Indian Institute of Technology
Indore

Software Design Document for project Clubs IITI

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1 Introduction

1.1 Purpose

The purpose of this Software Design Document is to provide a description of the design of our Clubs IITI system (Clubs Management System) fully enough to allow for software development to proceed with an understanding of what is to be built and how it is expected to built with requirements in correspondence to the SRS document.

1.2 Scope

"**IITI Club Management WEBSITE**" creates a space for Teachers, IITI students,non-IITI students and Office Staffs for making an effort to resume the activities of the clubs which have stopped due to the pandemic for example:-Dance, Music, etc...
After logging into the website by IIT-I Mail id, a student has been given a unique id, by using which he/she can reach out to form-fill-up page. It will take his/her personal information,info about clubs which he/she have joined and info about the clubs for which he has applied.He will be added as a student of that particular club only after being approved by the club head. Also the student can see the recent activities of any club and they can also see who all are already a part of the club. Student profile will contain all his personal information, past positions, recent positions etc...
Office staff, admins and club Heads can control the website according to the club which they have been assigned . But of course, with the permission of Director.
Directors' main work is to assign permission to the admins, club heads and office staff when they want to create a new club or dissolve any existing club or merging two clubs. He also has all the authorities that are with the admins and the staff. He can also directly post notice to the website, admins or club heads.

2 System Overview

Give a general description of the functionality, context and design of your project. Provide any background information if necessary.

2.1 Description of Problem

Due to Covid-19, now everything is being done online. In our club management system, we aim to do everything in online mode. In our website, any student of IITI can send a join request for the club. A mail will be sent to club head and he can schedule interview with him and can eventually accept it or reject it. Then He/She can continue to participate in Clubs Activities as per his/her wish and can leave whenever he wants. Respective Club Admin can can remove that person.This creates a Whole new Ecosystem for Club activities which is easy,clean,transparent ans fast.

2.2 Technologies Used

IITI Club Management website is being build on Python+Flask,
JavaScript, CSS,HTML and MySQL.
Back-End - Python+Flask
Font-End - JavaScript, CSS, HTML.
Database - MySQL

3 System Architecture

Figure 1 and Figure 2 depicts the high-level system architecture. The system will be constructed from multiple, distinct components in order to achieve the complete functionality of the system. This is a high level overview of how the responsibilities of the system will be partitioned and then assigned to subsystems.

