



# BANNARI AMMAN INSTITUTE OF TECHNOLOGY

An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade

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PROJECT ID:25

PROJECT TITLE: STUDENT DATABASE MANAGEMENT

## Technical Components

Component	Tech Stack
Backend	NODE.JS,EXPRESS.JS
Frontend	REACT
Database	MONGO DB
API	OPENAPI

## **PROBLEM STATEMENT:**

The decentralized nature of student database management system within educational institutions leads to several challenges, including:

- **Searching conflicts:** faculty needs to search every time and time consuming, unable to filter it.
- **Administrative burden:** Managing email distribution lists, resolving conflicts, and ensuring timely delivery of critical information through impose a significant administrative burden on staff and faculty.

## **PROJECT-FLOW:**

### **Purpose:**

To develop a centralized student database management system that efficiently manage to edit, add or delete the student information and makes communication easier by sending email without any conflicts.

### **Scope:**

This system includes user authentication, a student portal form, filter, and a real-time student portal form for viewing and editing the database.

### **Business Context:**

The student database system is aimed to enhance the deleting, editing, adding, searching ,sending emails for a particular group of people at low conflicts. Thus boosting organizational efficiency by minimizing conflicts.

### **Consideration:**

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

### Dependencies:

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

### User personas:

- **Admin Staff:** Manages system operations such as adding, editing, removing files from database system, resolves conflicts and sending emails without any delay.

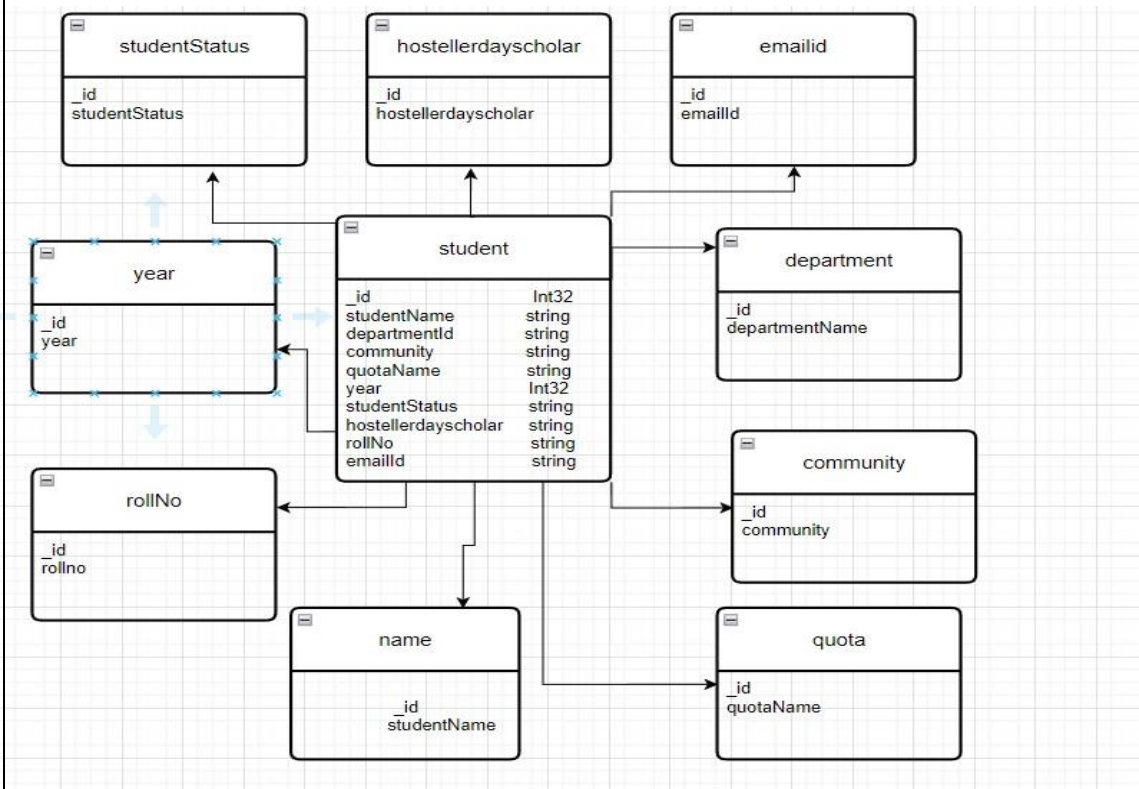
### User Stories:

- As a faculty member, I need to have a database management system without any delay and conflicts, to have filters that enable us not to search everytime and to send email without much process.

### Functional Requirements:

- **User Authentication:** Secure login using Google OAuth.
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- **Mailer Request Form:** Users input mail content.
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- **Resolving conflicts:** By using filters to filter the gathered input data ,less consuming time
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- **Dynamic Database system:** Real-time schedule viewing and interaction

ER DIAGRAM (DB DESIGN):



FLOWCHART:

