Software Requirement Specification for Special Lab Portal - Overall

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Project Title: Special Lab Portal – Overall

Project Id: 14

Seat No :374

Technical Components:

Component	Tech stack
Backend	Node js & express js
Frontend	Vue js
Database	Mongo db
API	REST Ful API

Problem Statement:

Student of the Special Lab are admitted through an interview process. These members are required to meet the targets set by the responsible authority. The development of products must adhere to industry standards and undergo review. Any transfers within the lab must be communicated to both the relevant student and the supervisor. Student accomplishments will be showcased on the portal.

Phase Notes:

Stage 1 Planning and Requirement gathering.

Stage 2 Design and Prototyping.

Stage 3 DB Designing.

Stage 4 Backend Implementation.

Stage 5 Testing & Implementation.

PROJECT-FLOW:

Purpose:

The web platform's goal is to make special lab registration and interviews to allocate special lab more efficient. Its goal is to make the procedure fair, transparent, and effective. By offering a centralized system, it makes communication easier, guarantees fair lab allocations, and permits flexibility while maintaining stability.

Scope:

Students can register for special labs and schedule interviews more easily with this platform. User authentication, faculty and student dashboards, scheduling for interviews for special lab allocation, wildcard entry, notifications, allocation academic slots, and security measures are all included. Maintaining fairness and transparency, improving communication, and streamlining procedures are the objectives.

Business Context:

The web platform provides an efficient way to handle interviews and special lab allocations. It guarantees compliance, improves productivity, enhances user experience, and offers relevant information. Ultimately, by simplifying procedures and promoting modern technology to the right students.

Consideration:

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

Dependencies:

- Secure authentication systems
- Integration with databases for storing user data
- Notification services for timely communication

User personas:

- **Student:** As a student, I want to register for a special lab that aligns with her interests and career goals. The students hope to secure a position through a successful interview process.
- **Faculty member:** As a faculty member, I want user-friendly platform to handle the administrative tasks associated with special lab allocations, and select the most suitable candidates for each lab.

Functional Requirements:

- Allow student and faculty to login.
- Provide student and faculty dashboards to view respective achievements.
- Offer students to review special lab profiles, manage registrations, and schedule their interviews.
- Support wildcard entry applications and interview by faculty.
- Display academic slot allocation.
- Enable change of special lab once in a semester.
- Implement a notification system for interview schedules and status updates
- Ensure data security and privacy measures are in place.

Non-Functional Requirements:

Performance: To ensure effective usability, the system must react to user actions in less than two seconds.

Security: Authorized admin users should only be able to access sensitive functionalities through secure authentication mechanisms, and user data must be encrypted both during transmission and storage.

Usability: In the event of input errors or system failures, users should be guided by clear and concise error messages that are provided in the user interface.

Reliability: In the event of a system failure or crash, data loss should be prevented by having a backup and recovery mechanism in place, and the system should be available around-the-clock with little downtime.

Scalability: The system must be built to support future expansion into new features and functionalities in response to changing needs, as well as an increase in the number of users and volume of data over time.

System Overview:

Users:

1. Students: Students register for labs, participate in interviews, and check their status weather their selected or not, and if not selected apply for wildcard process, and check their status weather their selected or not if not selected student will be allocated to the academic slot.

2. Faculty:

Faculty members conducts review and select or reject the students.

Features:

1. Login and registration:

Students can register for an account or login with their existing account

2. **Dashboards for students and faculty members.**

Students can view available labs, register for labs, and track their registration status.

Faculty members can manage lab registrations, schedule interviews, and review student profiles.

3. Lab Registration:

Students browse available labs and register for the labs they're interested in.

Faculty members review and approve / reject student registrations.

4. Interview Process:

Faculty members schedule and conduct interviews for registered students.

After interviews, faculty members can Select or Reject the students.

5. Wildcard Entry:

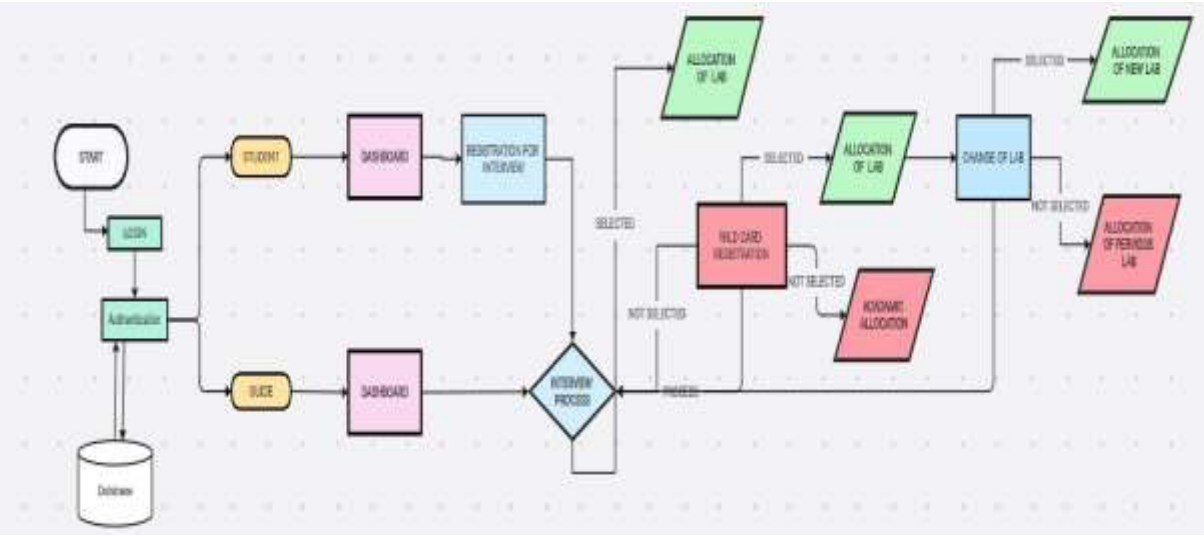
Students rejected in the regular process can apply for wildcard entry.

Faculty members review wildcard applications, conduct interviews, if necessary, and make decisions based on performance.

6. Notifications:

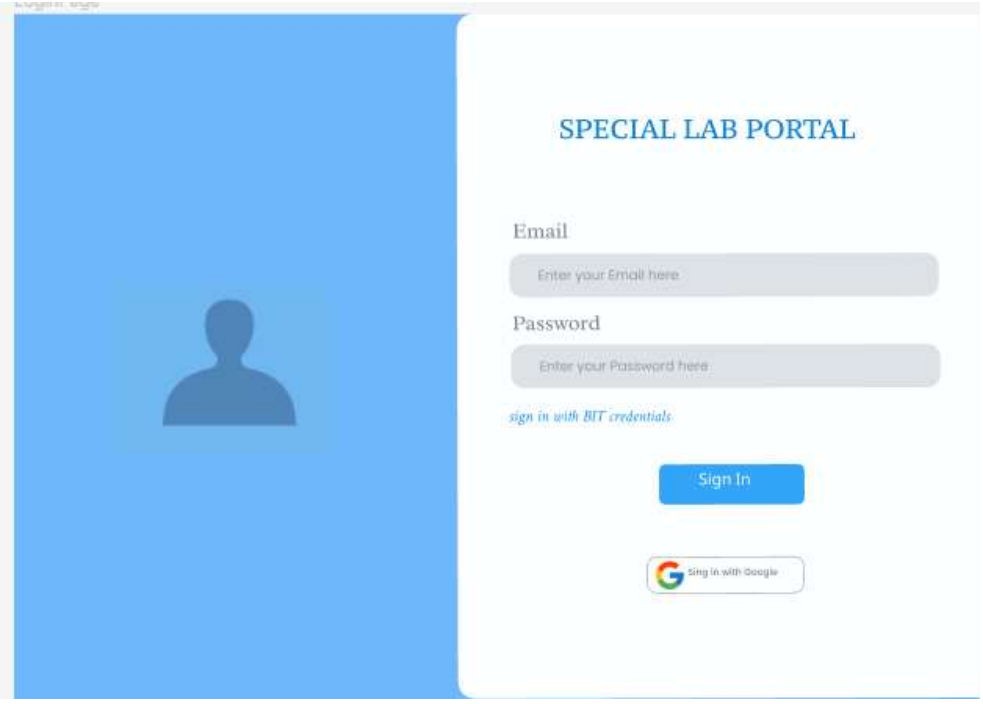
Email notification sent to users for important events like interview scheduling and registration status updates.

Flow chart:



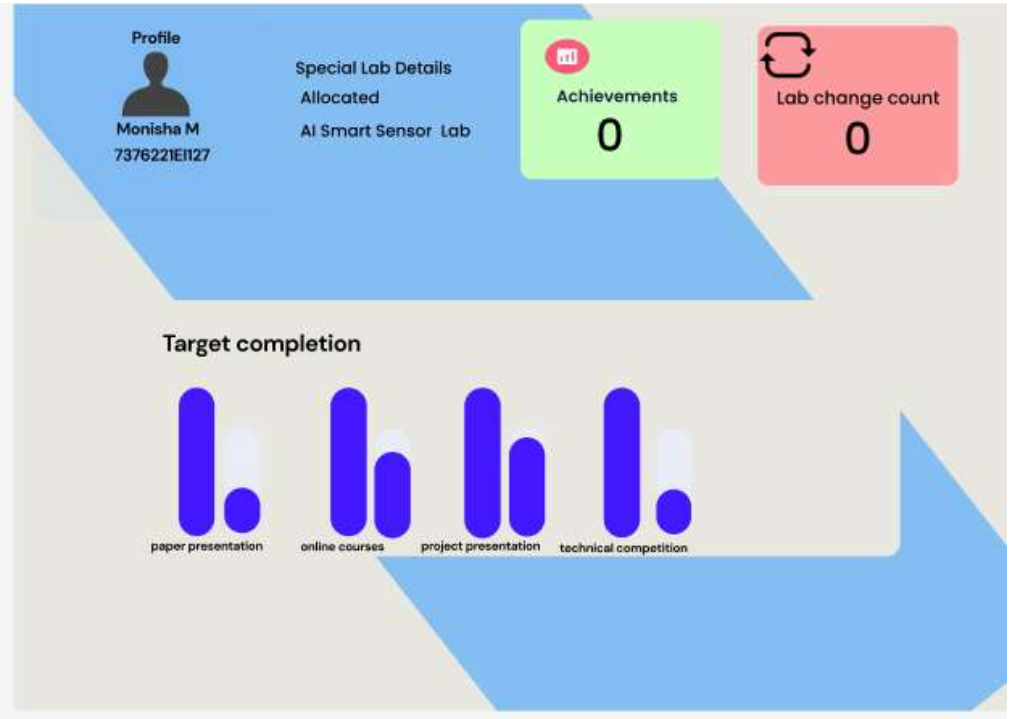
Prototype of the Project:

1.Login page:



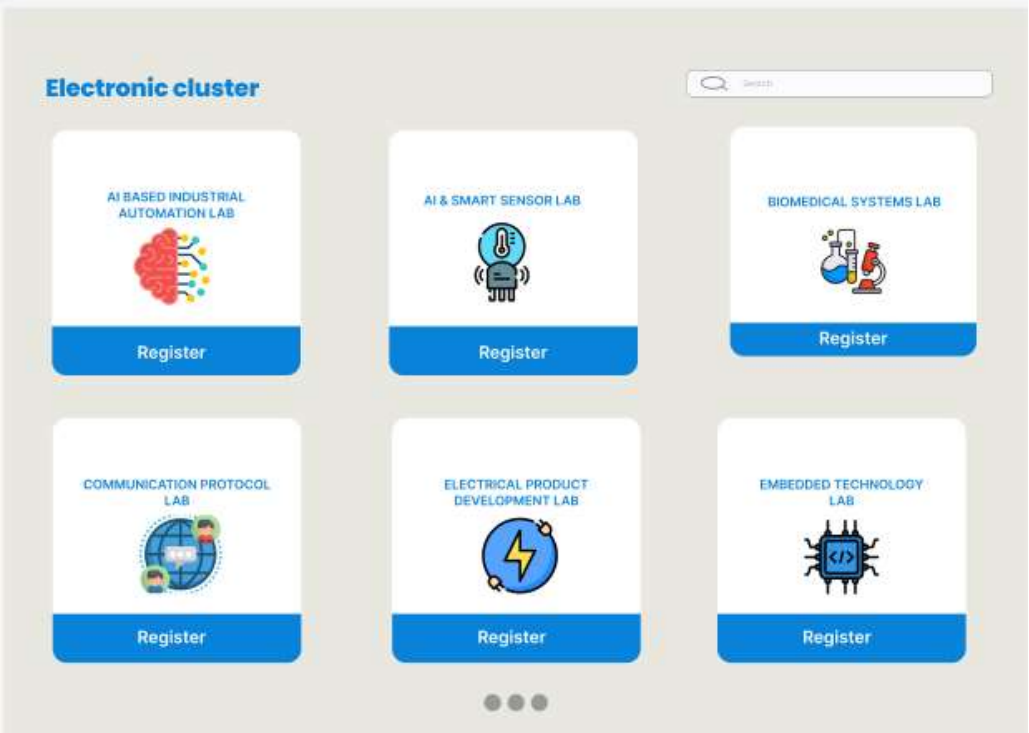
2. Home page:

3.Student dashboard:

