B.Tech Project Proposal

# Project Title:

Student-Centric ERP System with Smart Calendar, Attendance, and Faculty Connect

# Problem Statement:

Students currently face significant challenges in managing their academic life. Timetables, assignments, exams, attendance records, and announcements are scattered across multiple disconnected platforms (emails, WhatsApp groups, notice boards, and different portals). This fragmentation leads to missed deadlines, poor attendance tracking, and unnecessary stress.  
  
Professors also face inefficiencies, including timetable confusion, difficulty communicating with students in a structured manner, and challenges in managing requests. Existing ERP systems are outdated, cluttered, and heavily admin-focused, failing to serve the needs of students directly.

# Key Pain Points:

* • Scattered information (timetables, assignments, announcements across multiple places).
* • Lack of a centralized calendar or planning hub.
* • Students missing deadlines due to poor assignment/test tracking.
* • Attendance is difficult to track; no clear link to internal marks.
* • Professors overwhelmed by casual communication channels (WhatsApp/email spam).
* • Too many events → information overload without personalization.
* • Existing ERPs are outdated, cluttered, and not student-friendly.
* • No proper system for exam forms, admit cards, and results in one place.
* • Lack of personalization and filtering (students get irrelevant info).
* • UI/UX of existing systems is poor → non-intuitive, non-color-coded.

# Proposed Solution:

A modern, student-first ERP system that centralizes all academic activities into a single platform (mobile + web). The system will be designed around a central calendar hub, an intelligent attendance tracker, structured assignment/test management, and a faculty connect module to replace casual communication with appointment booking. The interface will use clean, pastel-coded UI/UX to ensure usability and clarity.

# Key Features:

* • Central Calendar (auto-fills classes/tests, students manually add events they want).
* • Timetable Management (admin uploads → always latest version, view-only for students/profs).
* • Smart Attendance Tracker (percentage attended, minimum required %, marks contribution).
* • Assignments & Test Management (deadlines, uploads, notifications, subject-wise tracking).
* • Internal Marks Tracker (attendance + assignments + tests shown separately and linked).
* • Examination Window (forms, fee payment, admit card, syllabus, datesheet, results).
* • Announcements Hub (categorized: Department, Student Union, College, University, Societies).
* • Faculty Appointment Booking (structured slot booking instead of casual chats).
* • Prof Profile Window (where they are teaching currently, awareness for students).
* • Notification Preferences (customized alerts, avoid spam).
* • Clean UI/UX (pastel colors, color-coded subjects, minimal clutter).

# Impact:

Students: A single hub for all academic needs, stress-free management of deadlines and attendance.  
Professors: Structured communication with students, clarity of timetable, reduced chaos.  
Administration: Transparent, centralized control and scalability across departments and universities.

# Future Scope:

* • AI-powered smart reminders and predictive attendance shortage alerts.
* • Integration with Google Classroom and other LMS platforms.
* • Analytics dashboards for faculty and administrators.
* • Scalable architecture adaptable to different universities and institutes.

# Features & System Overview

## Timetable Edit and Automation

Students can now edit their personal timetable view — allowing flexibility to add demo sessions, viva deadlines, or assignment due dates. These edits will automatically sync with Google Classroom and email notifications to maintain consistency across platforms.

## Flexible Course Attendance

Students can choose to attend classes outside their registered courses or skip certain ones within their own curriculum. The system allows timetable editing for such flexibility while preserving default course timetables.

## Dynamic Course Dashboard

Each course screen displays real-time progress — current marks, attendance percentage, and component breakdown. Progress bars visually represent how much of each criterion (marks, attendance, projects, etc.) has been completed.

## Faculty Communication Update

In-app faculty communication (chat or appointment system) has been removed to simplify focus on core academic utilities.

## Vision and Expansion

This system is envisioned as a comprehensive mobile app built in Kotlin (Android Studio), starting with IIIT Delhi and later scalable to other institutes. It integrates academic, administrative, and student-life workflows into a single unified experience.