# 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**

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| **ROLL NO** | 7376221CD125 |
| **SEAT NO** | 207 |
| **PROJECT ID** | 07 |
| **PROJECT TITLE** | PROJECT WORK MARK CONSOLIDATION SYSTEM |

## IMPLEMENTATION TIMELINE:

| Stage | Description | Deadline | Status |
|---|---|---|---|
| Stage 1 | Planning and Requirement gathering | 03.5.2024 | Completed |
| Stage 2 | Design and Prototyping | | Ongoing |
| Stage 3 | Database Designing | | Not started |
| Stage 4 | Backend Development | | Not started |
| Stage 5 | Testing and Implementation | | Not started |

## TECHNICAL COMPONENTS:

| | |
|---|---|
| **FRONTEND** | • Angular |
| **BACKEND** | • Express.js<br>• Node.js |
| **DATABASE** | • MongoDB |
| **API** | • REST Ful API<br>• GraphQL APIs |

## PROBLEM STATEMENT:

Build a web portal to compute the final project marks for S7 and S8 students, when the admin submits the review mark and guide mark in excel sheet. This web portal will include:

- Submission of S7 and S8 students review marks.
- Students with moderation marks.
- Students without moderation marks.
- Analytics for overall performance.
- Download of Report.

## PURPOSE:

The purpose of this project is to create a web portal facilitating efficient project review and assessment processes. It aims to provide students with a platform to review their project marks and track their progress. Additionally, the portal will enable faculty members to review student projects. Administrators will have access to comprehensive analytics and reporting features to oversee project evaluations. It will explain the purpose and features of the system, interfaces of the system, what the system will do, the constraints under which the system will operate.

## SCOPE:

This software system will serve as a web portal for the Project Monitoring Committee, students to view their review mark and total marks in their respective login. The project will have user logins for students, faculty members(guides), administrators(admin).

## STAKEHOLDERS:

Only Students and Faculties(guides) of Bannari Amman Institute of Technology with their respective email ids can access the web portal. All the edit access in the web portal will only be applicable to the administrators(admin).

**Students:** The student login functionality enables students to access their project review marks and total marks through the portal. Upon login, students are presented with their individual review marks, and if necessary, a notification indicating the requirement for a moderation mark is displayed. If no moderation mark is required, the portal displays the guide mark alongside the average marks of all reviews. Subsequently, after the administrative team assigns moderation marks, the portal updates the total marks to reflect the addition of both moderation and guide marks.

**Faculty:** For the guide or faculty login, the portal grants access to faculty members to view the marks of all students they have reviewed. This feature streamlines the review process and provides faculty with easy access to student performance data.

**Admin:** Admin login provides comprehensive edit access, allowing administrators to manage various aspects of the system. Admins can upload student details, review marks, and guide marks via Excel sheets, as well as provide information on guide assignments. Additionally, upon receiving reports indicating students in need of moderation marks, admins can upload moderation marks for all affected students. The portal also facilitates report generation, enabling admins to download necessary reports as required. Furthermore, the admin dashboard provides insights into student performance through data analysis, including clustering analysis where applicable.

## FUNCTIONAL REQUIREMENTS:

**User Authentication:** Upon accessing the portal, users will be prompted to authenticate themselves based on their role:student, faculty (guide), or administrator (admin). Users will log in using their credentials (username and password) to access their respective functionalities.

**Report and Analysis:** The portal will offer reporting capabilities, enabling users to download reports and access data analysis features. Users can generate performance analysis reports based on student data, including clustering analysis and other relevant metrics.

**Data Security:** Ensure data security and privacy measures are in place to protect sensitive student information. Implement access controls to restrict users' access to only the functionalities and data they are authorized to view or modify.

## NON-FUNCTIONAL REQUIREMENTS:

**Performance:** The portal should load quickly and respond to user actions within acceptable timeframes. It should be able to handle concurrent user sessions without significant performance degradation.

**Scalability:** The system should be designed to scale horizontally or vertically to accommodate increasing user loads or data volumes. It should support the addition of new features and functionalities without major architectural changes.

