



STUDENT DISCIPLINE MONITORING AND MANAGEMENT PORTAL FOR FACULTY MEMBERS

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Abstract - The Student Discipline Monitoring and Management Portal is a web-based system that streamlines student disciplinary tracking and faculty duty management through role-based access for Faculty, Block Head, and Discipline Head. Built with ReactJS (frontend) and Go (backend), it ensures secure API interactions with JWT authentication. Faculty can log violations and request duty changes, Block Heads monitor faculty presence, and Discipline Heads oversee records and approvals. Automated real-time tracking, duty logs, and severity-based violation ranking enhance accountability. With scheduled updates and report generation, the system reduces manual effort, improves transparency, and ensures efficient discipline enforcement in academic institutions.

Key Words: Role-Based Access, Automated Tracking, Disciplinary Management

1. INTRODUCTION

Maintaining discipline in educational institutions is crucial for fostering a structured and conducive learning environment. However, traditional methods of tracking student discipline and faculty duty compliance are often inefficient and prone to inconsistencies. The Student Discipline Monitoring and Management Portal aims to streamline this process by providing a role-based access system for faculty, discipline heads, and block heads. This digital solution ensures accurate disciplinary record management, faculty duty monitoring, and automated report generation, enhancing overall accountability and operational efficiency.

1.1. Background of the Work

Educational institutions face challenges in maintaining an efficient discipline monitoring system. Manual record-keeping often leads to errors, delays, and mismanagement, making it difficult to track student violations and faculty duty presence. A centralized digital platform can significantly improve efficiency by automating record-keeping, ensuring real-time access, and enhancing decision-making. The proposed portal incorporates ReactJS

for the frontend and Go for the backend, enabling a scalable and efficient system. The system includes JWT-based authentication to ensure secure access, allowing faculty members to report incidents, discipline heads to approve requests, and block heads to oversee compliance.

1.2. Motivation and Scope of the Proposed Work

With the increasing number of students and faculty members in educational institutions, manual discipline tracking methods often lead to inefficiencies, inconsistencies, and lack of transparency. Traditional systems rely on paper-based or fragmented digital records, making it difficult to track disciplinary actions, faculty duty attendance, and violation trends over time. The lack of a structured and automated approach results in delayed decision-making, miscommunication, and difficulty in enforcing discipline policies effectively.

The Student Discipline Monitoring and Management Portal aims to address these challenges by providing a centralized, automated, and secure system for handling disciplinary records and faculty duty management. The portal enables real-time student violation tracking, automated faculty duty monitoring, and severity-based ranking of disciplinary cases, ensuring that all stakeholders have clear insights into discipline trends. The system's role-based access ensures that faculty members can report incidents, block heads can verify faculty duty attendance, and discipline heads can take necessary actions, approve requests, and assign new duties. By leveraging ReactJS for the frontend, Go for the backend, and JWT-based authentication, the platform ensures security, scalability, and seamless user experience.

The scope of this project extends beyond basic record-keeping, offering features like scheduled data updates, automated alerts for faculty duty absence, and report generation for better decision-making. Future enhancements could include predictive analytics for identifying discipline patterns, AI-driven violation detection, and integration with



existing institutional management systems, making the solution more intelligent, adaptable, and scalable for broader applications.

2. METHODOLOGY

The Student Discipline Monitoring and Management Portal is designed to streamline disciplinary tracking and faculty duty monitoring using a structured, automated approach. The system employs a role-based access model, ensuring that faculty, block heads, and discipline heads can perform their designated tasks efficiently. The backend, built using Go, handles secure API interactions, while the frontend, developed using ReactJS, ensures a user-friendly experience. JWT-based authentication enhances security, and a scheduled update system ensures real-time monitoring of disciplinary actions and faculty presence. Automated violation ranking helps prioritize cases based on severity, allowing quicker decision-making.

2.1. Data Collection and Storage:

Student disciplinary records, faculty duty logs, and violation reports are collected through the portal. Data is stored in a structured database, ensuring efficient retrieval and management. Each record includes details such as student ID, violation type, action taken, faculty duty status, and timestamps.

2.2. Role-Based Access Control:

Faculty: Can report student violations and request alternate duty.

Block Head: Monitors faculty presence during duty slots and logs additional violations.

