

## 4th Semester (Basic CRUD with Core Technologies):

### Core Features :-

**User roles and authentication:** Create roles for teachers (with mark entry permissions), students (with result viewing permissions), and possibly administrators. Implement secure login and password protection.

**Student and teacher profiles:** Store basic information like names, classes, subjects, and roles.

**Mark entry forms:** Design user-friendly forms for teachers to enter marks for unit tests, terminal exams, and board exams.

**Result viewing portal:** Develop a secure interface where students can view their results and overall performance.

**Report generation:** Enable teachers to generate reports with student marks, class averages, and other relevant statistics.

**Question bank management:** Create a module for teachers to upload and manage old question papers for student reference.

## 6th Semester (Advanced Features and Expansion):

### Potential Enhancements :-

**Personalized dashboards:** Provide customized dashboards for students and teachers to visualize their progress and performance metrics.

**Subject-specific analysis:** Allow teachers to view student performance in individual subjects for targeted interventions.

**Parental access:** Consider optional features for parents to view their children's results and receive progress updates.

### Student Reminders :-

**Personalized Goal Reminders:** Help students stay on track with reminders for their personal goals, promoting self-accountability.

**Event Notifications:** Schedule and send automatic reminders for tests, assignments, deadlines, and school activities.

**Performance Reminders:** Based on analysis, remind students to revisit specific topics or practice more for upcoming assessments.

### **Student Routine Table :-**

**Schedule Management:** Allow students to create and manage class timings, study time.

**Color-Coding and Prioritization:** Enhance visual clarity and prioritize tasks based on importance and deadlines.

## **8th Semester (AI Integration):**

### **AI-Powered Features :-**

**Grade prediction:** Use basic algorithms to estimate student grades based on past performance and projected trends.

**Predictive analytics:** Use machine learning to predict students at risk of failing or dropping out, allowing for early intervention and support.

**Personalized learning recommendations:** Recommend specific study resources and learning strategies tailored to individual student needs based on their strengths and weaknesses in different subjects.

**Adaptive assessments:** Develop AI-powered assessments that adjust difficulty levels based on student performance, providing a more personalized learning experience.

**Chatbot integration:** Create a chatbot to answer student and teacher queries, provide guidance, and direct users to relevant resources.

### **Additional Considerations :-**

**Data privacy and security:** Implement robust measures to protect student data, ensuring compliance with ethical guidelines and privacy regulations.

**User experience:** Design an intuitive and user-friendly interface for all user roles, making the system accessible and engaging.

**Scalability:** Consider how the system can handle increasing numbers of users and data as it grows in popularity.