

# Institute Management System

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Project Title: Institute Management System

## Project Overview

Industry: Education & Academic Administration

Project Type: ERP/CRM Implementation for Institutes

Target Users: Administrators, Faculty, Students, Parents, Support Staff

### Problem Statement:

Educational institutes often face difficulties in managing student records, admissions, faculty workload, timetables, examinations, and communication with parents. Manual or outdated systems cause inefficiency, duplication of data, lack of transparency, and poor student/parent experience.

The Institute Management System aims to centralize admission, academics, attendance, examination, fees, library, and communication modules into one platform. The goal is to reduce paperwork, improve transparency, ensure accurate record-keeping, enhance communication, and support better decision-making.

## Use Cases

- Admission Management: Online application, verification, seat allocation, and enrollment.
- Student Information System (SIS): Centralized student profile with academic, attendance, and disciplinary records.
- Faculty Management: Timetable scheduling, workload assignment, leave tracking.
- Attendance Tracking: Daily attendance with biometric/RFID or mobile app integration.
- Examination Module: Online exam scheduling, grade entry, result generation.
- Fee Management: Online fee payment, invoices, receipts, and overdue reminders.
- Library Management: Book cataloging, issue/return tracking, fine calculation.
- Parent Portal: View student progress, attendance, fees, and exam results.
- Notifications & Alerts: SMS/Email/App notifications for events, fees, and academic updates.
- Analytics & Reporting: Reports on student performance, faculty workload, fee collection, and resource utilization.

## **Project Phases**

### **Phase 1: Requirement Analysis & Stakeholder Identification**

Conduct interviews with administrators, faculty, students, and parents. Identify gaps in admissions, academics, and communication.

### **Phase 2: Org Setup & Configuration**

Institute profile: Departments, courses, academic years. Business hours: Academic schedule. User setup & security: Profiles (Admin, Faculty, Student, Parent), Roles (Student → Teacher → HOD → Admin).

### **Phase 3: Data Modeling & Relationships**

Custom Objects: Student\_\_c, Faculty\_\_c, Course\_\_c, Exam\_\_c, Fee\_\_c, Library\_\_c.

Relationships: Student\_\_c linked to Course\_\_c, Exam\_\_c linked to Student\_\_c and Course\_\_c, Fee\_\_c linked to Student\_\_c, Library\_\_c linked to Student\_\_c.

### **Phase 4: Process Automation**

Validation rules: Prevent duplicate admissions. Flows: Auto-generate student ID after admission. Alerts: Notify parents about attendance shortage or pending fees. Scheduled Reports: Daily attendance, exam performance, fee status.

### **Phase 5: Apex Programming (Developer)**

Payment Gateway: Secure online fee payment. Biometric/RFID API Integration: For attendance tracking. SMS Gateway Integration: Automated alerts.

### **Phase 6: User Interface Development**

Lightning App with tabs. Page Layouts: Show related courses on Student record. Quick Actions: 'Mark Attendance' / 'Generate Report Card'. LWC (Optional): Student/Parent-facing portal.

### **Phase 7: Integration & External Access**

Web-to-Lead for student admission inquiries. Named Credentials for payment/SMS gateway. API Callouts for board/exam systems.

### **Phase 8: Data Management & Deployment**

Data Loader: Import students, courses, fee records. Duplicate rules: Prevent duplicate entries. Deployment: Dev Sandbox → UAT → Production.

### **Phase 9: Reporting, Dashboards & Security Review**

Reports: Student performance, attendance, fee collection. Dashboards: Admin (admissions, revenue), Faculty (attendance, grading). Security: Field-level security, audit trails.

## **Phase 10: Final Presentation & Demo Day**

Live demo: Admission → Fee Payment → Attendance → Exam → Report Card → Parent Notification. Documentation: Guides for Admin/Faculty/Students. Portfolio upload to GitHub/LinkedIn. Future Scope: AI prediction, mobile app, e-learning integration.