Project Overview - SMS

School Management System

1. Project Overview

The School Management System (SMS) is a digital platform designed to manage all day-to-day operations of your college efficiently. It replaces manual processes and ensures smooth management of students, teachers, staff, classes, attendance, exams, fees, and communication.

Technology Used:

- Backend: Laravel

- Frontend: React

- Database: MySQL

- Payment Integration: eSewa / Khalti / ConnectIPS

Objective:

- Automate administrative processes

- Improve transparency and reporting

- Provide easy access to information for students, parents, teachers, and staff

2. Key Modules Delivered

A. User & Role Management

- Roles included: College Admin, Teacher, Accountant, Student, Parent

- Role-based access to system features

- User profile management (personal information, contact, password reset)

B. Student Management

- Student admission and registration

- Student profiles: personal, academic, documents

- Assign students to classes and sections

- Attendance tracking (punch-in/punch-out system)

- Academic performance tracking and reports

C. Teacher & Staff Management

- Staff profiles and information management

- Attendance tracking for staff

- Assign teachers to classes and subjects

- Basic payroll management for staff

- Reporting: attendance summary, payroll summary

D. Classes & Timetable

- Create classes, sections, subjects

- Assign teachers to classes

- Generate timetables

- Teachers and students can view their respective schedules

E. Exams & Grading

- Exam scheduling and creation

- Marks entry and evaluation

- Automatic report card generation

- Grade / GPA calculation

- Historical exam data available for review

F. Fees & Accounting

- Define and track fee structure: tuition, library, transport, fines

- Track pending and paid fees

- Online payment integration (eSewa / Khalti / ConnectIPS)

- Invoice and receipt generation

- Basic payroll tracking for staff

G. Attendance Management

- Punch-in/punch-out system for students and staff

- Daily, weekly, and monthly attendance reports

- Alerts for absent students/staff

H. Communication

- SMS and email notifications

- Alerts for fees, attendance, exam schedules

- Messaging between teachers, students, and parents

I. Reports & Analytics

- Student attendance reports

- Exam and grade performance reports

- Fee collection and pending fee reports

- Staff payroll reports

- Dashboards with overview statistics for college admin

J. Dashboards

- **College Admin:** Overview of students, staff, attendance, fees, exams

- **Teachers:** Class assignments, attendance, grading, communication

- **Students:** Attendance, grades, fees, timetable, notifications

- **Parents:** Child's attendance, grades, fees, notifications

3. Additional Features

- Secure login and role-based access

- Responsive design (works on desktop, tablet, mobile)

- Tenant-ready architecture (preparing system for future expansion)

- Easy-to-use interface with minimal training required

4. Deliverables for College

1. Fully functional **School Management System** installed for your college

2. Configured **roles and users** (Admin, Teacher, Accountant, Student, Parent)

3. **Punch-in attendance system** for students and staff

4. **Online payment integration** for fees with invoice generation

5. **Reports and dashboards** for quick decision making

6. **Training and documentation** for staff and administrators

5. Optional / Future Enhancements (Not Included in Phase 1)

- Library management

- Transport / hostel management

- Mobile application for students and parents

- Multi-school (multi-tenant) expansion for SaaS

- Online learning modules

Summary
Phase 1 delivers a complete digital management system for your college, covering student, teacher, staff management, classes, attendance, exams, fees, and communication. It's easy to use, secure, and ready for future expansion.

