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<b>ROLL NO</b>	7376221SE146
<b>SEAT NO</b>	111
<b>PROJECT ID</b>	18
<b>PROJECT TITLE</b>	COURSE REGISTRATION
<b>DOMAIN</b>	ACADEMICS

## Technical Components:

Component	Tech Stack
Backend	Spring Boot (JAVA)
Frontend	React.js
Database	MySQL
API	RESTful services

## **PROBLEM STATEMENT:**

### **Background:**

In academic institutions, managing course registrations is a critical and complex task that involves coordinating between students, faculty, and administrative staff. Traditionally, this process is often manual, time-consuming, and prone to errors. To address these challenges, we propose developing an automated Course Registration module that facilitates efficient and accurate course registration for students, while providing robust management tools for faculty and administrators.

### **Objective:**

Develop a Course Registration module that enables students to register for their departmental courses, individual electives, and additional courses in an organized and user-friendly manner. The system should streamline the registration process, ensure data accuracy, and enhance the overall academic experience for all stakeholders.

## **PROJECT-FLOW:**

### **Purpose:**

To develop a centralized mailing system that efficiently manages communication regarding student schedules and activities, resolving existing issues of schedule conflicts and communication inconsistencies.

### **Scope:**

This system includes user authentication, a mailer 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 mailing system is aimed at enhancing communication clarity and timeliness across BIT, thus boosting organizational efficiency by minimizing scheduling conflicts. Primary stakeholders include students, faculty, administrative staff, and the IT department.

### **Considerations:**

- ~ 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:**

### 1) Student:

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

### 2) Faculty:

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

### 3) 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 an admin staff member, I need to resolve schedule conflicts and approve mail requests to maintain smooth communication and scheduling.

## **Functional Requirements:**

**1) User Authentication and Authorization:** Allow users to log in with Google accounts via OAuth, assigning roles and access levels accordingly.

**2) Mailer Request Form:** Enable faculty to submit mailer requests, check for conflicts, and route them to admin for approval.

**3) Schedule Management:** Provide students with a real-time, unified schedule view that integrates with personal calendars and sends change notifications.

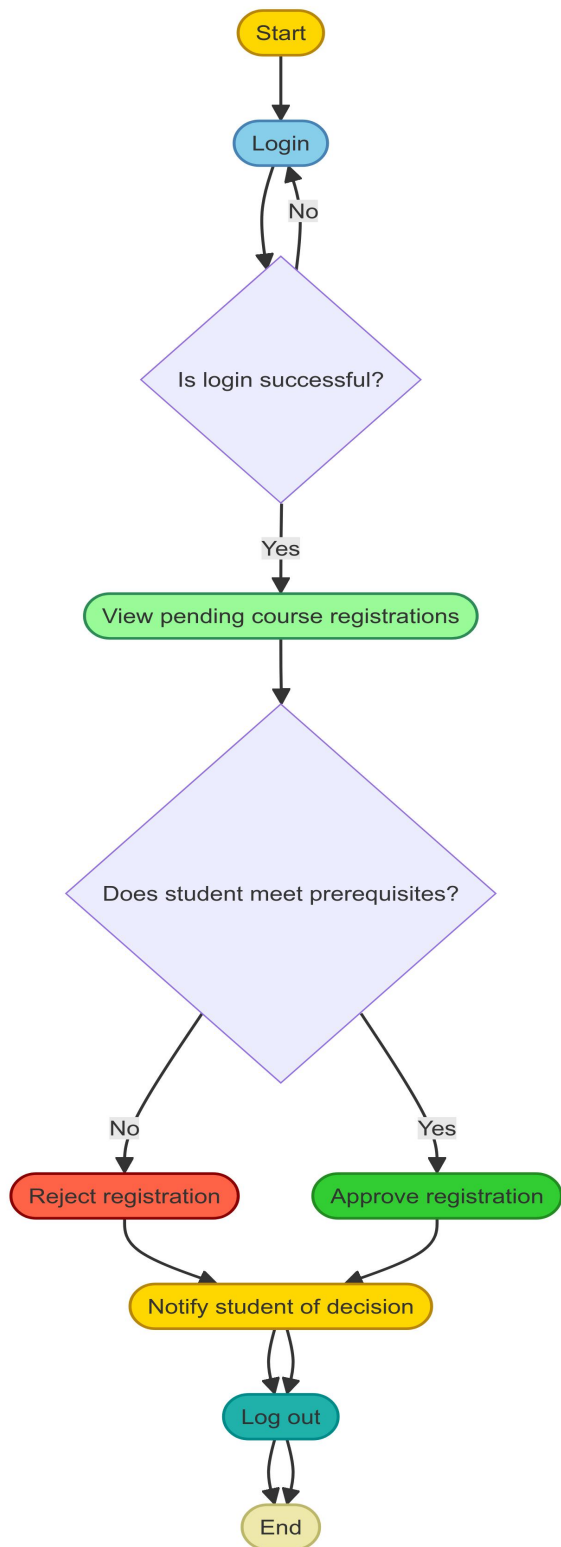
**4) Conflict Checking:** Automatically detect scheduling conflicts and notify users, offering resolution suggestions.

**5) Real-Time Dashboard:** Offer dashboards for students, faculty, and admin to manage schedules, mailer requests, and notifications.

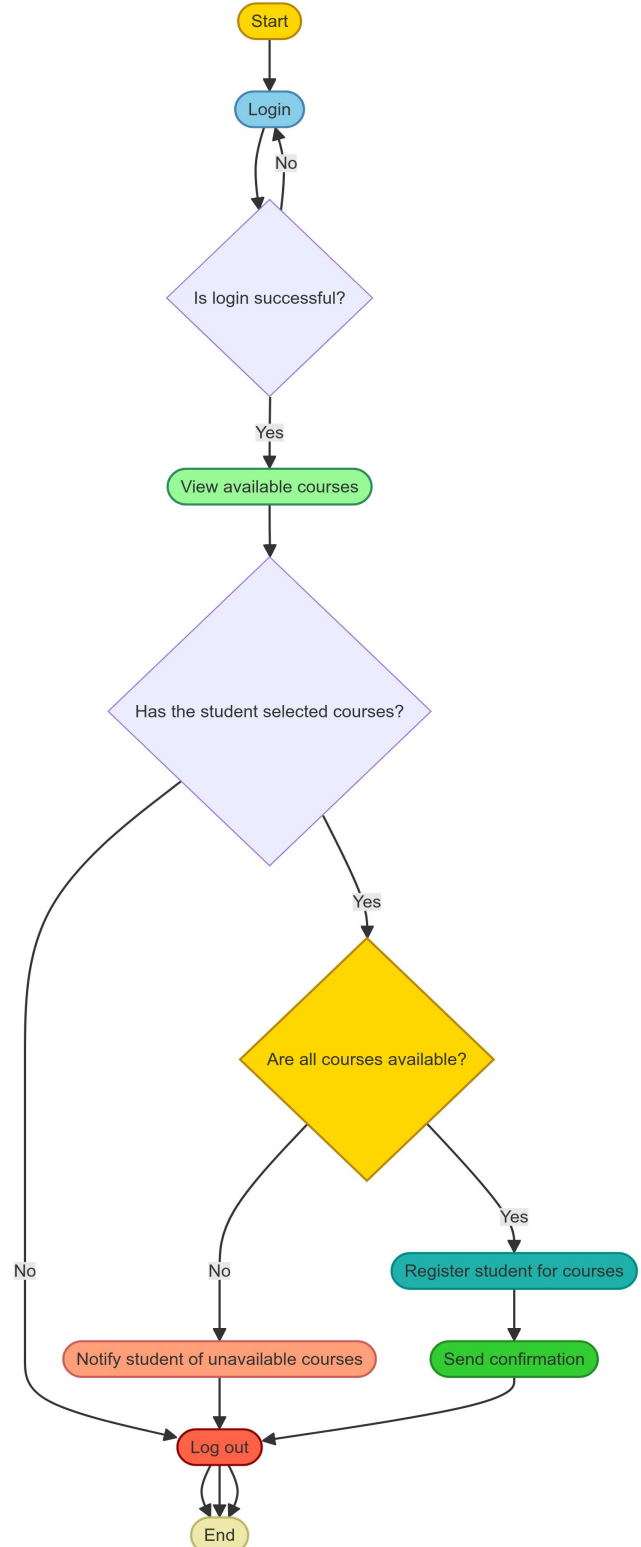
**6) Notification System:** Send timely email notifications for approved mailer requests, schedule changes, and important reminders.

## FLOW CHART:

### STUDENT PORTAL:



### FACULTY PORTAL:



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## ADMIN PORTAL:

