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

Project Work Title Registration Portal

Name	Naveen M
Roll no	7376221CD129
Seat no	208
Project ID	08
Problem Title	Title Registration Portal

Technical Components:

Front End	React Js
Backend	Node Js, Express Js
Data Base	MongoDB
Api	OpenApi

1. Introduction

1.1. Purpose:

This document aims to provide a thorough overview of the Title registration portal. The document will elucidate the objectives and characteristics of the system, as well as its interfaces, functionalities, operational limitations, and response to external stimuli.

1.2. Scope of Project:

1.2.1 Title Selection and Reservation System:

- The portal will feature a user-friendly interface that allows students to browse and select project titles from a list of available options.
- Real-time availability checks will be integrated into the system to ensure that students can view the current status of each title before making a selection.
- A secure reservation mechanism will enable students to reserve their chosen titles, preventing conflicts and ensuring fair allocation.

1.2.2 Administrative Oversight and Analytics Dashboard:

- An administrative dashboard will provide comprehensive oversight of title availability, reservations, and student activities within the portal.
- Administrators will have the ability to review and approve/reject title selections, manage reservations, and resolve any conflicts that may arise.
- Notification systems will be in place to alert administrators about critical actions, conflicts, and approaching deadlines, ensuring efficient management of the system.

2. System Overview:

2.1. Users:

1. **Students**:

   The project registration portal facilitates students in selecting project titles seamlessly. Students can easily browse through the available titles, reserve their preferred options, and monitor the status of title Approval.

2. Faculty Guide :

Faculty members play a crucial role in managing the project registration process within the portal. They are responsible for overseeing the list of available project titles, ensuring accuracy and relevance for student selection. Faculty members collaborate with administrators to address any registration issues or conflicts that may arise during the process.

3. Admin:

Administrators hold full access to the site, managing title availability, updating lists, and promptly resolving registration issues.

3. Features:

1. **User Authentication and Registration:**
   - Users can securely log in to the portal using their college email IDs for authentication purposes.
   - New users have the option to register and create accounts within the portal to access its functionalities.
2. **Project Title Selection:**
   - The portal provides users, particularly students, with a curated list of available project titles.
   - Users can explore titles based on categories or use a search function to find specific projects of interest.
3. **Title Availability Check:**
   - Each project title in the portal is accompanied by real-time availability status indicators.
   - Users are promptly notified if a selected title is already reserved or unavailable for registration.

4. **Title Reservation and Management:**
    - Users, primarily students, can reserve their chosen project titles securely within the portal.
    - The system incorporates validation checks to manage conflicts and ensure equitable title allocation among users.
5. **Faculty Dashboard:**
    - The faculty who have given the respective project title will automatically see it reflected in their respective faculty dashboard when a student selects the title
    - The dashboard includes tools for Faculty to review, approve, or reject title selections, resolve conflicts, and monitor system performance.
6. **Communication and Notifications:**
    - The portal facilitates seamless communication between users, enabling discussions on project title selections and approvals.
    - Users receive timely notifications regarding title availability updates, reservation status, and important deadlines.

3. System Requirements Specification:

3.1 Functional Requirements:

(1) User Management:

a. Students can register and login.

b. Admins and Guides have a separate login page and dashboard.

(2) Project Classification:

a. Internal Projects:

i. The projects given by the Faculties (Special lab, R&D ,other faculties) in the portal .

b. External Projects:

ii. External Own projects & External Industry projects

iii. The Title of the Project can be inserted by the student.

iv. Guides can be chosen by the students themselves.

(3) Constraints:

i. A team may consists of 1-3 members.

ii. At least one member from the team should be in the same cluster as the chosen project title.

iii. Only team leader can Fill the Title registration form.

(4) Approval Status:

a. Students can view the current status of their application.

b. If the application is rejected, then the remarks is shown.

c. Students can also see the logs of their applications.

(5) Guide Dashboard:

a. Guide can view a list of all submitted Requests for the project Titles from the students.

b. Applications can be filtered by category (software, hardware).

