BANNARI AMMAN
INSTITUTE OF TECHNOLOGY
An Autonomous Institution, Affiliated to Anna University,
Approved by AICTE, Accredited by NAAC with 'A+' Grade

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

Student Name: VARSHINI T M

Seat No: 169

Project ID: 7

Project title: (Faculty Log) Mailer BIT

Technical Components

Component	Tech Stack
Backend	Express JS, Node JS
Frontend	Angular
Database	MONGODB
API	RESTful services

PROBLEM STATEMENT:

The decentralized nature of email communication within educational institutions leads to several challenges, including:

Inconsistent messaging: Different departments and administrative units send emails independently, leading to duplication of information and inconsistent messaging.

Schedule conflicts: Students and faculty receive multiple emails with overlapping schedules and events, causing confusion and missed opportunities.

Fragmented communication: Important announcements and updates get lost in the volume of emails, making it difficult for recipients to stay informed and engaged.

Administrative burden: Managing email distribution lists, resolving conflicts, and ensuring timely delivery of critical information imposes a significant administrative burden on staff and faculty.

PROJECT-FLOW:

Purpose:

To develop a centralized communication system that efficiently manages information about student schedules and activities, addressing existing issues of schedule conflicts and communication inconsistencies.

Scope:

This system includes user authentication, a mail request form, conflict checks, and a real-time dashboard for viewing and managing schedules. It integrates with existing email systems to ensure scheduled and conflict-free messaging.

Business Context:

The centralized communication system aims to enhance communication clarity and timeliness across BIT, boosting organizational efficiency by minimizing scheduling conflicts. Primary stakeholders include students, faculty, administrative staff, and the IT department.

Consideration:

1. All users have active Google accounts for authentication.
2. Users have regular access to internet-enabled devices.

Dependencies:

1. Integration with Google OAuth for user authentication.
2. Consistent performance and availability of the existing email server.

User Personas:

Student: Needs an up-to-date schedule to effectively plan activities.

Faculty: Requires the ability to send out schedule updates and notices efficiently.

Admin Staff: Manages system operations, resolves conflicts, and approves mail requests.

User Stories:

As a student, I want to view a unified schedule of my classes and events to organize my day effectively.

As a faculty member, I need to ensure my communications reach students without conflicting with their other scheduled activities.

As a faculty member, I want my timetable tasks to be tracked, showing "Completed" if finished on time, or "Overdue" if not, with reminders sent to my mobile to prevent missed tasks.

As an admin staff member, I need to ensure faculty cannot engage in any malpractices, ensuring all tasks are accurately reported.

Functional Requirements:

User Authentication: Secure login using Google OAuth.

Mail Request Form: Users input mail content, scheduling time, category, and recipients.

Conflict Resolution: Automatic detection of scheduling conflicts with options for adjustment.

Dynamic Dashboard: Real-time schedule viewing and interaction, including:

Faculty Timetable Monitoring: Weekly updates indicating "Completed" for finished tasks or "Overdue" for incomplete tasks.

Notifications: Automated reminders sent to faculty mobile devices for overdue tasks.

Malpractice Prevention: Ensuring integrity and accuracy in task reporting.

Priority Algorithm: Automated prioritization of communications based on rules.

Technology Stack:

Frontend: Angular (JS Framework)

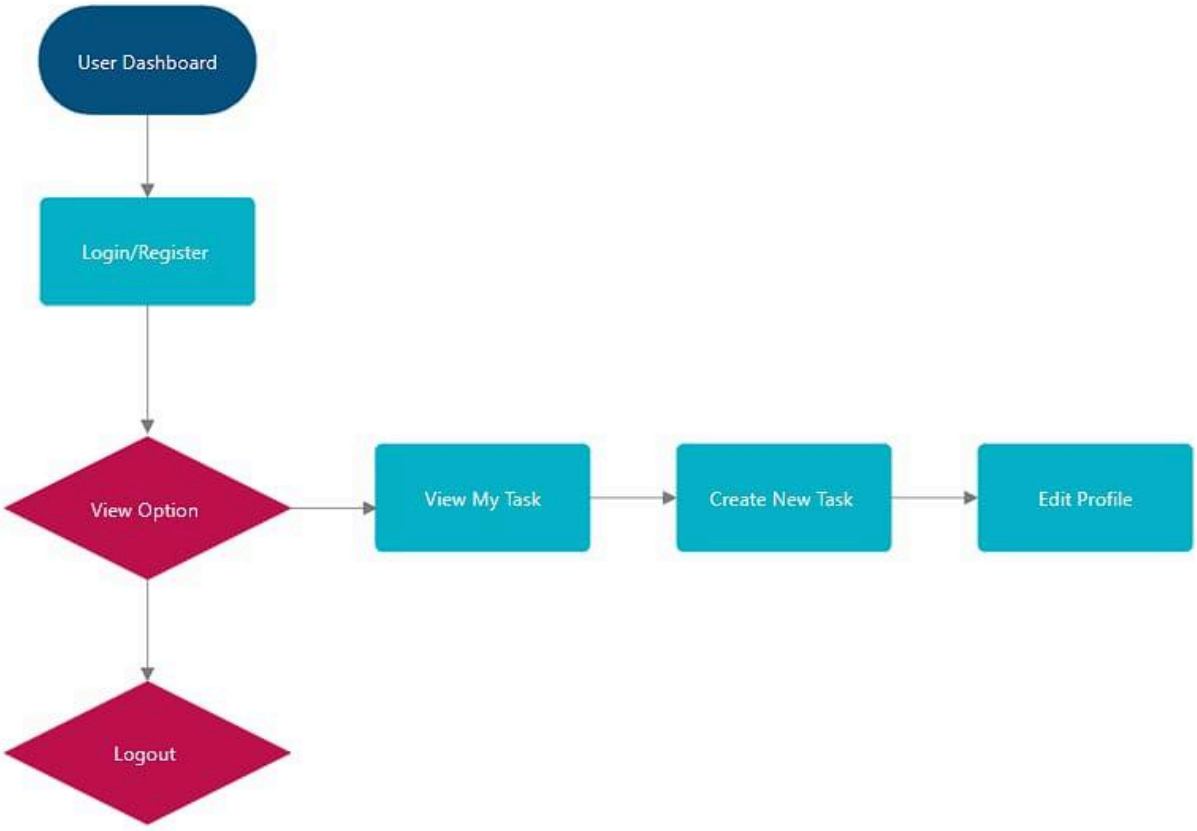
Backend: Node.js with Express

Database: MongoDB

Authentication: Restful API

FLOWCHART :

USER DASHBOARD



ADMIN DASHBOARD