BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
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STUDENT NAME: DHARSHINI AK

PROJECT ID:14

PROJECT TITLE:MARK ENTRY(ACADEMICS)

TECHNICAL COMPONENTS

COMPONENT	TECH STACK
Frontend	vue.js
Backend	Node js and Express.js
Data base	Mongo DB
API	RESTful Services

Objective:

To design and implement a secure, user-friendly online portal that allows faculty members to log in using their college email IDs, select departments and subjects, and enter students' marks for PT1, PT2, and Semester exams. The portal should facilitate detailed recording of marks according to specific course outcomes, ensure compliance with passing criteria, and generate an articulation matrix table for academic evaluation.

Background:

In a college environment, managing student marks across various assessments and subjects can be a complex task. Faculty members need a streamlined process to enter marks, especially when dealing with multiple course outcomes and integrating internal (IP)

marks. The current manual or semi-digital methods are prone to errors, inefficiencies, and lack comprehensive analytics capabilities.

1 .INTRODUCTION

1.1.Purpose:

The purpose of this document is to present a detailed description of the mark entry portal.It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli.

1.2.Scope of the project:

This software system will serve as a portal for the mark entry,enabling staffs to enter mark and calculate the CO's and PO's.

Only people with tha mail id of BIT will enter into the portal and choose their department and choose their subject and enter the marks of the student.

2.SYSTEM OVERVIEW

2.1.Users:

1.Faculty:

They have the access to enter the marks or edit or to delete.They can be only allowed if they use BIT mail id.First of all they must login with the mail id.And then they must choose the department .And then they must choose the handling subject.

2.Admin:

The admins have to check weather the faculty members updated the marks or not.They can then collect the data from the portal and save it for the result result analysis.

Functional Requirements:

User Authentication:

- The system shall allow faculty members to log in using their official college email IDs.
- The system shall validate the email ID and password against the college's authentication system.

Department and Subject Selection:

- The system shall display a list of departments upon successful login.
- The system shall allow the user to select a department from the list.
- The system shall display a list of subjects associated with the selected department.
- The system shall allow the user to select a subject from the list.

Marks Entry for PT1:

- The system shall allow faculty to enter marks for:
- Course Outcome 1 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 2 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 3 with a maximum of 10 marks and a minimum of 6 marks to pass.
- The system shall allow faculty to enter Internal (IP) Marks with a total maximum of 8 marks, which can be distributed across the three course outcomes.

Marks Entry for PT2:

- The system shall allow faculty to enter marks for:
- Course Outcome 3 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 4 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 5 with a maximum of 10 marks and a minimum of 6 marks to pass.
- The system shall allow faculty to enter Internal (IP) Marks with a total maximum of 8 marks, which can be distributed across the three course outcomes.

Marks Entry for Semester:

- The system shall allow faculty to enter marks for:
- Course Outcome 1 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 2 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 3 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 4 with a maximum of 20 marks and a minimum of 12 marks to pass.
- Course Outcome 5 with a maximum of 20 marks and a minimum of 12 marks to pass.

Marks Calculation:

- The system shall combine marks from PT1, PT2, and Semester for each course outcome.
- The system shall determine the pass/fail status for each course outcome based on the predefined pass marks.

Articulation Matrix Table Generation:

- The system shall generate an articulation matrix table based on the combined marks and pass/fail status of each course outcome.
- The system shall provide a detailed report for academic evaluation.

User Interface:

- The system shall provide an intuitive and user-friendly interface for faculty to enter marks.
- The system shall provide validation messages to ensure marks are entered within the allowed limits.

Data Security and Integrity:

- The system shall ensure that all data is securely stored and transmitted.
- The system shall provide mechanisms to prevent unauthorized access to marks and student information.

Concurrent Access:

The system shall handle concurrent access by multiple faculty members without performance degradation.

Error Handling:

- The system shall provide clear error messages for invalid inputs or system errors.
- The system shall log errors for further analysis and resolution.

Reports and Analytics:

- The system shall allow faculty to generate reports on student performance across different course outcomes.
- The system shall provide analytics tools for academic performance monitoring and improvement.

Scalability:

The system shall be scalable to accommodate an increasing number of users and data entries.

2.2.Features:

Flowchart Description

- Start
- Login
- Faculty logs in using college mail ID
- Select Department
- Select Subject
- Enter Marks for PT1
- Enter marks for Course Outcome 1 (Max: 20, Pass: 12)
- Enter marks for Course Outcome 2 (Max: 20, Pass: 12)
- Enter marks for Course Outcome 3 (Max: 10, Pass: 6)
- Enter IP Marks (Max: 8, distributed across the three course outcomes)
- Enter Marks for PT2

- Enter marks for Course Outcome 3 (Max: 20, Pass: 12)
- Enter marks for Course Outcome 4 (Max: 20, Pass: 12)
- Enter marks for Course Outcome 5 (Max: 10, Pass: 6)
- Enter IP Marks (Max: 8, distributed across the three course outcomes)
- Enter Marks for Semester
- Enter marks for all Course Outcomes (1 to 5, Max: 20 each, Pass: 12 each)
- Calculate Final Results
- Combine marks from PT1, PT2, and Semester for each Course Outcome
- Generate Articulation Matrix Table
- Use the combined results to generate the table
- End

FLOW CHART