incomplete submissions, reducing delays and improving compliance with submission deadlines.

1.2 Data Management and Submission Process

To maintain uniformity and accuracy in submissions, the system requires faculty members to fill out a predefined template that includes essential details such as the date and time of the meeting, attendees, agenda, discussion points, and resolutions. The system validates each submission to ensure completeness before forwarding it for approval. If a submission lacks required information, faculty members receive an automated prompt to correct and resubmit the document. This structured validation process ensures that only well-documented minutes proceed to the next stage, maintaining the integrity of academic records.

1.3 User Interface

A user-friendly interface is essential for effective adoption, and the system is designed with accessibility in mind. The web-based platform provides a seamless experience where faculty members can submit minutes, track approval progress, and view previous records. HoDs can efficiently review documents, approve or request changes, and provide feedback directly through the system. Administrators can oversee the overall workflow, monitor compliance with submission deadlines, and intervene when necessary. Features such as automated notifications, real-time status updates, and a searchable submission history enhance usability, making the system efficient for all stakeholders.

Fig -1- Flowchart

REFERENCES

[1] Sharma, R., et al. (2021). "Automated Documentation System for Academic Meetings Using Web Technologies." International Journal of Educational Technology and Innovation, 9(3), 145-158.

[2] Kumar, S., & Patel, A. (2020). "Enhancing Workflow Automation in Higher Education Through Digital Platforms." Journal of Digital Education Systems, 12(4), 210-225.

[3] Verma, P., et al. (2019). "Role-Based Access Control for Academic Record Management: A Web-Based Approach." IEEE Transactions on Information Systems, 27(2), 98-112.

[4] Nair, V., & Reddy, M. (2022). "Improving Documentation Efficiency with Automated Meeting Minutes Generation." Proceedings of the International Conference on Smart Computing and Education, pp. 67-74.

[5] Reddy, L., & Nair, S. (2022). " Optimizing Faculty Workflow Through AI-Driven Document Management Systemsn." Journal of AI and Human Interaction, 10(5), 332-346.
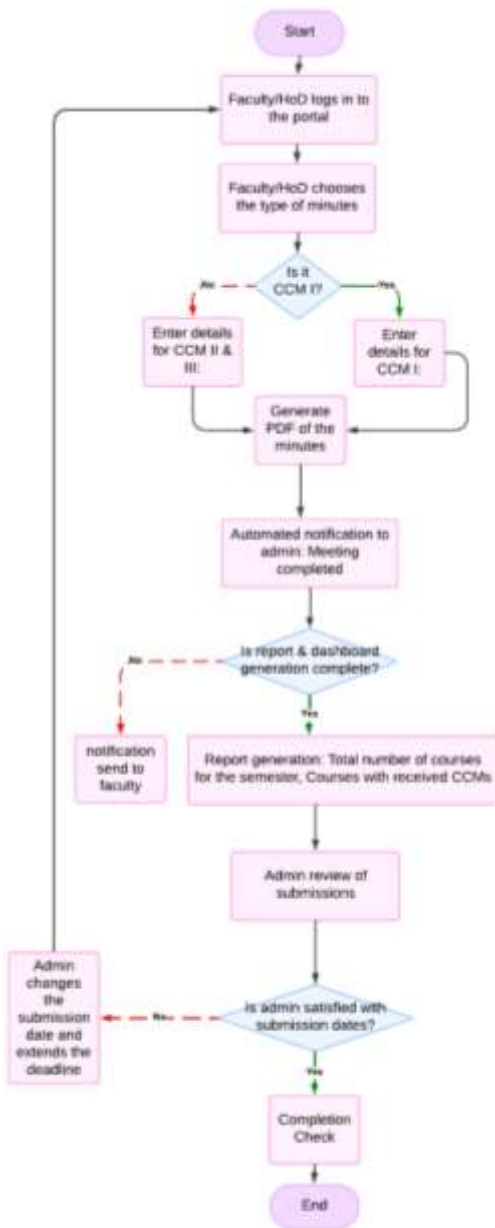
2. CONCLUSIONS

In conclusion, the development of an automated class committee meeting documentation system significantly enhances the efficiency and accuracy of record-keeping in academic institutions. By integrating a structured workflow that captures meeting details, processes information, and generates standardized reports, this system streamlines administrative tasks while ensuring consistency and reliability. The use of web-based technologies facilitates ease of access and usability, allowing faculty members to focus on decision-making rather than manual documentation.