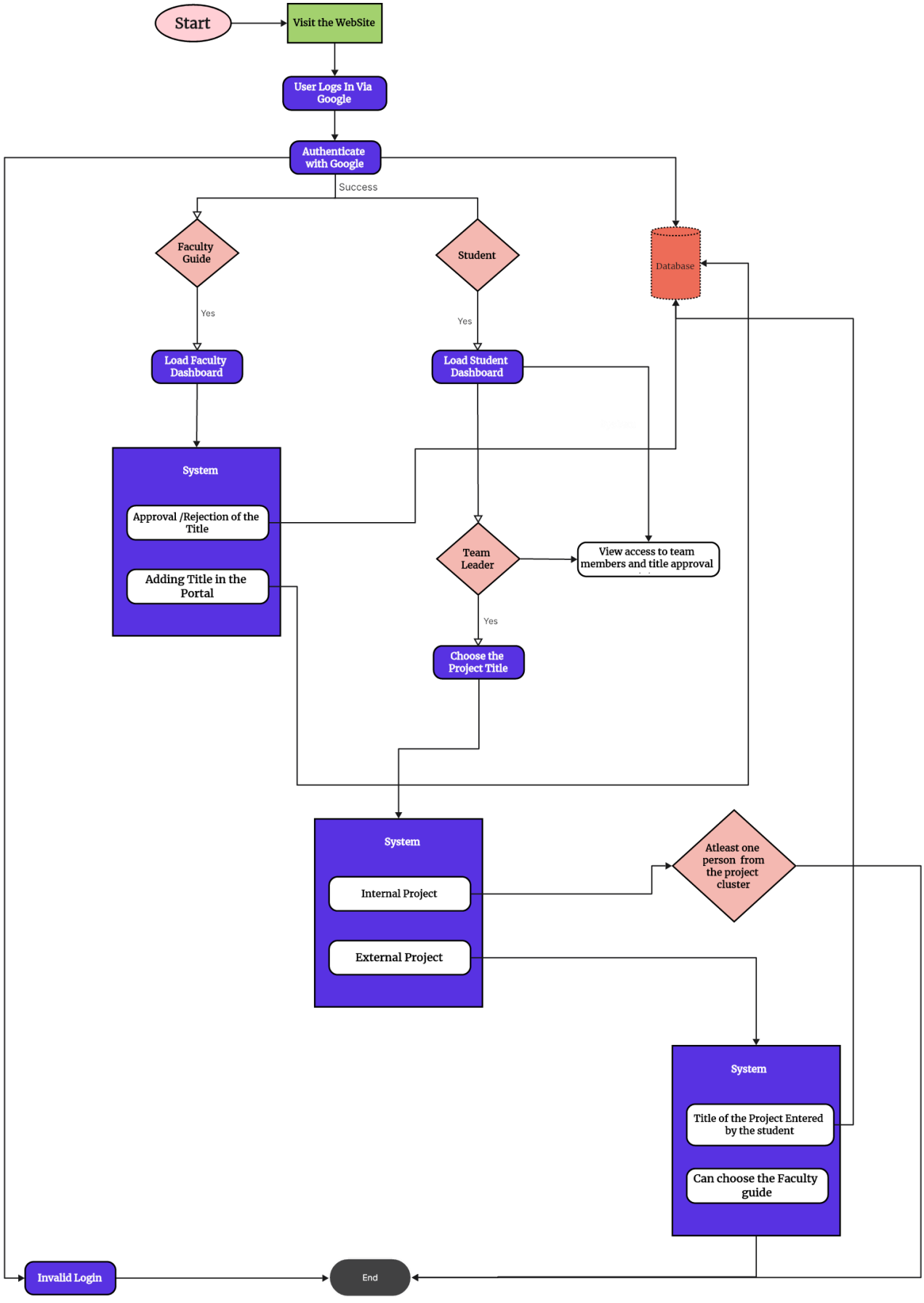
c. The Guide can view details of each application.

d. Guide can approve or reject applications with suitable remarks.

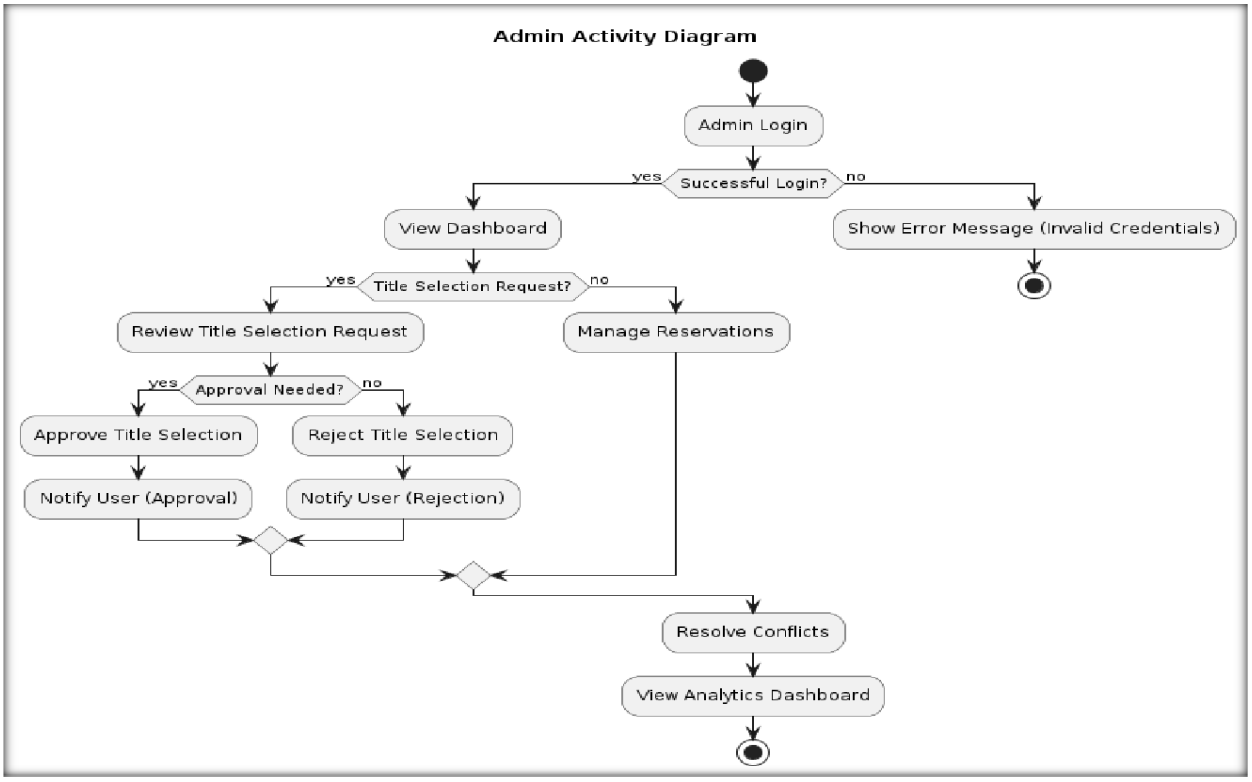
3.2. Non-Functional Requirements:

- **Performance**: The system must respond to user actions within 2 seconds to ensure efficient usability and must handle a concurrent user load of at least 100 users without significant performance degradation.
- **Security**: User data must be encrypted during transmission and storage, and access to sensitive functionalities should be restricted to authorized admin users through secure authentication mechanisms.
- **Usability**: The user interface should be intuitive and user-friendly, with clear and concise error messages provided to guide users in case of input errors or system failures.
- **Reliability**: The system should be available 24/7 with minimal downtime and should have a backup and recovery mechanism in place to prevent data loss in case of system failures or crashes.
- **Scalability**: The system should be designed to accommodate an increasing number of users and data volume over time, and it should be scalable to support additional features and functionalities as per future requirements.

FLOWCHART FOR USERS:



FLOWCHART FOR ADMIN:



UI: