Faculty Log IQAC Mailer Project

The project "Faculty Log IQAC Mailer" will be built using the MERN stack.Below is the detailed plan for the project:

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PROJECT ID	10
PROBLEM STATEMENT	FACULTY LOG IQAC MAILER

Project Overview

The Faculty Log IQAC Mailer system is designed to streamline the process of sending and prioritizing mails to faculty members. The workflow involves a sender, an admin, and faculty members, each with distinct roles and responsibilities.

Stack Details

MERN Stack:

- **MongoDB:** Document database to store mail records and logs.
- **Express.js:** Web framework for Node.js to handle routing and middleware.
- **React.js:** Client-side JavaScript framework for building the user interface.
- **Node.js:** JavaScript runtime for building the server-side application.

Project Flow

1. **Mail Sending:**
    - Senders compose and send mails.
    - These mails are received by the admin first.
2. **Admin Handling:**
    - The admin reviews incoming mails.
    - Based on the priority, the admin redirects the highest-priority mail to the faculty.
    - Lower-priority mails are returned to their respective senders.

3. **Priority Management:**
    - The admin prioritizes mails if multiple mails arrive simultaneously.
    - Only one mail (the highest-priority) is sent to the faculty at any given time.
4. **Workflow Management:**
    - Once a mail is sent to the faculty, no additional mail is sent until the current task is completed.
    - Separate dashboards for the sender, admin, and faculty to maintain logs and track mail flow.

Dependencies

- **Node.js:** For running the server.
- **Express.js:** For handling server routes.
- **React.js:** For building the front-end interface.
- **MongoDB:** For storing mail logs and records.
- **React Router DOM:** For navigating between different pages in the application.
- **Tailwind CSS:** For styling the application.
- **Google OAuth:** For authentication purposes.

User Roles

1. **Admin:**
    - Views and manages mail priority.
    - Redirects mails to faculty based on priority.
    - Maintains logs and tracks mail flow.
2. **Sender:**
    - Composes and sends mails.
    - Receives feedback if the mail is of lower priority.
3. **Faculty:**
    - Receives and responds to high-priority mails.
    - Manages their task based on the received mails.

Features

- **Authentication:** Login and registration using Google OAuth.
- **Dashboards:** Separate dashboards for senders, admin, and faculty to manage their respective tasks.
- **Mail Management:** Interface for composing, sending, prioritizing, and tracking mails.
- **Priority Handling:** Admin decides mail priority and ensures smooth workflow management.

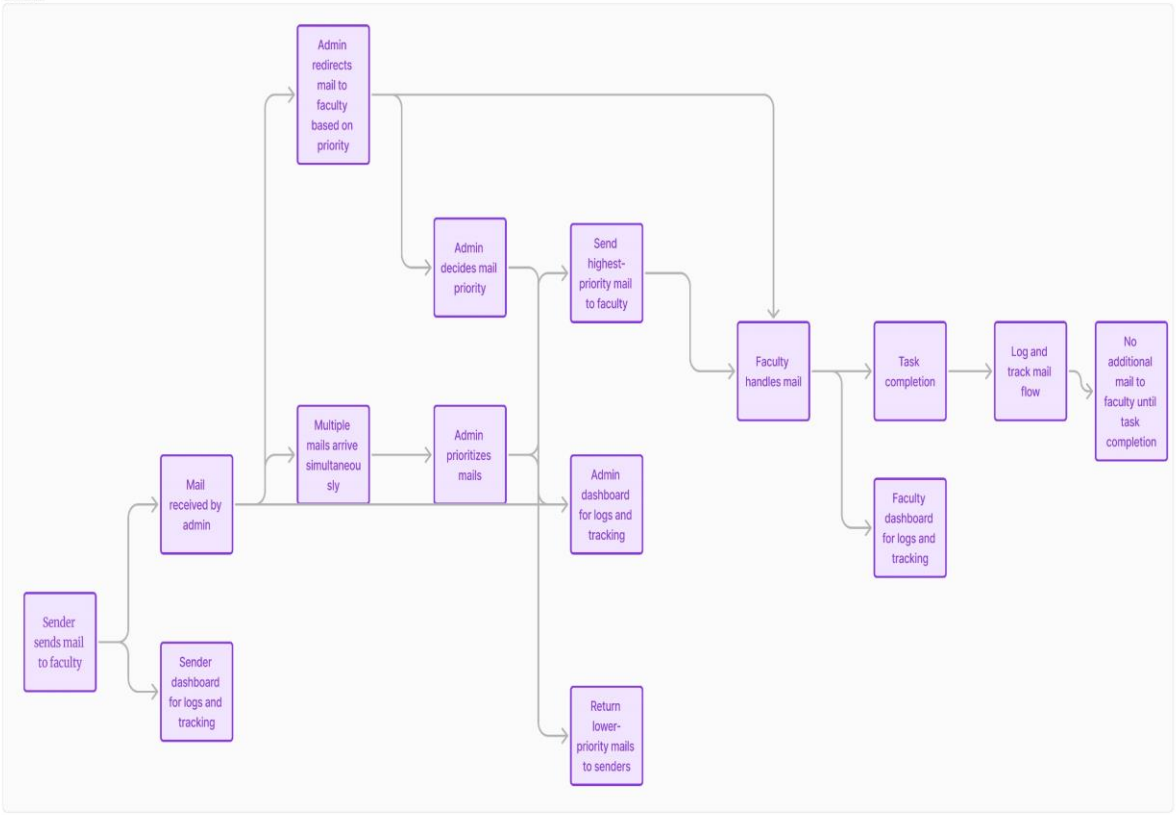
Database Schema

1. **Mail Entity:**
    - **Sender ID**: string
    - **Receiver ID**: string
    - **Mail Content**: string
    - **Priority**: number (1 - highest, 5 - lowest)
    - **Status**: string (Pending, Sent, Completed)
    - **Timestamp**: date
2. **User Entity:**
    - **Username**: string
    - **Email**: string
    - **Password**: string (hashed)
    - **Role**: string (Admin, Sender, Faculty)
    - **Full Name**: string
    - **Department**: string (for faculty)
3. **Log Entity:**
    - **Mail ID**: string
    - **Status**: string
    - **Timestamp**: date

Flow Chart

1. **Sender Interface:**
    - Compose Mail
    - View Sent Mails
2. **Admin Interface:**
    - View Incoming Mails
    - Set Priority
    - Forward Mails
    - Track Mail Status
3. **Faculty Interface:**
    - View Received Mails
    - Update Task Status

Flow chart


Admin redirects mail to faculty based on priority
Admin decides mail priority
Send highest-priority mail to faculty
Faculty handles mail
Task completion
Log and track mail flow
No additional mail to faculty until task completion
Multiple mails arrive simultaneou sly
Admin prioritizes mails
Admin dashboard for logs and tracking
Faculty dashboard for logs and tracking
Mail received by admin
Sender sends mail to faculty
Sender dashboard for logs and tracking
Return lower-priority mails to senders