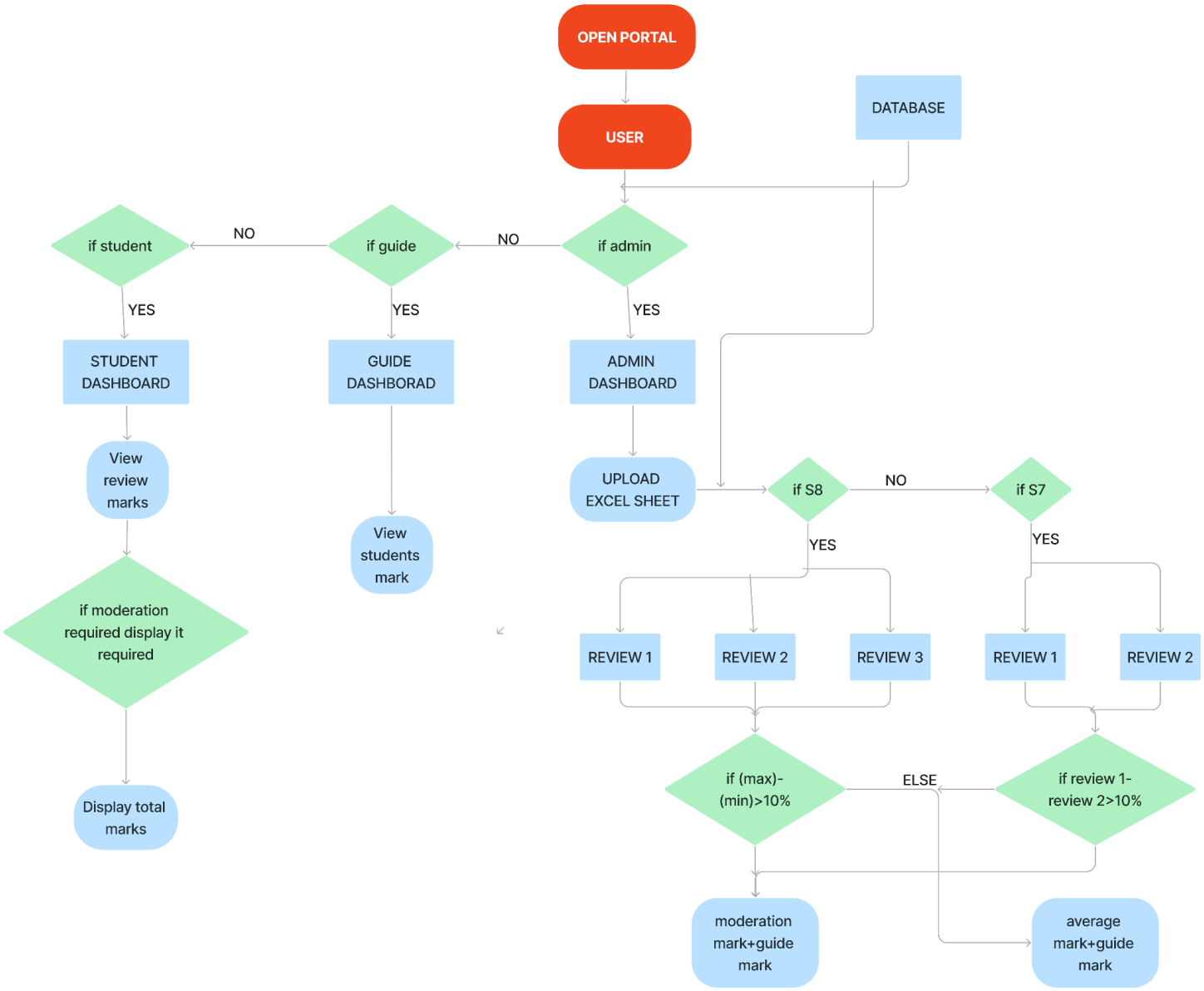
**Reliability:** The portal should be highly available, with minimal downtime for maintenance or upgrades. It should have mechanisms in place to handle errors gracefully and recover from failures without data loss.

**Usability:** The portal should have an intuitive and user-friendly interface, with clear navigation and consistent design elements. It should provide helpful feedback to users during interactions and guide them through complex tasks.

## PROJECT MARK CALCULATION:

| Project Type | Number of Reviews | Review Calculation | Total Mark Calculation |
|---|---|---|---|
| S7 | 2 | Difference between two review marks | If difference > 10%: Moderation mark + Guide mark <br> If difference <= 10%: Guide mark + Average mark |
| S8 | 3 | Difference between maximum and minimum review marks | If difference > 10%: Moderation mark + Guide mark <br> If difference <= 10%: Guide mark + Average mark |

# FLOW CHART:


OPEN PORTAL
USER
DATABASE
if student
NO
if guide
NO
if admin
YES
YES
YES
STUDENT DASHBOARD
GUIDE DASHBORAD
ADMIN DASHBOARD
View review marks
View students mark
UPLOAD EXCEL SHEET
if S8
NO
if S7
YES
YES
if moderation required display it required
REVIEW 1
REVIEW 2
REVIEW 3
REVIEW 1
REVIEW 2
Display total marks
if (max)-(min)>10%
ELSE
if review 1-review 2>10%
moderation mark+guide mark
average mark+guide mark