Discipline Head: Has full control, including approving faculty duty requests, assigning new duties, and reviewing student disciplinary records.

2.3. Faculty Duty Monitoring:

The system tracks faculty attendance during their assigned duty slots, ensuring accountability and compliance. Faculty members must log their presence, while block heads verify attendance and report any absences. Automated alerts notify discipline heads if faculty members fail to attend their assigned duties. The system maintains a historical log of faculty presence, enabling trend analysis for future duty assignments. Faculty can request alternates in case of unavailability, with discipline heads having the authority to approve or reject requests. This ensures smooth duty management and prevents gaps in disciplinary supervision.

2.4. Automated Violation Severity Ranking:

Violations are classified into low, medium, and high severity based on predefined criteria such as recurrence, impact, and nature of the offense. The system automatically updates rankings every 24 hours, ensuring real-time prioritization of disciplinary actions. Severe violations receive immediate attention, while minor offenses are monitored for repeated occurrences. Discipline heads can manually adjust severity rankings if necessary, providing flexibility for special cases. The ranking system helps optimize resource allocation, ensuring critical incidents are handled promptly.

2.5. Report Generation and Decision Support:

The system generates detailed reports on student violations and faculty duty compliance, allowing admins to analyze trends and take corrective actions. Reports can be filtered based on severity, date, and role, offering a customized view of disciplinary records. Data visualization tools, such as charts and graphs, enhance report readability and decision-making. Reports can be exported in PDF or CSV format for official documentation and reference. Predictive analytics help identify potential repeat offenders, enabling proactive intervention strategies.

2.6. Security and Authentication:

To ensure data protection, the system uses JWT authentication, allowing only authorized users to access sensitive records. Role-based access control restricts functionalities based on user roles, preventing unauthorized modifications. All disciplinary records are encrypted, securing data against potential breaches or unauthorized access. An audit log tracks all system interactions, maintaining transparency and accountability in disciplinary management. Regular security updates and access control mechanisms strengthen system integrity.

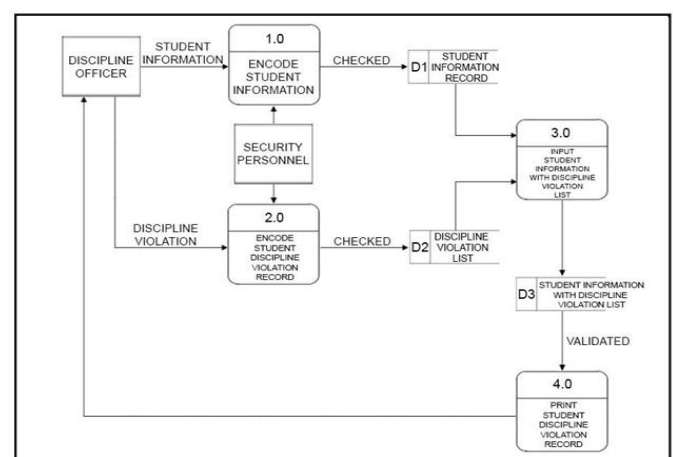


Fig -1- Flowchart

3. CONCLUSION

The project successfully implements a role-based Student Discipline Monitoring and Management Portal to enhance faculty supervision and disciplinary tracking. The system



ensures secure authentication, automated faculty duty monitoring, and structured violation handling, improving efficiency in managing student discipline. By leveraging ReactJS for the frontend and Go for the backend, the platform ensures a smooth user experience with real-time data updates. Automated ranking of violations and faculty attendance tracking provide better decision-making support. The system enhances transparency and accountability, making disciplinary management more structured and effective. Future enhancements could focus on expanding automation, integrating AI-based analytics, and improving real-time alert mechanisms.

Suggestions for Future Work

- 1. AI-Powered Anomaly Detection** – Implement machine learning models to predict and flag potential violations based on historical data.
- 2. Enhanced Real-Time Alerts** – Improve notification systems to provide instant alerts for high-severity violations or faculty duty absences.
- 3. Mobile App Integration** – Develop a mobile version for on-the-go access, enabling faculty and discipline heads to update records instantly.
- 4. Improved Role-Based Access Control** – Add granular permission levels to ensure fine-tuned control over different disciplinary tasks.
- 5. Advanced Data Visualization** – Introduce dynamic dashboards with graphical insights for better trend analysis and reporting.

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