# Software Requirement Specification for Special lab portal

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| **Seat no** | 294 |
| **Project ID** | 14 |
| **Problem Statement** | SPECIAL LAB PORTAL |

## *PROBLEM STATEMENT*

The problem statement for the special lab portal involves creating a system that manages lab members, Admission Process, and student achievements. The key requirements are as follows:

- Admission Process: Lab members are admitted through an interview process.
- Performance Targets: Members must meet set targets by the responsible authority.
- Booking System: Enable students to book their slots for lab activities.
- Student Achievements: Showcase student achievements.
- Portal Features: The portal should display special lab details, student achievements, and faculty information.
- Admin Functionality: An admin page is needed to add student and faculty details to the system.

## *PURPOSE*

The primary purpose of this project is to streamline and enhance the management of the special lab by introducing a dedicated portal that caters to the specific needs and requirements of the lab environment. Implementing an organized interview process for admitting lab members to ensure the selection of suitable candidates. Providing students with a user-friendly booking system to manage their lab activities effectively. Showcasing student accomplishments to motivate and inspire continuous improvement

# *SCOPE*

The project scope encompasses the development of a comprehensive special lab portal that will serve as a centralized system for managing lab members, the Admission Process, student achievements, and various operational aspects of the lab

- Enabling students to book slots for lab activities efficiently.
- Providing a platform to highlight and celebrate student accomplishments.
- Displaying special lab details, student achievements, and faculty information.

# *USERS:*

***Students:***

- They are admitted through an interview process.
- They must meet set performance targets defined by the responsible authority.
- They can book slots for lab activities using the booking system.
- Their achievements and accomplishments are showcased on the dedicated portal.

***Faculty:***

- They can conduct interviews to evaluate students who have booked lab activity slots.
- They can accept or reject students based on their performance in the interview and review process.

***Admin:***

- They can add and manage student and faculty details in the admin page of the system.

# *FEATURES:*

***Login and registration:***

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

**Booking System:**

- Allow students to book slots for lab activities.
- Allow Students to book slot if they won't able to attend due to valid reason (with proof)
- Manage and display available slots for booking.

**Admission Process Management:**

- Conduct interviews for prospective lab members.
- Accept or reject students based on performance in the interview and review process.

**Portal Features:**

- Showcase special lab details.
- Highlight student achievements.
- Display faculty information for reference.
- Students allowed to change lab once in a semester with proper permission.
- Faculty can add/update Student Achievements.

**Student Achievements Showcase:**

- Display student accomplishments and achievements.
- Provide a platform for recognition and motivation.

**Admin Functionality:**

- Add and manage student and faculty details.

## *Functional Requirements*

**User Management:**

- Lab members can register and login to the portal.
- Admins have access control with an analytical dashboard and dedicated features.

**Admission Process Management:**

- Lab members can apply for admission through an interview process.

**Booking System:**

- Students can book slots for lab activities and access the booking calendar.
- Admins can manage the availability and scheduling of lab activity slots.

**Student Achievements Showcase:**

- Students can submit their accomplishments and achievements for showcasing.
- Admins can review and approve the submissions for display on the portal.
- The portal will prominently feature the approved student achievements.

**Admin Dashboard:**

- Admins can view and manage all aspects of the lab portal, including user details, applications, performance targets, product reviews, and student achievements.
- Admins can generate reports and analytics to support decision-making.

## *Non-Functional Requirements:*

**Usability:**

- The portal should be easy to use and navigate for lab members, students, and administrators.
- The user interface should be intuitive and user-friendly.
- The system should be designed to reflect the specific needs of the lab environment.

**Scalability:**

- The portal should be scalable to accommodate potential growth in users and data.
- It should be able to handle increased loads and additional features in the future.

**Security:**

- Data stored in the system should be encrypted to ensure confidentiality.
- Role-based access control should be implemented to restrict unauthorized access.

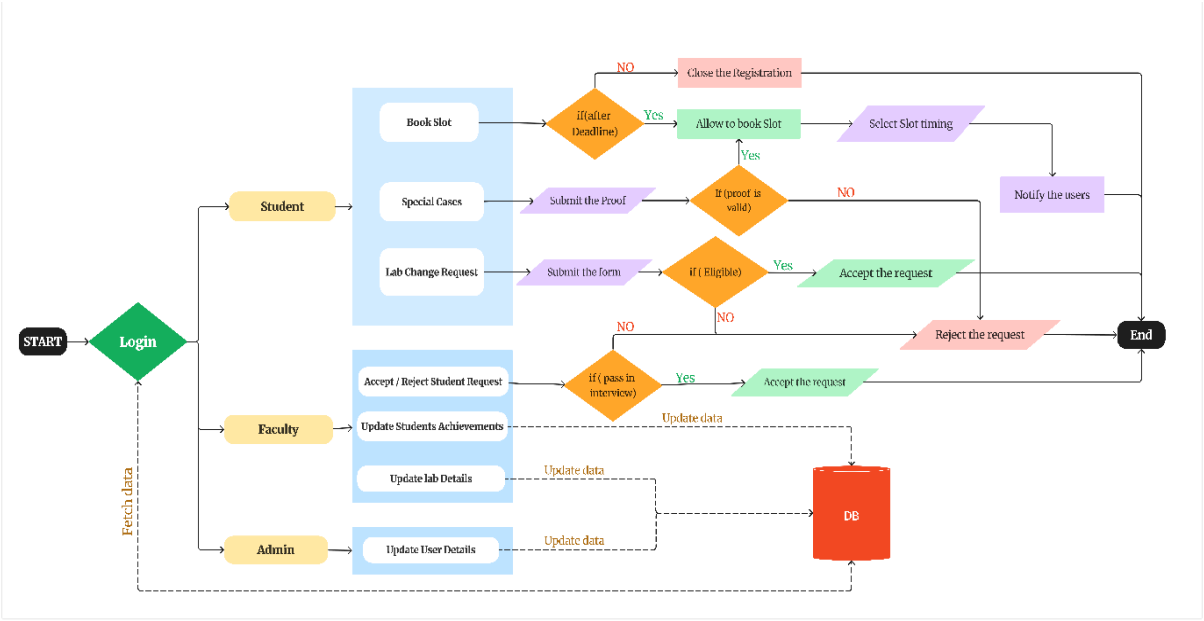
**Maintainability:**

- The system should be designed for easy maintenance and updates.
- Changes and updates to the system should not disrupt its functionality.

**Performance:**

- The system should respond promptly to user requests to provide a smooth user experience.
- It should handle a minimum number of concurrent users without significant performance degradation.

## *PROJECT FLOW*




# *Backend:*

1.Lab Entity

| | |
|---|---|
| lab_id (primary key) | String |
| name | String |
| incharge | String |
| No of students | String |
| vacancy | Integer |

2.Facultydetails Entity

| | |
|---|---|
| faculty_id (primary key) | String |
| name | String |
| Email | String |
| department | String |
| Phone no | Integer |
| lab | String |

3.Student Details Entity

| | |
|---|---|
| student_id (primary key) | String |
| name | String |
| Phone no | Integer |
| email | String |
| department | String |
| lab | String |

4.Users Entity

| | |
|---|---|
| Userid | String |
| Email | String |
| password | String |
| role | String |

5.Booking Entity

| | |
|---|---|
| booking_id (primary key) | Integer |
| userid | String |
| slot_date | Date |
| status | String |

6.Achievement Entity

| | |
|---|---|
| achievement_id (primary key) | Integer |
| userid | String |
| title | String |
| description | String |
| date | Date |

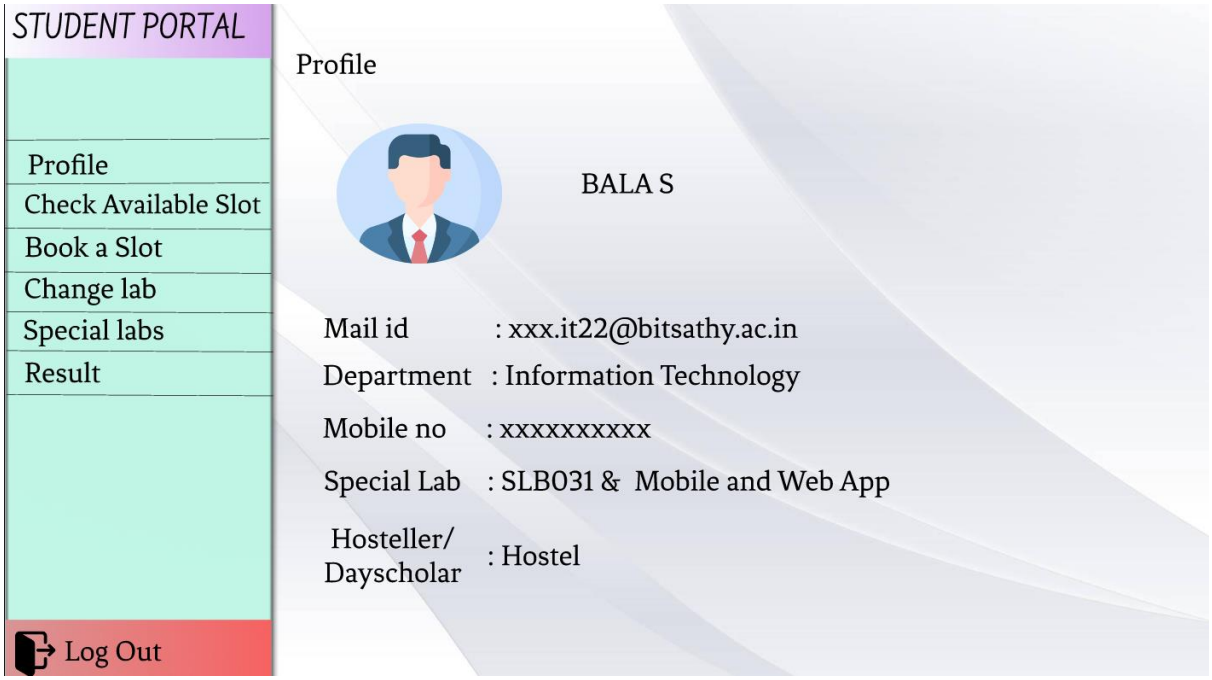
## Stack:

