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Defaulter Management System: A Web-Based Approach for Academic Monitoring

Vaishnavi Subhash Garad
Department of Computer Engineering
Shreeyash College of Engineering and Technology (Polytechnic) Chh. Sambhajinagar, India

Abstract: In educational institutions, tracking student attendance, assignment submissions, and fee payments is essential for academic discipline. Traditional manual systems are inefficient and error-prone. This paper presents a Defaulter Management System, a web-based solution that automates the identification of student defaulters. The system integrates attendance, fee tracking, and assignment monitoring into a centralized platform and sends automated alerts to students and parents.

Index Terms - Defaulter Management System, Web Application, Attendance Tracking, Automation

I. Introduction

Educational institutions must monitor student performance effectively. Manual systems using registers and spreadsheets are inefficient and lead to delayed identification of defaulters. The proposed Defaulter Management System (DMS) provides a centralized and automated solution for real-time mon-itoring.

II. Problem Statement

Existing systems suffer from:

1. Manual data handling
2. Lack of integration
3. Delayed detection
4. Poor communication

III. Objectives

5. Automate defaulter detection
6. Maintain centralized records
7. Track attendance, fees, assignments
8. Send notifications
9. Generate reports

IV. Literature Review

ERP systems are complex and costly. Attendance apps lack integration. Open-source systems require customization. A lightweight focused solution is needed.

V. System Architecture

The architecture of the proposed system is illustrated in Fig. 1. It shows interaction between users and backend services.

VI. Proposed System

The system consists of three modules:

- **Admin Module**
  - Manage users
  - Track fees
  - Generate reports

- **Faculty Module**
  - Mark attendance
  - Track assignments
  - Monitor defaulters
- **Student Module**
  - View status
  - Receive alerts

The database structure is shown in Fig. 2.

VII. Implementation Results

[1] **Faculty and Admin Interface**

[2] **Student Interface**

VIII. Advantages

TABLE I. Real-time monitoring

TABLE II. Reduced workload

TABLE III. Improved accuracy

TABLE IV. Better communication

IX. Limitations

TABLE V. Requires internet

TABLE VI. Needs training

TABLE VII. Depends on data accuracy

X. Conclusion

The Defaulter Management System improves efficiency and accuracy by automating academic monitoring. It enables early detection of defaulters and timely intervention.

XI. Future Work

TABLE VIII. Mobile app

TABLE IX. AI prediction

TABLE X. Biometric integration

References

Fig. 1. R. Pressman, Software Engineering, McGraw-Hill, 2014.

Fig. 2. R. Elmasri, Database Systems, Pearson, 2017.

Fig. 3. M. Haverbeke, Eloquent JavaScript, 2018.

