 

**COLLEGE CODE :** 8203

**COLLEGE NAME:** A.V.C. College of Engneering

**DEPARTMENT:** Computer Science And Engineering

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**DATE : 08/09/2025**

**Completed the project named as Phase -1 TECHNOLOGY**

**PROJECT NAME:** Student Grading System

**SUBMITTED BY,**

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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  Teachers | View grades, download report card  Enter marks, view/edit results |
| **Secondary Users** | Admin / Exam Cell  Parents | Manage records, subjects, grading policies  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**

1. **Wireframes (basic idea):**

* Login page (Admin/Teacher/Student)
* Dashboard (different for each role)
* Student list and marks entry page
* Grade report page

1. **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 | |
|  | | |