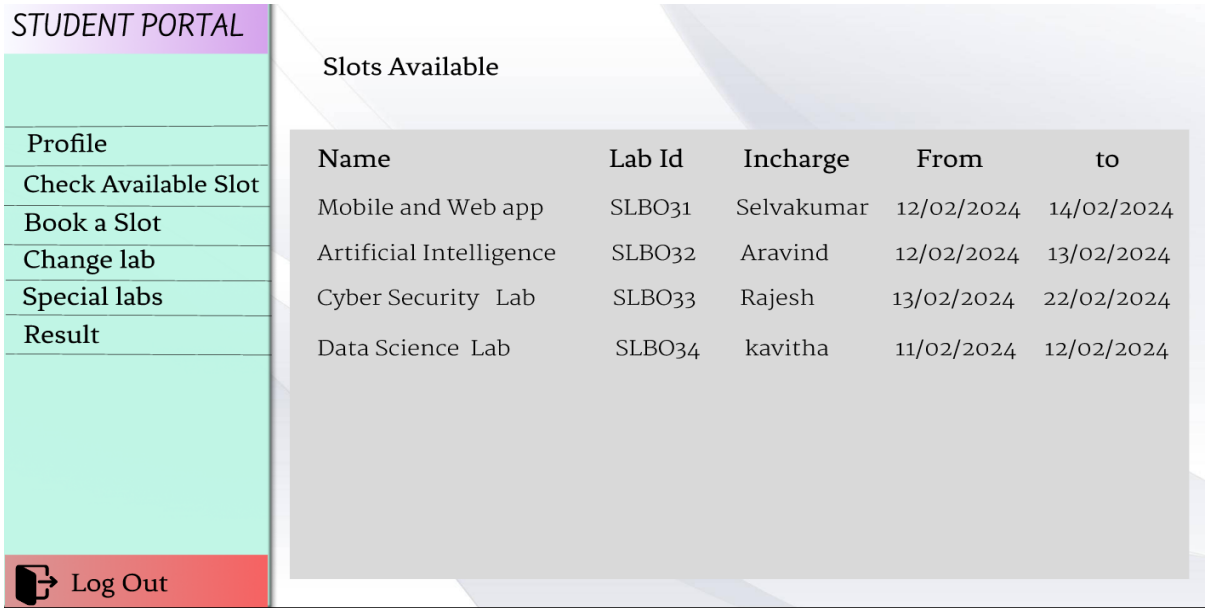
| | |
|---|---|
| Front End | PythonStack(AI) |
| Backend | Python |
| Data Base | MySQL |

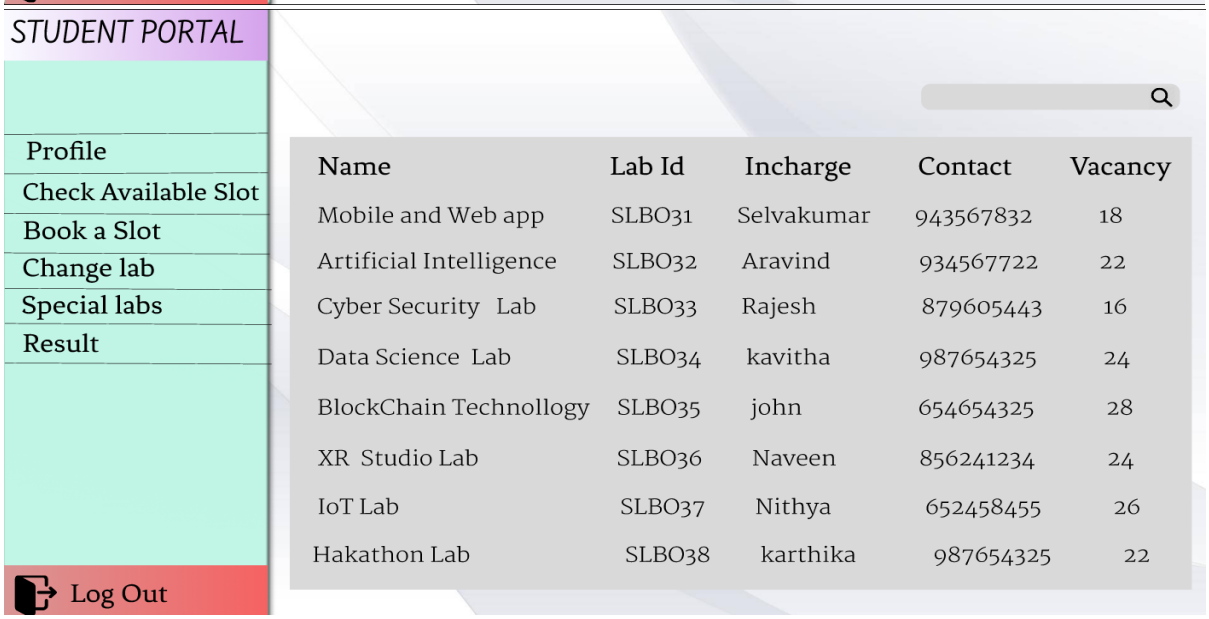
# *Prototype of the Project:*

*Login page*


## *Student Portal*




STUDENT PORTAL
Profile
Check Available Slot
Book a Slot
Change lab
Special labs
Result
Log Out
Slots Available
Name Lab Id Incharge From to
Mobile and Web app SLBO31 Selvakumar 12/02/2024 14/02/2024
Artificial Intelligence SLBO32 Aravind 12/02/2024 13/02/2024
Cyber Security Lab SLBO33 Rajesh 13/02/2024 22/02/2024
Data Science Lab SLBO34 kavitha 11/02/2024 12/02/2024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Log Out
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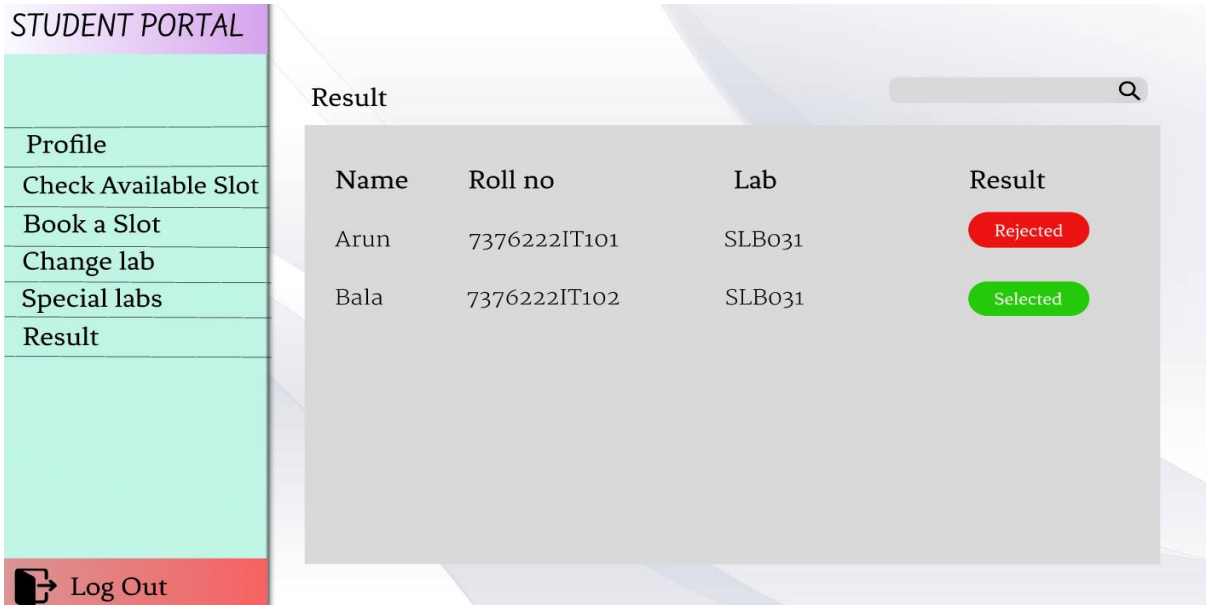
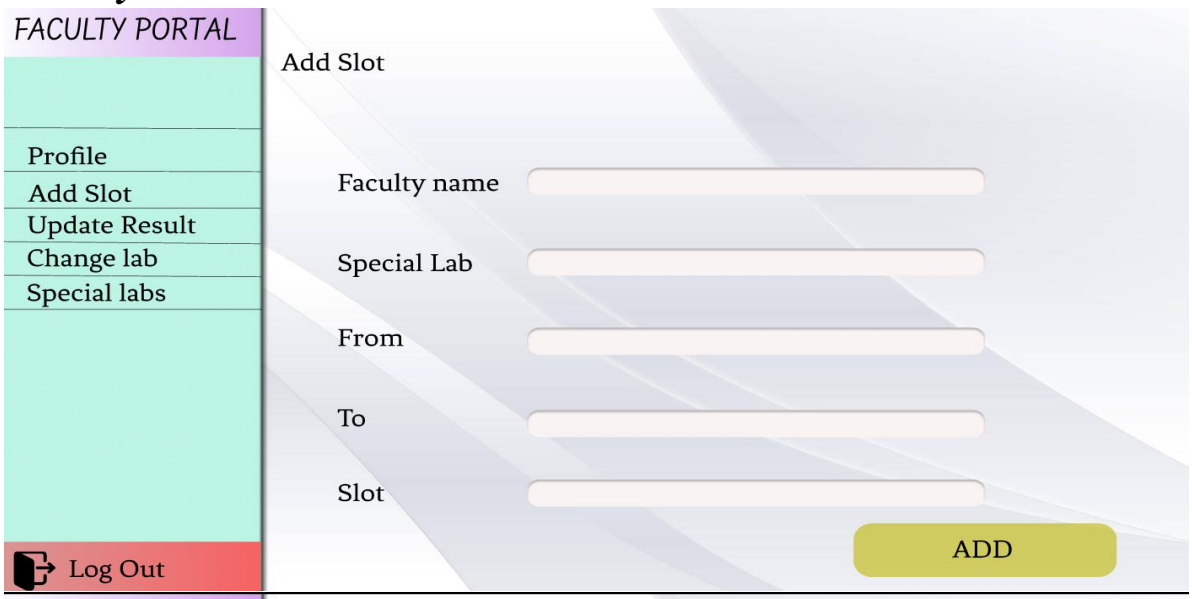
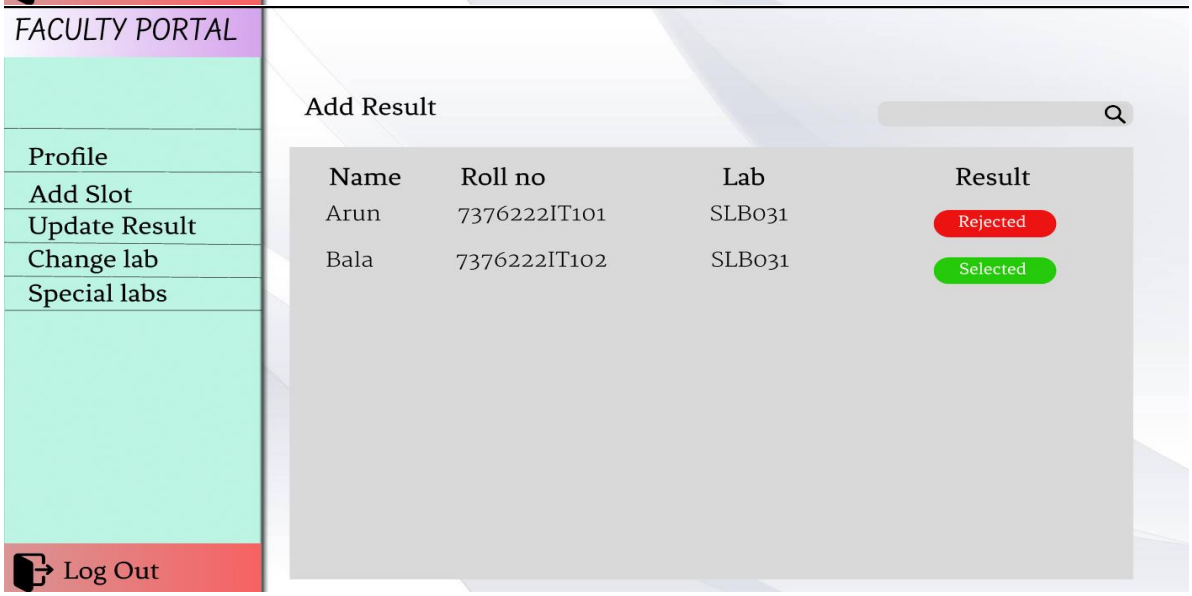
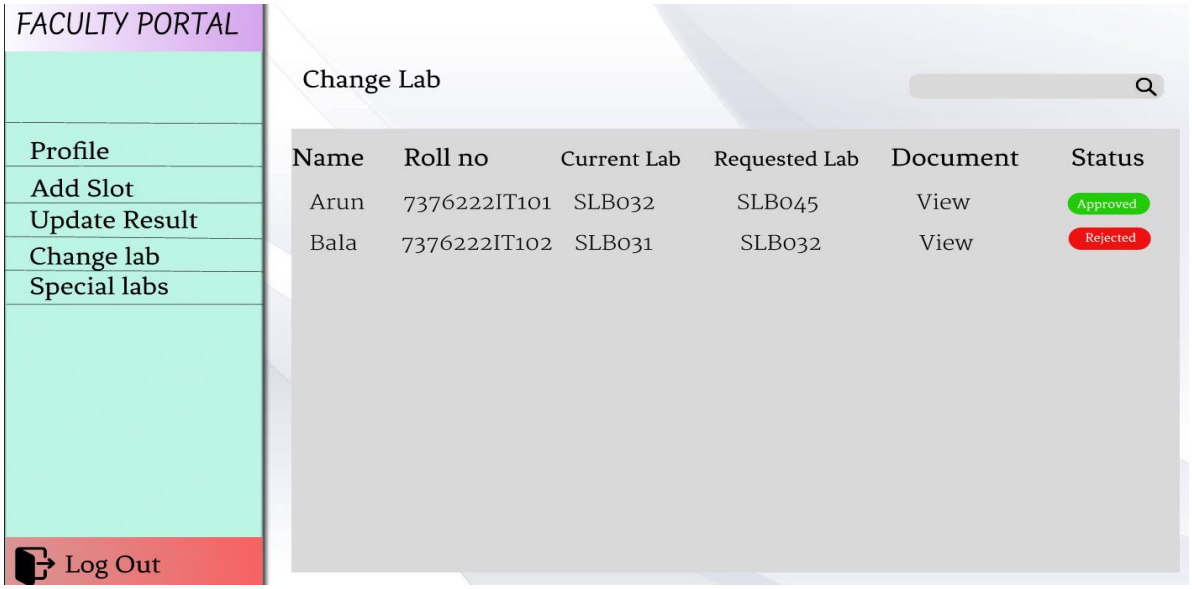
Artificial Intelligence SLBO32 Aravind 934567722 22
Cyber Security Lab SLBO33 Rajesh 879605443 16
Data Science Lab SLBO34 kavitha 987654325 24
BlockChain Technollogy SLBO35 john 654654325 28
XR Studio Lab SLBO36 Naveen 856241234 24
IoT Lab SLBO37 Nithya 652458455 26
Hakathon Lab SLBO38 karthika 987654325 22



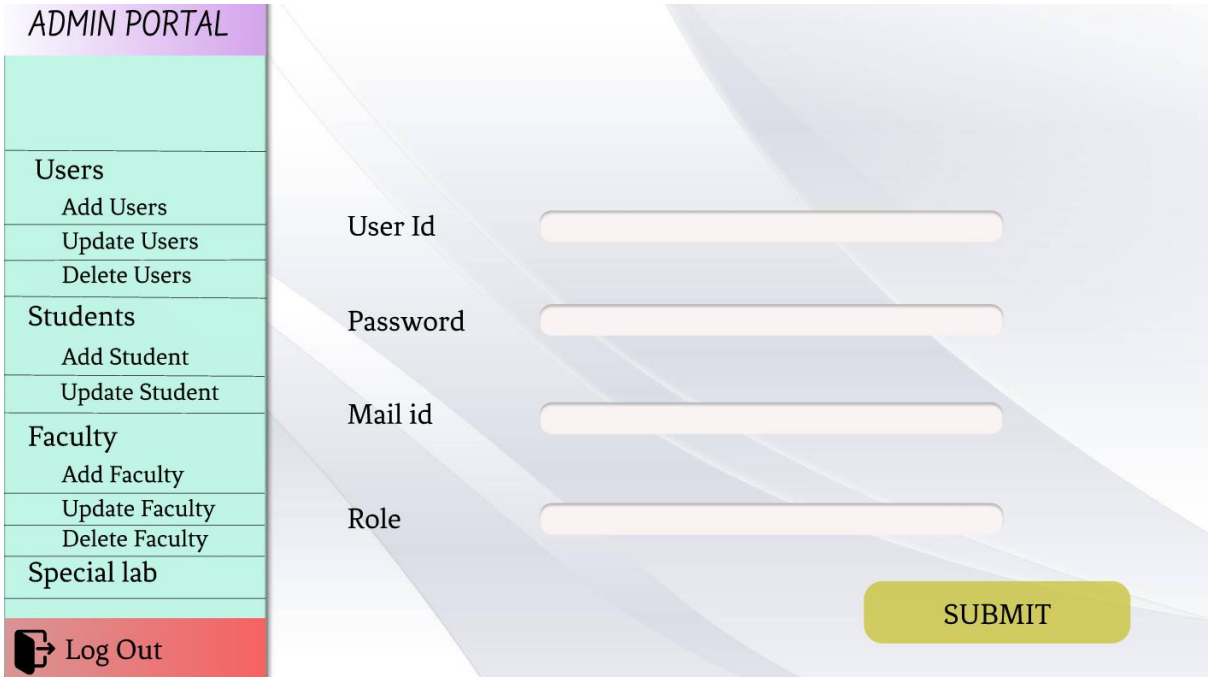

## *Faculty Portal*

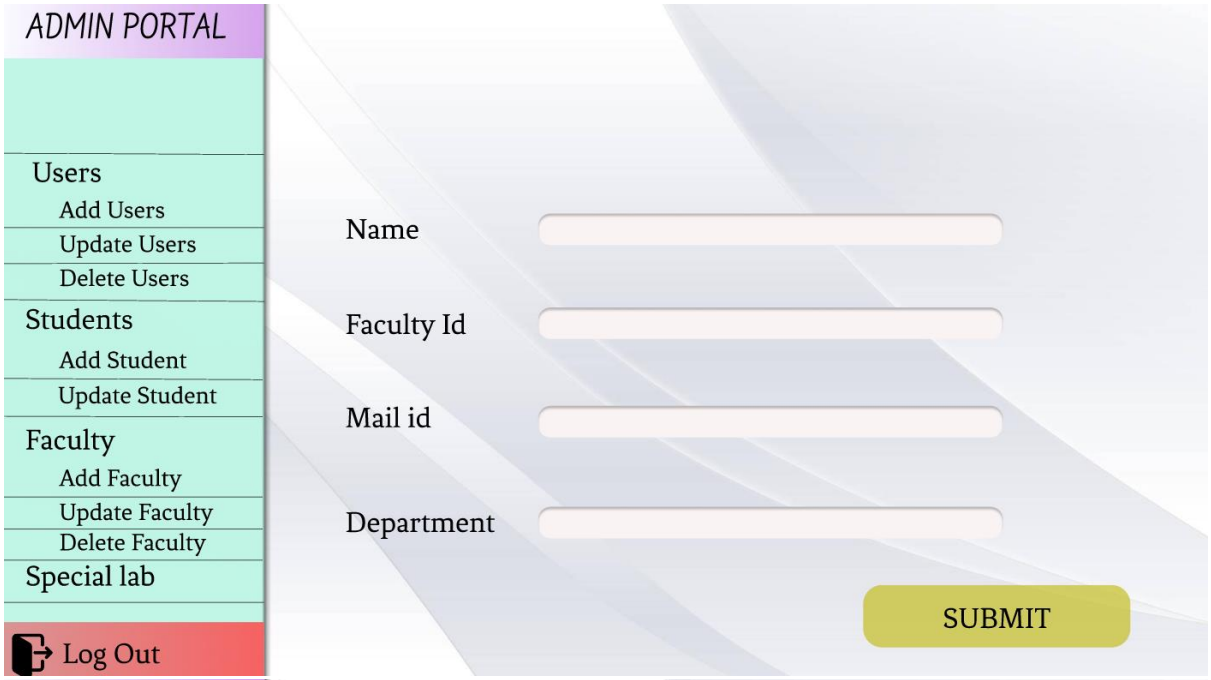





## *Admin Portal*

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Users
Add Users
Update Users
Delete Users
Students
