BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
Sathyamangalam - 638401 Erode District, Tamil Nadu, India

Software Requirement Specification

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Project ID: 14

Project Details:

Project Name	Mark entry
Domain	Academics
Stack	LAMP Stack

1. Problem statement

There is a need for a comprehensive platform that can simplify the entry, management, and analysis of student performance data from various assessments across five subjects. This platform should ensure accurate calculation of COs and POs and provide actionable insights to improve student outcomes.

2. Introduction:

2.1 Purpose:

The purpose of this project is to enhance the evaluation and analysis of student performance in multiple subjects through the use of CO-PO mapping. Specifically, this project aims to Improve Tracking and Analysis,Accurate CO and PO Calculation,Enhance Educational Strategies.

2.2 Product Scope:

- Data Collection: Collect marks obtained by students in five subjects, categorized by COs.
- CO-PO Mapping: Use the predefined mapping of COs to POs to evaluate how each CO contributes to the POs.
- Result Analysis: Analyze the overall results to identify trends, strengths, and weaknesses in student performance and the effectiveness of the course delivery

2.3 Product Value:

The development and implementation of a comprehensive platform for the analysis and evaluation of student performance using CO-PO mapping will Enhance Academic Performance, Improve Student Outcomes and also has Administrative Benefits.

2.4 Intended Use:

The comprehensive platform for analysis and evaluation of student performance using CO-PO mapping is intended to be used by various stakeholders in an educational institution to enhance the quality and effectiveness of education. The specific uses include Faculty Members, Academic Coordinators, Institutional Administrators, IT and Data Management Teams.

3. Stack Architecture and Infrastructure:

Front-end	HTML, CSS, JavaScript
Back-end	LAMP
Database	MySQL
API	RESTful services

4. Dependencies

Integration with Data Sources:

The platform must integrate with various data sources such as assessment tools and student Information Systems (SIS) to gather information on student performance.

Dependency on Data Formats:

The platform should support multiple data formats, including CSV, Excel, and JSON, to handle diverse data sources effectively.

Data Storage and Management:

A robust DBMS is required to securely store students' academic performance data. The DBMS should facilitate the calculation of key performance metrics, such as Course Outcomes (COs) and Program Outcomes (POs). The system must provide actionable insights based on the stored data to help improve student outcomes.

5.Functional requirements:

1. User Management

User Registration and Login:
Faculty, students, and administrators should be able to register and log in securely.

2. Data Management

Assessment Data Entry:
Faculty can manually input or upload student performance data (marks/grades) for various assessments (exams, quizzes, assignments). Support for bulk data upload through CSV or Excel files.

3. Performance Analysis

CO and PO Score Calculation: Automatically calculate average scores for each CO based on

student assessments. Aggregate the contribution of COs to relevant POs.

4. Reporting and Insights

Customizable Reports: Generate detailed reports on student performance, CO-PO contributions, and overall academic progress.

5. FLOW CHART: