Problem Statement for Lab Rescheduling Management System
BANDARA H.G.T.D.
2022/E/048
2025/06/01

1. High Level Problem Summary

Efficient and conflict-free lab session rescheduling is not possible with the current manual and fragmented process, resulting in communication lapses, scheduling errors, and administrative inefficiencies.

Success will be measured by the implementation of a digital system that enables students to request lab rescheduling, automates approval workflows, notifies all stakeholders, and maintains a complete log of rescheduling activities.

The project scope includes:

- User management for students, subject coordinators, and lab instructors

- Digital request and approval workflow

- Automated email notifications

- Lab schedule and availability tracking

- Reporting and logs for lab usage and rescheduling history
  Out of scope:

- Creation of the initial lab timetable

- Physical lab infrastructure management

- Integration with financial or academic calendar systems

2. Detailed Problem Statement

2.1 FUNCTION

The solution must:

- Allow students to submit lab rescheduling requests with supporting documents (e.g., faculty approval letter)

- Enable subject coordinators to review and approve/reject requests, and forward approved requests to lab instructors

- Notify all relevant parties (students, coordinators, instructors) via email about request status and schedule changes

- Track lab details (Lab ID, Name, Location, availability) and update schedules accordingly

- Record attendance for rescheduled sessions

- Generate reports on lab usage and rescheduling trends

Key features (in order of priority):

- Secure login for different user roles

- Request submission and approval workflow

- Automated notifications

- Schedule management and conflict checking

- Reporting and audit logs

2.2 TIME

Past:
Lab rescheduling was handled manually using paper forms, emails, or phone calls, often leading to lost requests, delayed approvals, and scheduling conflicts.

Present:
The new system will be used by students needing to reschedule labs, subject coordinators managing requests, and lab instructors updating schedules and attendance. It addresses the need for a centralized, efficient, and transparent process.

Future:
Potential extensions include integration with academic management systems, mobile app access, predictive analytics for lab utilization, and expansion to cover equipment booking and maintenance scheduling.

3. Key Stakeholders

- Students: Submit rescheduling requests and receive notifications

- Subject Coordinators: Approve/reject and manage requests

- Lab Instructors: Confirm reschedules and update attendance

- Academic Administration: Review reports and ensure policy compliance

- IT Support: Maintain and update the system

4. Revision History

Version	Date	Author	Description
1.0	2025/05/01	BANDARA H.G.T.D.	Initial problem statement created
1.1	2025/06/01	BANDARA H.G.T.D.	ER diagram completed and reviewed

Project Timeline & Milestones

- 2025/05/01: Project initiated, requirements gathering started

- 2025/05/10: Completed user role and workflow analysis

- 2025/05/20: Drafted system features and use cases

- 2025/06/01: ER diagram completed