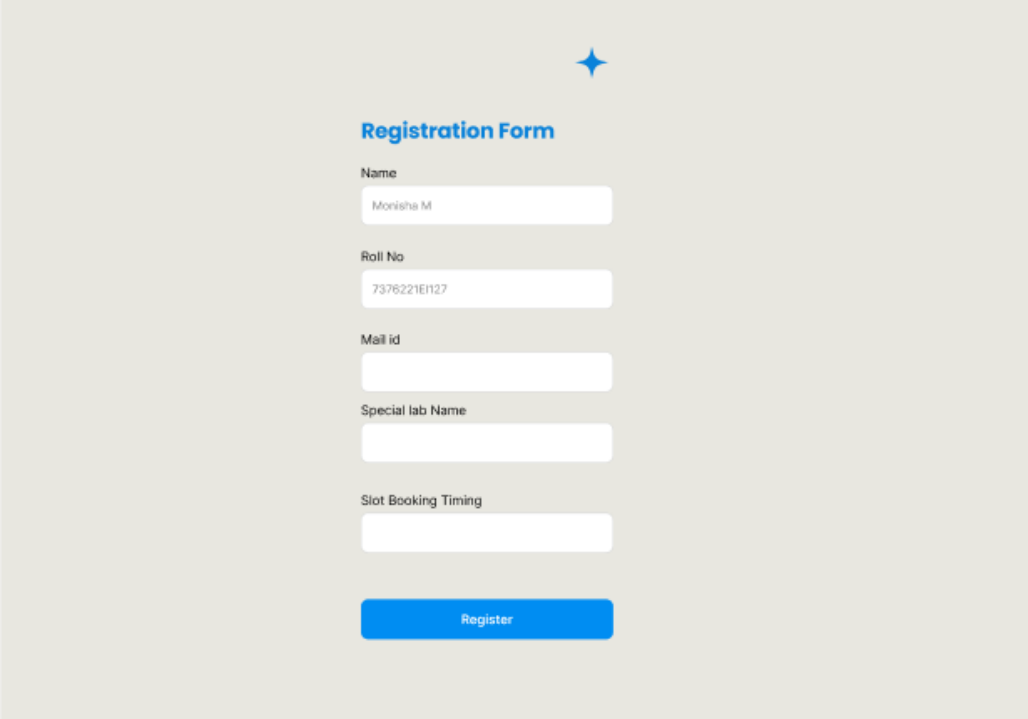


4.Faculty Dashboard:

5.Clusters and Special lab description:

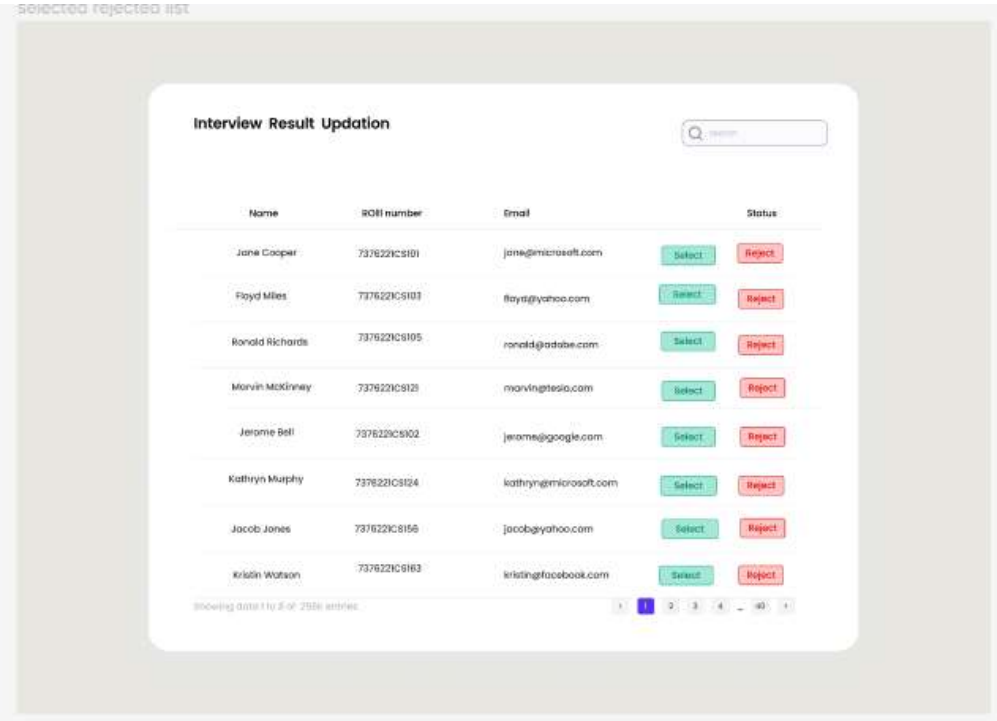


6. Registration Form:



7. Slot booking process:

8. Interview Process



9. Result:

10. Feedback Form: