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Completed the project named as Phase -1 TECHNOLOGY

PROJECT NAME: Student Grading System

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Phase 1 — Problem Understanding & Requirements

1. Problem Statement

Educational institutions face challenges in efficiently managing student grades, calculating results, and generating reports. Manual grading is time-consuming, error-prone, and lacks transparency.

Solution:

A Student Grading System that automates marks entry, grade calculation, and result publishing, making the process faster, accurate, and transparent.

2. Users & Stakeholders

Category	Role	Responsibilities
Primary Users	Students	View grades, download report card
	Teachers	Enter marks, view/edit results
Secondary Users	Admin / Exam Cell	Manage records, subjects, grading policies
	Parents	View student performance
Stakeholders	Management, IT Support Team	Monitor performance, maintain system

3. User Stories

User	Story
Teacher	As a teacher, I want to add/update student marks, so that grades are accurate.
Student	As a student, I want to view my grades online, so that I can track progress.
Admin	As an admin, I want to manage subjects and grading rules, so that data is updated.
Parent	As a parent, I want to see my child's report card, so that I can monitor progress.
Management	As management, I want summary reports, so that I can analyse performance.

4. MVP(Minimum Viable Product) Features

- **Login & Authentication** - Secure login for Admin, Teacher, Student, Parent
- **Student Record Management** - Add/Edit/Delete student details
- **Marks Entry Module** - Teachers enter subject-wise marks
- **Grade Calculation** - Automatic grade generation using rules
- **Reports & Results** - View/download reports in structured format

5. Wireframes / API Endpoint List

- i. **Wireframes (basic idea):**
 - Login page (Admin/Teacher/Student)
 - Dashboard (different for each role)
 - Student list and marks entry page
 - Grade report page
- ii. **API Endpoints (sample):**

Endpoints	Method	Purpose
/login	POST	Authenticate user (Admin/Teacher/Student)
/students	GET	Fetch student list
/students	POST	Add a new student
/students/:id	PUT	Update student record
/students/:id	DELETE	Delete a student
/marks	POST	Enter/update student marks
/grades/:studentId	GET	Fetch grade report
/reports	GET	Generate class/subject report

6. Acceptance Criteria

Criteria	Expected Result
Teachers can add/update marks	No data entry errors
Students can view grades after publishing	Real-time grade access
Automatic grade calculation works correctly	Grades match defined rules
System supports 500+ concurrent users	No performance issues
Reports are downloadable	PDF/Excel formats available
Secure access	Role-based authentication