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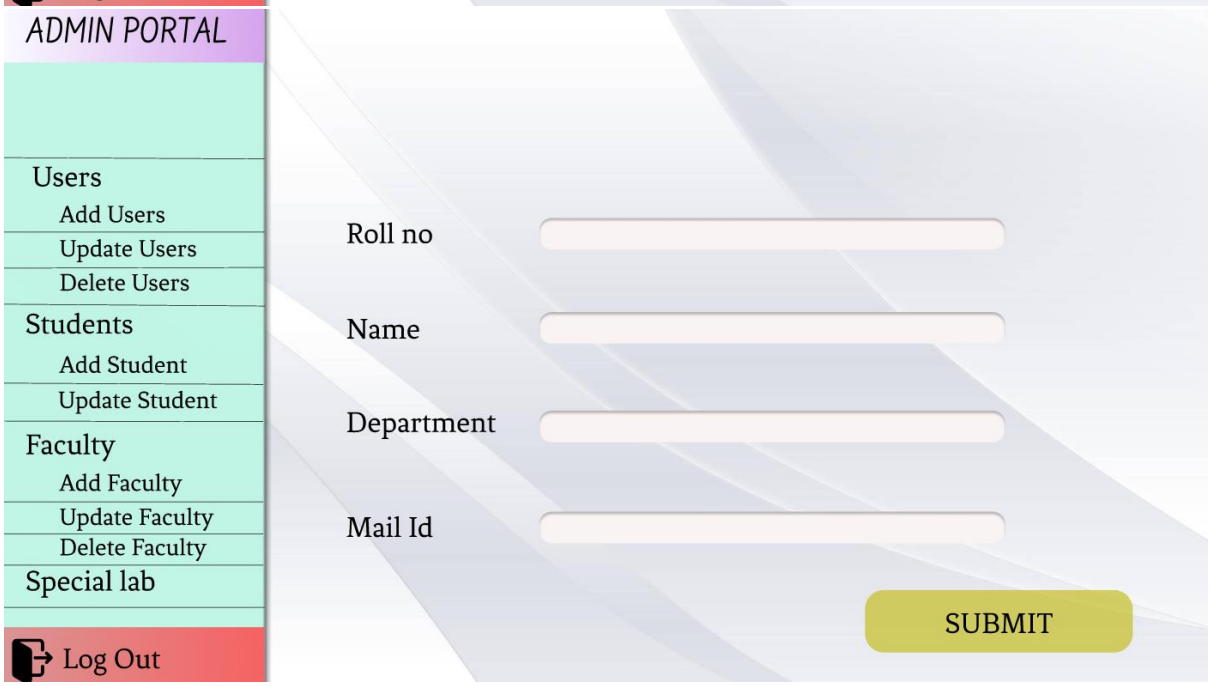
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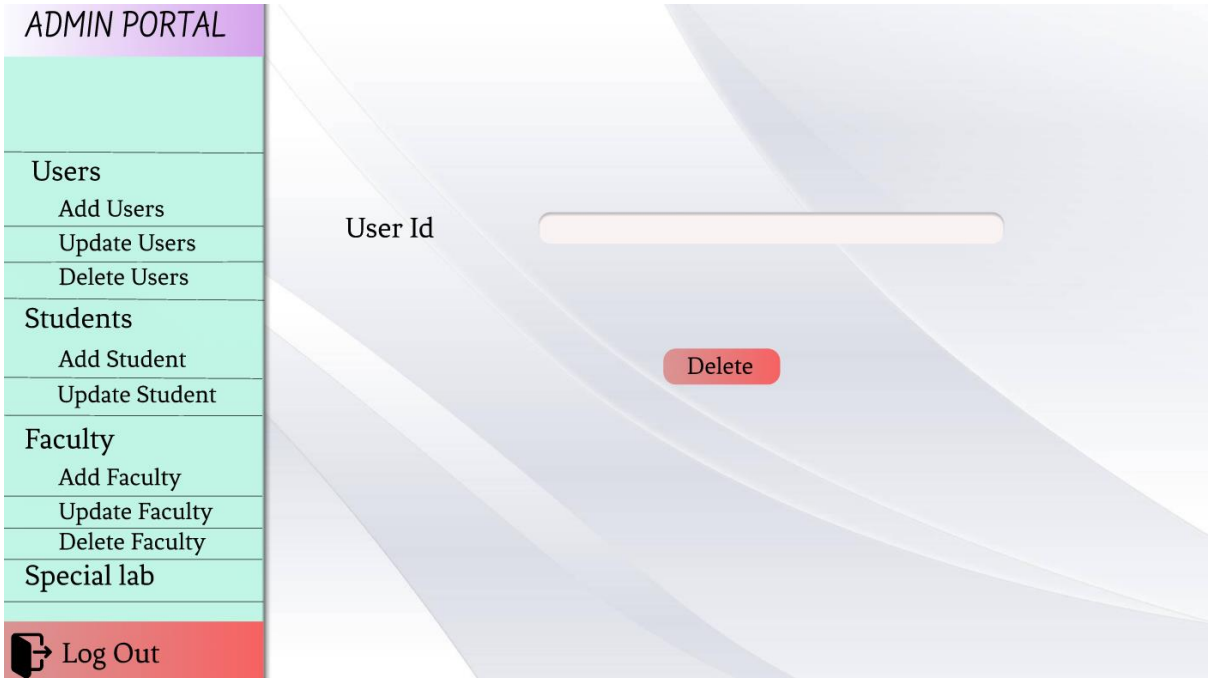
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