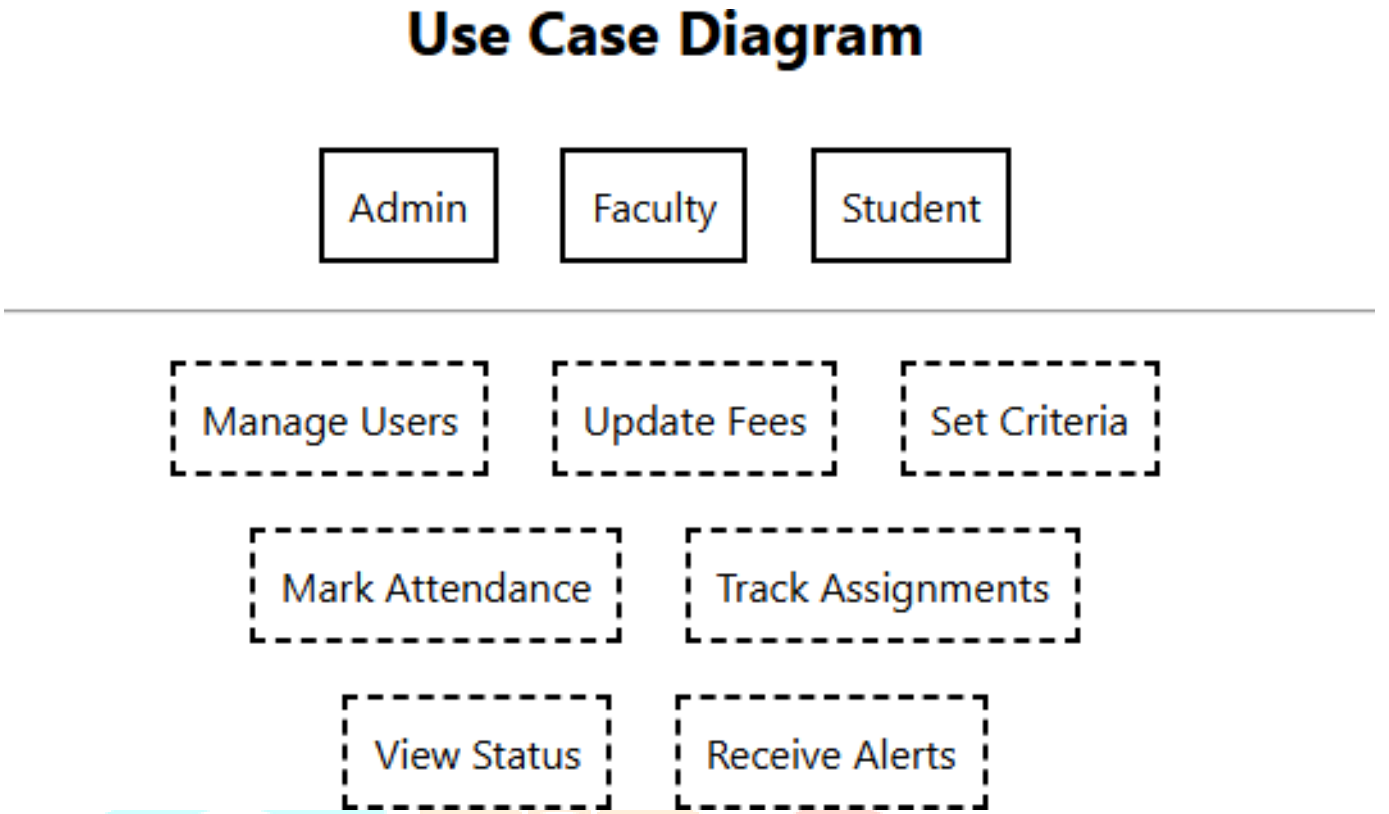

Fig. 1. System Architecture of Defaulter Management System

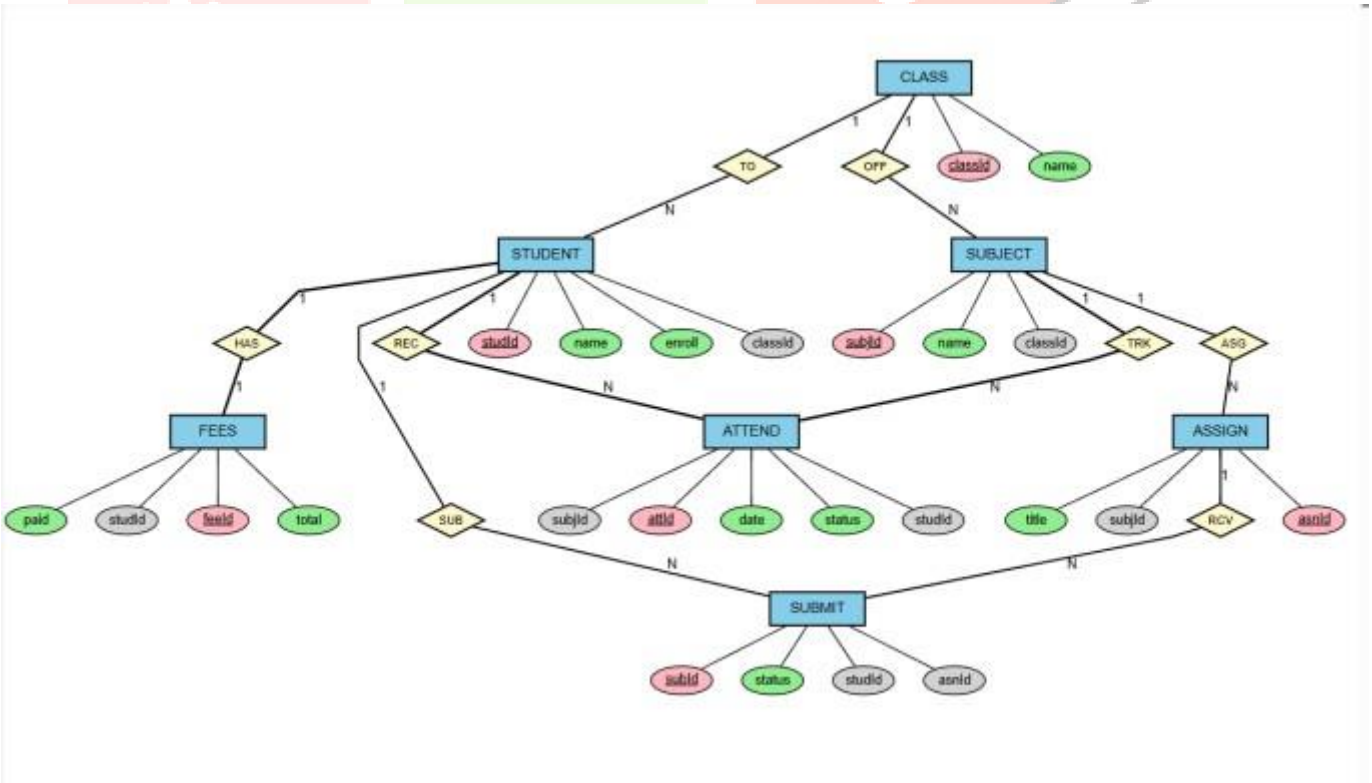

Fig. 2. Entity Relationship Diagram of the System

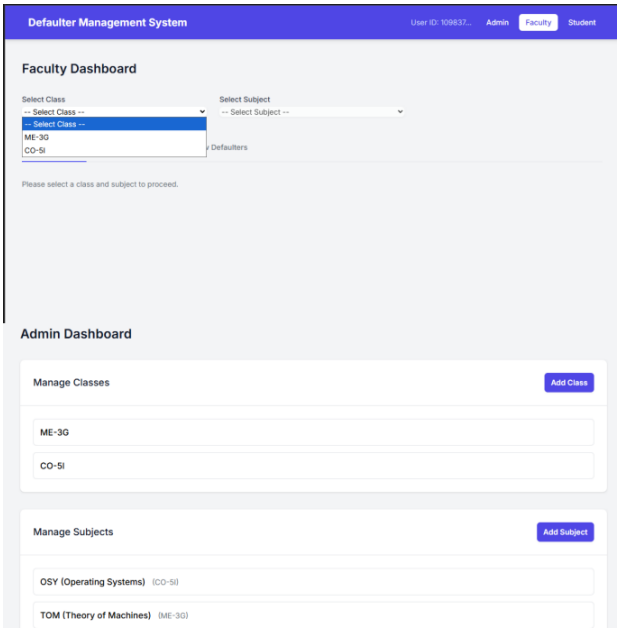

Fig. 3. Faculty and Admin Dashboard Interface

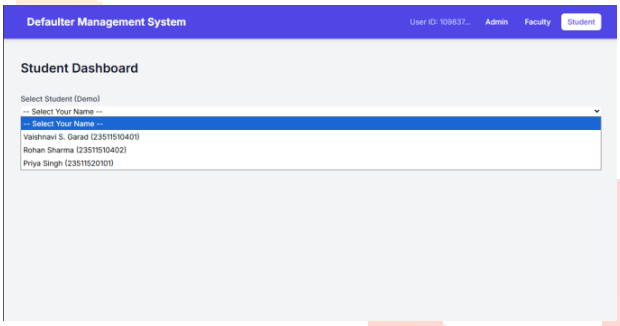

Fig. 4. Student Dashboard Interface