Work Break Down

Phase 1 Work Breakdown Table – SMS

Module	Feature	Tasks	Roles Involved	Priority
User & Role Management	Role creation & assignment	DB tables for roles/permissions; APIs for CRUD; Frontend forms; Validation	College Admin	Must-have
	User profile management	DB tables for user info; APIs for CRUD; Frontend forms; Login & password reset	All Users	Must-have
Student Management	Admission & registration	DB tables: students; APIs for CRUD; Frontend forms	Admin	Must-have
	Student profiles	Include personal, academic, documents; API & frontend	Admin/Teacher	Must-have
	Class/section assignment	DB tables & APIs; Admin UI	Admin	Must-have
	Attendance tracking	Punch-in system; APIs for logs; Frontend dashboards	Admin/Teacher/ Student	Must-have
	Academic performance & reports	DB tables: marks, grades; APIs for report generation; Frontend views	Admin/Teacher/ Student	Must-have
Teacher & Staff Management	Staff profiles	DB tables; APIs; Frontend forms	Admin	Must-have

	Attendance tracking	Punch-in/out system; reports	Admin/Teacher	Must-have
	Class/subject assignment	DB & API; Admin UI	Admin	Must-have
	Payroll management	Basic payroll DB & APIs; Frontend dashboard	Admin/Accountant	Must-have
	Reports	Attendance summary, payroll summary	Admin/Accountant	Must-have
Classes & Timetable	Create classes/sections/subjects	DB & APIs; Admin UI	Admin	Must-have
	Assign teachers	API & Admin UI	Admin	Must-have
	Generate timetable	Backend logic; Frontend calendar	Admin/Teacher/ Student	Must-have
Exams & Grading	Exam scheduling	DB & API; Admin UI	Admin	Must-have
	Marks entry & evaluation	API & frontend forms	Teacher/Admin	Must-have
	Report card generation	Backend report generation; Frontend view & PDF export	Admin/Teacher/ Student	Must-have
	Historical exam data	DB structure & API; Frontend views	Admin/Teacher	Must-have
Fees & Accounting	Fee structure setup	DB tables; APIs; Admin UI	Admin/Accountant	Must-have

	Payment tracking	APIs for paid/pending; Frontend dashboards	Admin/Account ant/Student	Must-hav e
	Online payment integration	Integrate eSewa/Khalti/ConnectI PS; API & Frontend forms	Admin/Student	Must-hav e
	Invoice & receipt generation	Backend logic; PDF generation; Frontend view	Admin/Account ant	Must-hav e
	Payroll tracking	APIs & dashboard	Admin/Account ant	Must-hav e
Attendance Management	Punch-in/punch-o ut	DB & API; Frontend UI	Teacher/Admin/ Student	Must-hav e
	Attendance reports	Daily/weekly/monthly; Backend + Frontend	Admin/Teacher	Must-hav e
	Absentee alerts	Integration with SMS/email APIs; Frontend notifications	Admin/Teacher	Must-hav e
Communication	Notifications	SMS/email API integration; Frontend setup	Admin/Teacher/ Student/Parent	Must-hav e
	Messaging	Backend APIs; Frontend messaging UI	Teacher/Student /Parent	Must-hav e
Reports & Analytics	Student attendance reports	API & frontend dashboard	Admin/Teacher	Must-hav e

	Exam & grade performance reports	API & frontend dashboard	Admin/Teacher/ Student	Must-have
	Fee collection & pending reports	API & frontend dashboard	Admin/Account ant	Must-have
	Staff payroll reports	API & frontend dashboard	Admin/Account ant	Must-have
	Dashboard charts	Backend aggregation; Frontend visualization	Admin/Teacher	Must-have
Dashboards	Admin dashboard	students, staff, attendance, fees, exams	Admin	Must-have
	Teacher dashboard	Class assignments, attendance, grading	Teacher	Must-have
	Student dashboard	Attendance, grades, fees, timetable	Student	Must-have
	Parent dashboard	Child's attendance, grades, fees	Parent	Must-have

Notes:

1. **All modules are MVP-focused** for Phase 1; optional modules (Library, Hostel, Transport, Online Learning, Mobile App) can be added in future phases.

2. **Tasks include backend + frontend work**, as this is a full-stack Laravel + React system.

3. **Roles involved** are client-side users; Super Admin or company-side monitoring can be considered separately if needed.

4. **Dependencies:**

   ○ Student Management → Attendance, Exams, Fees
   ○ Teacher & Staff Management → Classes & Timetable, Exams
   ○ Fees → Online Payment integration