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# **Software Requirements Specification**

## **for Alumni Affairs Network**

**Version 1.1**

**Prepared by**

**Group No. : FN-9**

**Mathew Kurian Pattam**

**B220045CS**

**mathew\_b220045cs@nitc.ac.in**

**Nivin Prasad**

**B221087CS**

**nivin\_b221087cs@nitc.ac.in**

**Athel Sumoj**

**B220020CS**

**athel\_b220020cs@nitc.ac.in**

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# 1 Introduction

This project is a prototype for the Alumni Affairs Network (AAN), an application designed to facilitate better administration of activities related to alumni engagement at NITC. The system aims to streamline alumni interactions, including networking, event coordination, job openings, and resource sharing. This section provides an overview of the project's aim, significance, and utility, with a focus on the targeted set of users, such as alumni, students, and administrators involved in managing alumni affairs at NITC.

## 1.1 Document Purpose

This document provides a comprehensive analysis of the Alumni Affairs Network (AAN) of NITC, covering both functional and non-functional requirements. The system offers a user-friendly platform to enhance alumni engagement by managing user profiles, networking opportunities, event coordination, mentorship programs, and resource sharing, ensuring seamless interaction between alumni, students, and administrators. It also highlights key functionalities such as alumni registration, event participation, job openings, and sharing achievements. Use case diagrams illustrate interactions between users and the system, showcasing workflows and scenarios involving alumni, students, and administrators.

## 1.2 Product Scope

The **Alumni Affairs Network (AAN)** provides an efficient and interactive platform for alumni, students, and faculty to stay connected, fostering lifelong engagement within the NITC community. The system enhances traditional alumni management by offering a **user-friendly interface** where alumni can register, log in, and update their profiles.

The platform will facilitate **networking, job postings, event organization, and mentorship opportunities**, allowing alumni to contribute to and benefit from the community. Features such as **batch-wise directories, job openings, achievements blog** will ensure a seamless and enriching experience.

## 1.3 Intended Audience and Document Overview

This document is intended to serve multiple stakeholders (Mathew Kurian, Nivin Prasad, Athel Sumoj) involved in the development and operation of the Alumni Affairs Network.

- **System designers** will reference it to develop the design of the application.
- **Developers and testers** will use it to ensure all requirements are accurately implemented and validated.
- **The targeted users-alumni and students** as key clients of the project, will review the document to understand the system's core functionalities.
- **Maintenance staff** will refer to it for future modifications, ensuring clarity on the current features and operations.

The next section, **Functional Requirements** section will cover the functional requirements of the application. The next section focuses on **Non-functional Requirements**, such as performance, reliability, and security. The final section will explain the use cases along with the use case diagram.

## 1.4 Definitions, Acronyms and Abbreviations

S.No	Abbreviation/Term	Definition(s)
1	SRS	Software Requirements Specifications
2	NITC	National Institute of Technology, Calicut
3	AAN	Alumni Affairs Network
4	User	A person accessing the alumni affairs site
5	Admin	Super Admin of the system managing the network
6	Database	Stores information about users,job openings,events,etc

## 1.5 Document Conventions

This document follows the IEEE formatting requirements.

## 1.6 References and Acknowledgments

- [Use-Case Diagram- Visual Pradigm](#)
- IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998

## 2 Functional Requirements

### User Side Functionalities

#### User Management

- F1 - Users should be able to register securely.
- F2 - Users should be able to log in securely.
- F3 - Users should have the ability to edit and update their profiles, including personal details, professional information, and social links.

#### Job Posting and Career Assistance

- F4 - Alumni should be able to post job openings at their companies or places they know.
- F5 - Users should be able to search and filter job postings by company, location, and job role.

#### Event Management and Meetups

- F6 - Alumni should be able to create, join, and manage meetups or trips.
- F7 - A calendar should display upcoming events.
- F8 - Countdown timers and animations should enhance user engagement.

#### Accessibility Features

- F9 - Font and contrast settings should be customizable for readability, especially for older members.

#### Gallery and College Memories

- F10 - A gallery page should display batch-wise college images and old event pictures.
- F11 - Users should be able to upload and tag images with their batch year.

#### Faculty Interaction and Research Support

- F12 - A portal should enable easy access to faculty for research discussions and project collaborations.
- F13 - Users should be able to schedule meetings with faculty members.

#### Recommendation Letters

- F14 - Alumni should be able to request recommendation letters online from faculty and HoDs.

### **Campaigns and Community Initiatives**

- **F15 - A campaigns page should list alumni board activities like rallies and charity events.**
- **F16 - Users should be able to donate or volunteer for initiatives.**

### **Sponsorship and Rewards**

- **F17 - First-time alumni users in the food outlet or entertainment facilities should get vouchers or rewards upon registration.**

### **Blog and Story Sharing**

- **F18 - Alumni should be able to write and publish blog posts about their experiences.**
- **F19 - The best stories should be highlighted on the homepage.**

### **Batch Enrollment Statistics**

- **F20 - A dashboard should show batch-wise statistics on alumni enrollments.**

### **Alumni Achievements and Recognition**

- **F21 - A dedicated page should showcase awards like "Alumnus of the Year" or "Rising Star" based on active alumni participation.**

### **College Event Participation**

- **F22 - Alumni should be able to register for college events like convocation or festivals.**
- **F23 - Special recognition should be given to attending alumni during events.**

### **Alumni Club Membership**

- **F24 - A membership section should allow alumni to apply for club facilities (e.g., RECCAA club).**
- **F25 - Members should be able to book stays and activities through the platform.**

# **Admin Side Functionalities**

## **Job Posting and Career Assistance**

- **F26 - Admin should be able to manage and delete job openings.**

## **Event Management and Meetups**

- **F27 - Admin should be able to manage and delete events.**
- **F28 - Admin should be able to invite batchmates and notify them through email.**

## **Gallery and College Memories**

- **F29 - Admin should be able to manage and delete the gallery with new batch-wise images and event pictures.**

## **Alumni Directory**

- **F30 - The system should maintain batch-wise directories, displaying alumni profiles with pictures, short bios, and links.**

## **Batch Enrollment Statistics**

- **F31 - Admin should be able to analyze batch-wise statistics and send targeted reminders for alumni batches with lower participation to join the platform.**

## **Recommendation Letter**

- **F32 - The system should send an automated email to the concerned faculty with the alumni's details.**

## **Campaigns and Community Initiatives**

- **F33 - Admin should be able to manage and delete alumni board activities like rallies and charity events.**

## **Alumni Achievements and Recognition**

- **F34 - Admin should be able to nominate and showcase award recipients for "Alumnus of the Year" and other recognitions.**

## **Sponsorship and Rewards**

- **F35 - Admin should be able to manage sponsorships from food outlets or entertainment facilities.**

## **News Bulletin and Updates**

- **F36 - Admin should be able to post,manage and delete college and neighborhood news updates.**
- **F37 - Notifications should be sent to registered users about important updates.**

## **Automated Email Invitations**

- **F38 - Admin should be able to configure and send promotional emails to alumni directories.**

## 3 Non-functional Requirements

### 3.1 Performance Requirements

- **System Responsiveness:** The alumni affairs network is designed to respond to user actions within one or two second for standard operations such as logging in, finding batchmates, and viewing readings and achievements.
- **Scalability:** The system is capable of handling a large volume of data, including information on a vast number of users,their readings and achievements,events,job openings. It will also support a high number of concurrent users, ensuring smooth performance even during peak usage times.

### 3.2 Safety and Security Requirements

- **Data Security:** All user data, including personal information, will be stored securely in a protected database. Sensitive data will be encrypted to prevent unauthorized access.
- **User Privacy:** The system will comply with data privacy regulations, ensuring that user data is collected and stored responsibly, with access limited to authorized personnel.

### 3.3 Software Quality Attribute

#### 3.3.1 Reliability

The system will not lag and will provide instant and accurate results to all the users.

#### 3.3.2 Adaptability

The system can be extended to other organizations as well.

#### 3.3.3 Maintainability

In case of errors, it can be rectified by any developer due to the ease of maintenance.

#### 3.3.4 Portability

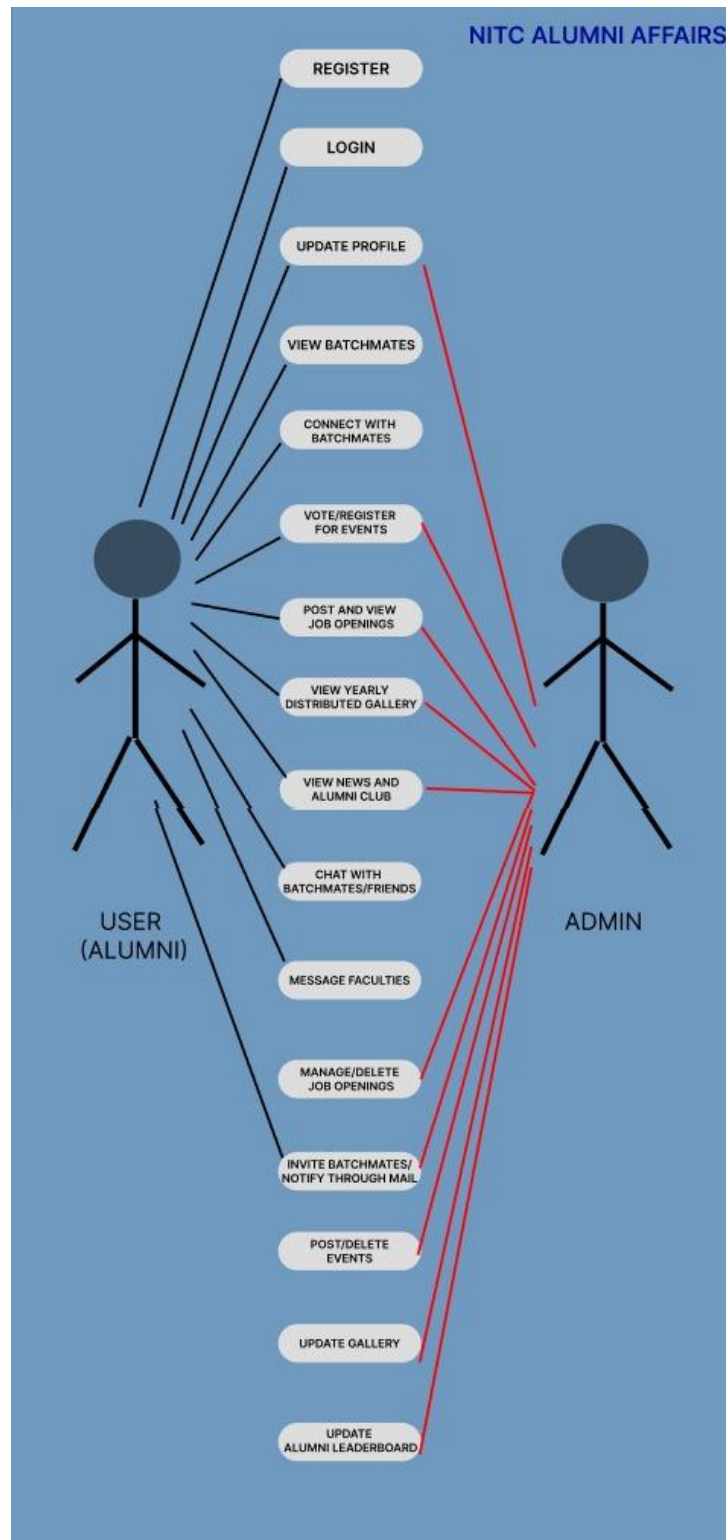
The system can be deployed on any machine. The quality of the database is maintained to be user-friendly.

#### 3.3.5 Cost-effectiveness

This system is less in cost and bearable to any organization



## 4 Use Case Diagram



## **User Use Cases**

### **4.1.1 Register - U1**

- **Purpose:** Allow new alumni to register and create accounts.
- **Traceability:** F1
- **Actors:** User (Alumni)
- **Preconditions:** Alumni must not be pre-registered.
- **Postconditions:** Alumni credentials are saved in the database.

### **4.1.2 Update Profile - U2**

- **Purpose:** Allow users to edit and update their profiles, including personal details, professional information, and social links.
- **Traceability:** F3
- **Actors:** User (Alumni), Administrator
- **Preconditions:** User is logged in.
- **Postconditions:** Updated profile information is saved in the system.

### **4.1.3 Login - U3**

- **Purpose:** Enable users to log in securely.
- **Traceability:** F2
- **Actors:** User (Alumni)
- **Preconditions:** Alumni must have valid credentials.
- **Postconditions:** Successful login redirects to the user dashboard.

### **4.1.4 View Batchmates - U4**

- **Purpose:** Allow alumni to view batch-wise directories.
- **Traceability:** F30
- **Actors:** User (Alumni)
- **Preconditions:** The alumni database must be updated with batch details.
- **Postconditions:** The system displays alumni profiles with pictures and bios.

#### **4.1.5 Connect with Batchmates - U5**

- **Purpose:** Enable alumni to connect and network with their batchmates.
- **Traceability:** F30
- **Actors:** User (Alumni)
- **Preconditions:** User is logged in.
- **Postconditions:** Connection request sent to the selected batchmate.

#### **4.1.6 Vote/Register for Events - U6**

- **Purpose:** Allow alumni to register for and participate in events or meetups.
- **Traceability:** F22
- **Actors:** User (Alumni), Administrator
- **Preconditions:** Event details must be available in the system.
- **Postconditions:** Registration is confirmed, and participation status is updated.

#### **4.1.7 Post and See Job Openings - U7**

- **Purpose:** Allow alumni to post job openings and search for opportunities.
- **Traceability:** F4, F5
- **Actors:** User (Alumni), Administrator
- **Preconditions:** User is logged in, and job postings exist.
- **Postconditions:** Job listings are displayed based on search criteria.

#### **4.1.8 View Yearly Distributed Gallery - U8**

- **Purpose:** Enable alumni to browse images from past events and college life.
- **Traceability:** F10, F11
- **Actors:** User (Alumni), Administrator
- **Preconditions:** The gallery must contain uploaded images.
- **Postconditions:** Images and tagged users are displayed.

#### **4.1.9 View News and Alumni Club - U9**

- **Purpose:** Provide updates on college news and alumni activities.
- **Traceability:** F36, F24
- **Actors:** User (Alumni), Administrator
- **Preconditions:** News updates and alumni club activities exist in the system.
- **Postconditions:** Recent news and updates are displayed.

#### **4.1.10 Chat with Batchmates/Friends - U10**

- **Purpose:** Enable communication between alumni.
- **Traceability:** F30
- **Actors:** User (Alumni)
- **Preconditions:** Both users must be logged in.
- **Postconditions:** Message is sent and stored in the chat history.

#### **4.1.11 Message Faculties - U11**

- **Purpose:** Allow alumni to send messages to faculty members.
- **Traceability:** F12, F13
- **Actors:** User (Alumni)
- **Preconditions:** Faculty must be available for contact.
- **Postconditions:** Message is delivered to the respective faculty member.

## **Admin Use Cases**

#### **4.1.12 Manage/Delete Job Openings - U12**

- **Purpose:** Allow administrators to manage and delete job opportunities.
- **Traceability:** F26
- **Actors:** Administrator
- **Preconditions:** Admin must be logged in.
- **Postconditions:** The job posting is available for users.

#### **4.1.13 Invite Batchmates/Notify Through Email - U13**

- **Purpose:** Allow admins to send email notifications to alumni.
- **Traceability:** F28, F38
- **Actors:** Administrator
- **Preconditions:** Alumni email directories must be imported.
- **Postconditions:** Emails are sent to selected alumni.

#### **4.1.14 Post/Delete Events - U14**

- **Purpose:** Enable admins to create and announce alumni events.
- **Traceability:** F27
- **Actors:** Administrator
- **Preconditions:** Admin is logged in.
- **Postconditions:** The event is visible to alumni.

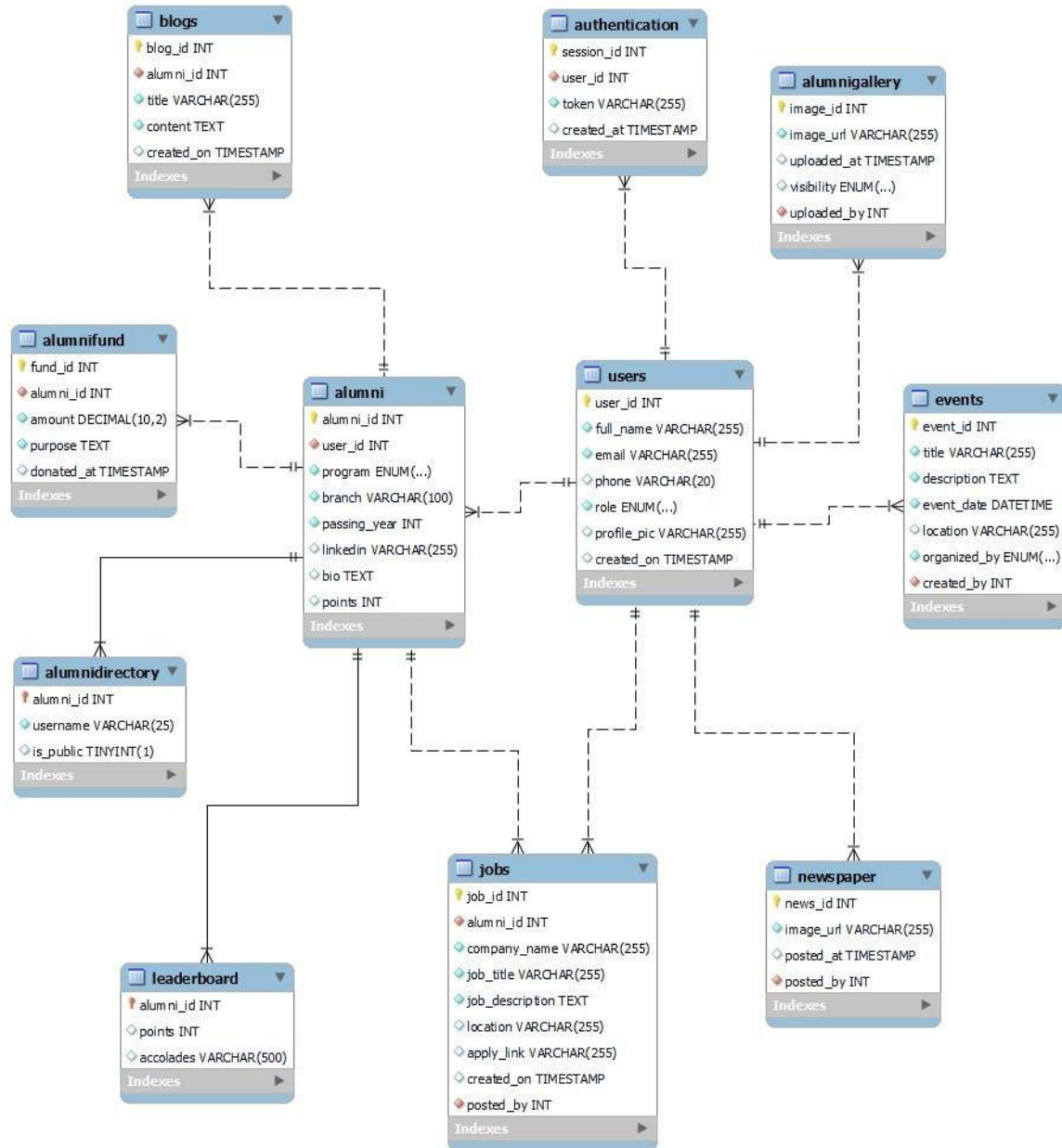
#### **4.1.15 Update Gallery - U15**

- **Purpose:** Allow administrators to upload and manage event images.
- **Traceability:** F29
- **Actors:** Administrator
- **Preconditions:** Admin is logged in.
- **Postconditions:** New images are added to the gallery.

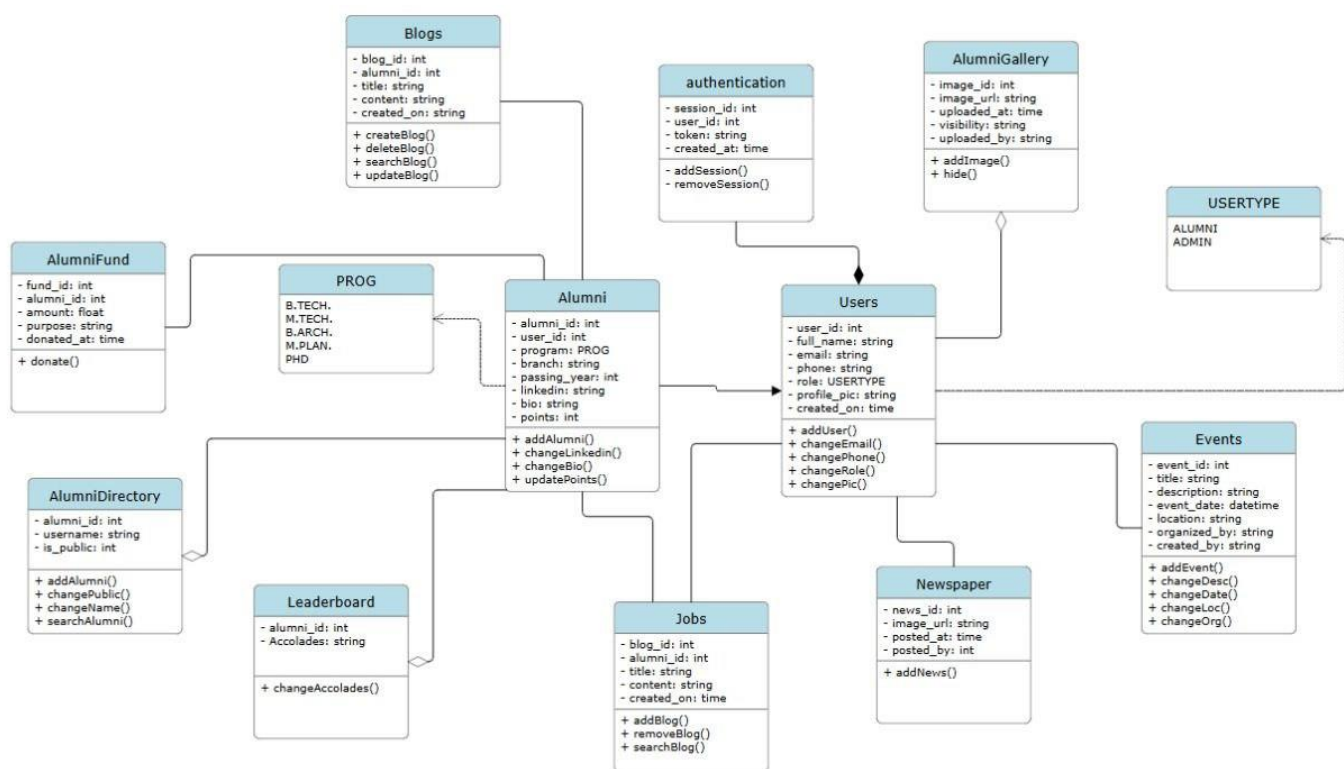
#### **4.1.16 Update Alumni Leaderboard - U16**

- **Purpose:** Maintain and update a leaderboard recognizing alumni achievements.
- **Traceability:** F34
- **Actors:** Administrator
- **Preconditions:** Admin is logged in.
- **Postconditions:** The leaderboard is updated with the latest rankings.

# Database Design Diagram



# Class Diagram



## Appendix A – Data Dictionary

Admin	They are the super admins who have built the alumni affairs network
User	They are the people accessing the alumni affairs network
Database	A database is an organized collection of data, generally stored and organised on a computer
National Institute Of Technology (NITC)	The organization for which the application is developed



## Appendix B – Group Log

Meeting Day	Timings
17/02/2025	05:00 - 08:00 PM
18/02/2025	05:00 - 09:00 PM
19/02/2025	05:00 - 07:00 PM
25/02/2025	05:00 - 07:00 PM

Name	Contributions
Mathew Kurian Pattam	Design,Functional Requirements F1-F12, Database Design Diagram
Nivin Prasad	Introduction,Functional Requirements F13-F20,Non-Functional Requirements, Use Case Diagram
Athel Sumoj	Functional Requirements F21-F38,Use Cases, Class Diagram