

# SOFTWARE REQUIREMENT SPECIFICATION

**STUDENT NAME :** MOHAMADU RIYAS S

**ROLL NUMBER :** 7376221CS223

**PROJECT ID :** 21

**PROJECT TITLE :** ACADEMICS LAB SLOT BOOKING

**STACK :** MERN STACK

## TECHNICAL COMPONENTS

COMPONENT	TECH STACK
FRONT END	REACT (JS LIBRARY FOR BUILDING USER INTERFACES)
BACK END	NODE.JS WITH EXPRESS.JS
DATABASE	MONGODB(NOSQL DATABASE)
API	OPENAPI

## PROBLEM STATEMENT

Develop a web-based portal for booking lab slots in an academic setting. This portal will enable students to book lab slots, view availability, and receive notifications about their bookings. Administrators will be able to manage the schedule, monitor bookings, and generate reports. The aim is to streamline the booking process, improve resource management, and enhance user experience.

## PROJECT FLOW

### PURPOSE

**Efficient Booking System:** Simplify the process of booking lab slots for students and faculty.

**Resource Management:** Optimize the use of lab resources by providing a clear and up-to-date schedule.

**User-Friendly Interface:** Provide an intuitive interface for both students and administrators.

## SCOPE

- **Booking Functionality:** Allow students to view available slots and book them.
- **Administrative Tools:** Enable administrators to manage the schedule, approve or deny bookings, and generate usage reports.
- **Notification System:** Implement notifications for booking confirmations, cancellations, and reminders.

## BUSINESS CONTEXT

- **Improved Utilization:** Ensure lab resources are utilized efficiently, reducing downtime and conflicts.
- **Enhanced User Experience:** Provide a seamless booking experience for users, minimizing frustration and increasing satisfaction.
- **Data-Driven Decisions:** Use generated reports to make informed decisions about resource allocation and scheduling.

## DEPENDENCIES

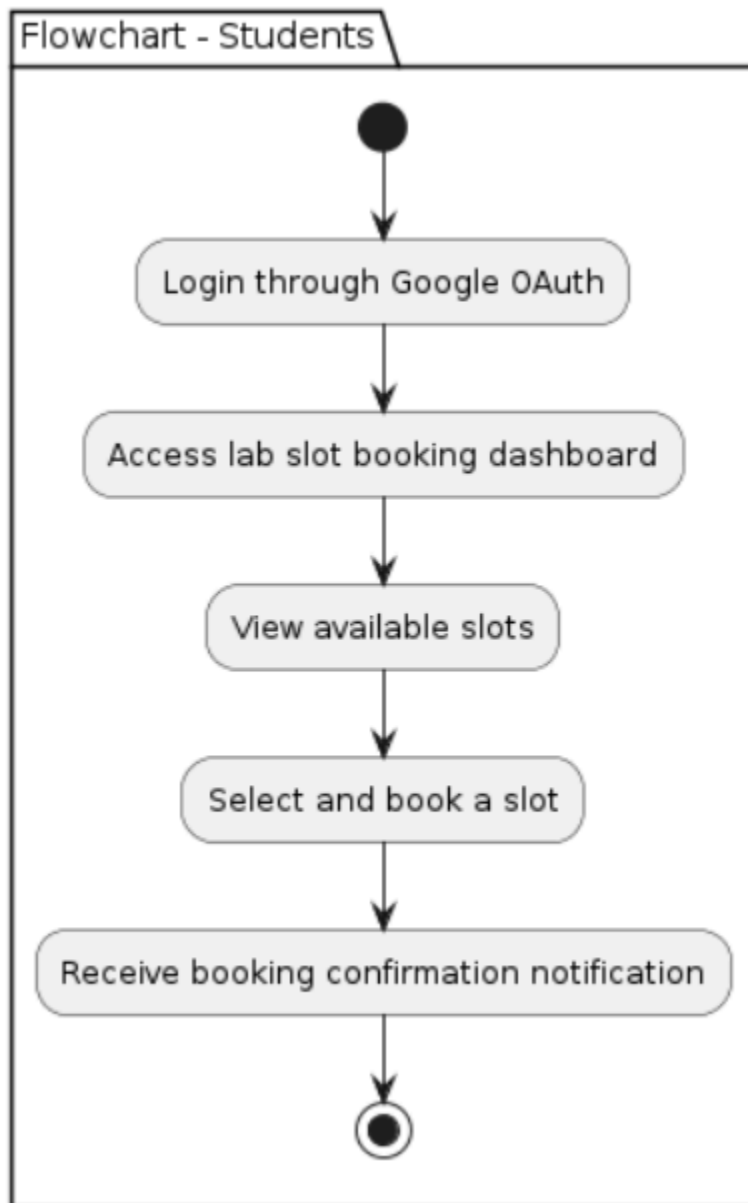
- Google OAuth for Authentication Process.
- MongoDB for Database Connectivity.
- Node.js with Express.js as Web Server.

## USER PERSONAS

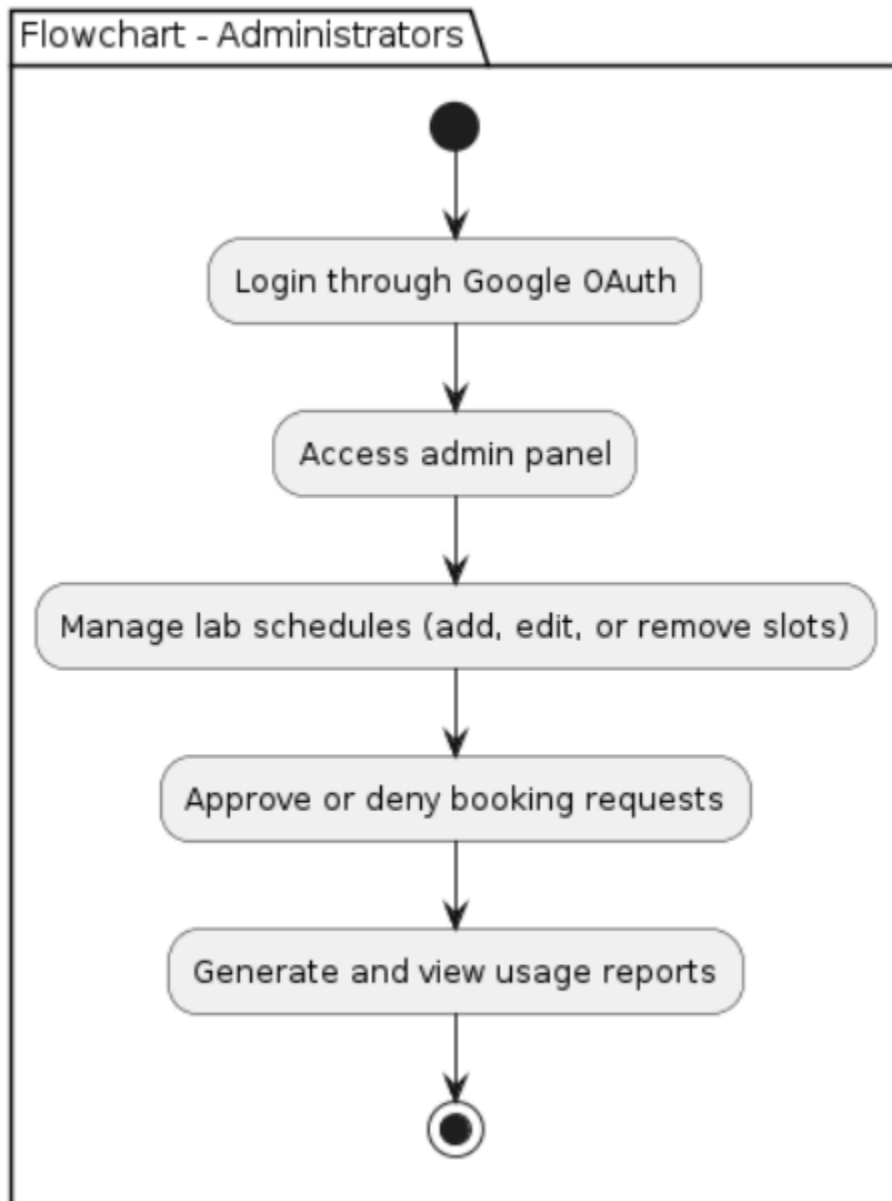
- **Students:** Book lab slots, view their bookings, and receive notifications.
- **Administrators:** Manage lab schedules, approve or deny bookings, and generate reports.

## FLOWCHART

Student:



**Admin Staff :**



## ENTITY RELATIONSHIP MODEL