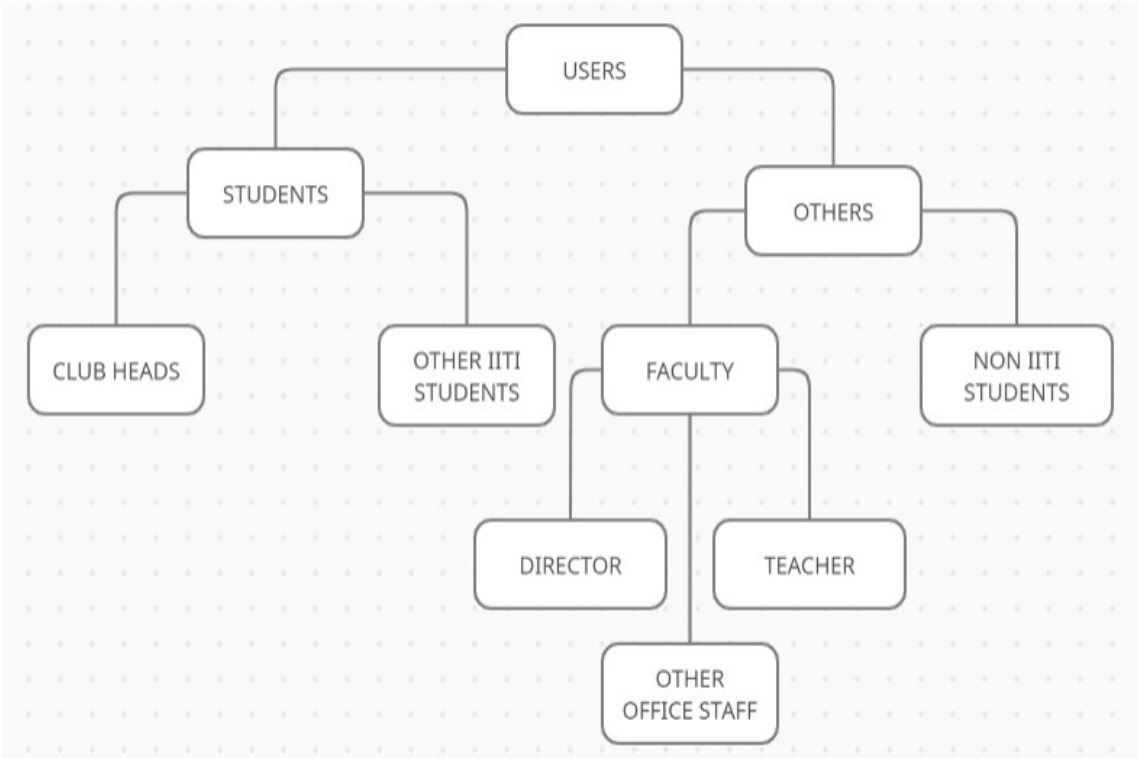

Figure 1: Entire work-flow

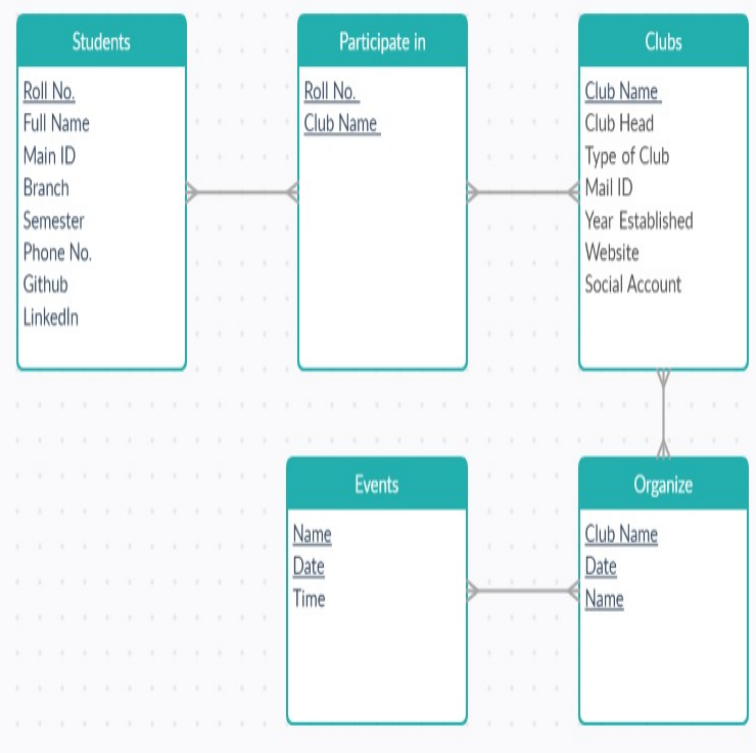

Figure 2: Data Flow Desgin Overview

3.1 User Interface

We can see the User Interface from Use Case Diagram as shown in figure 3:-

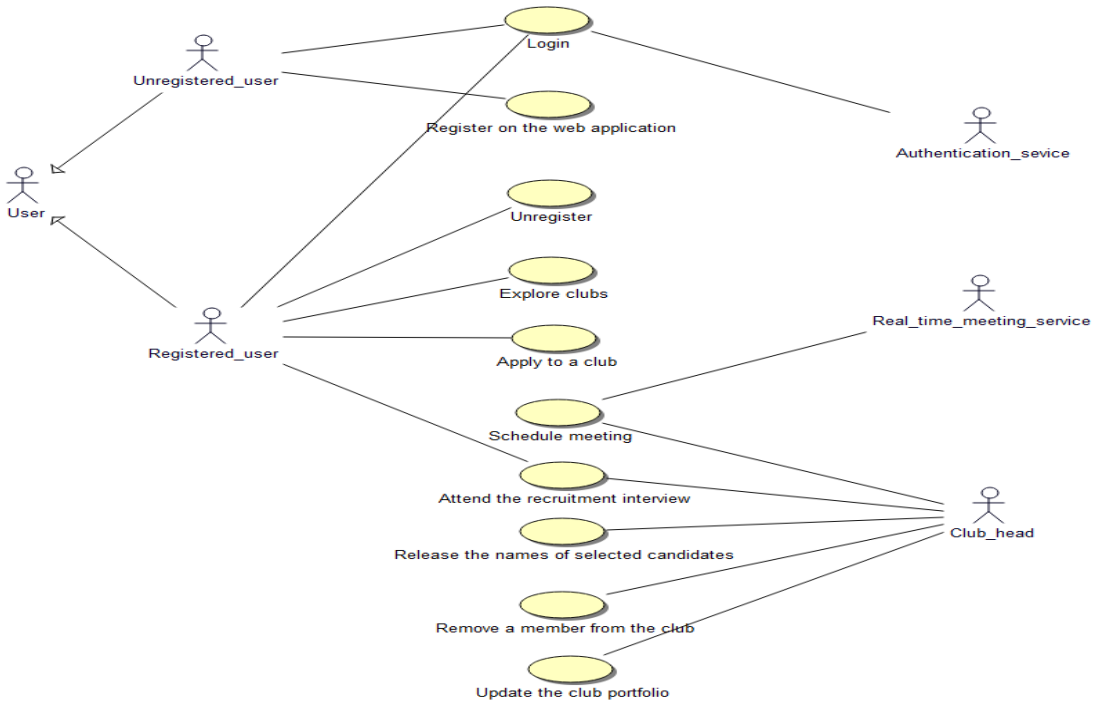

Figure 3: Use Case Diagram

3.2 ER Diagram

Figure 4 depicts the ER-Diagram for the Website.

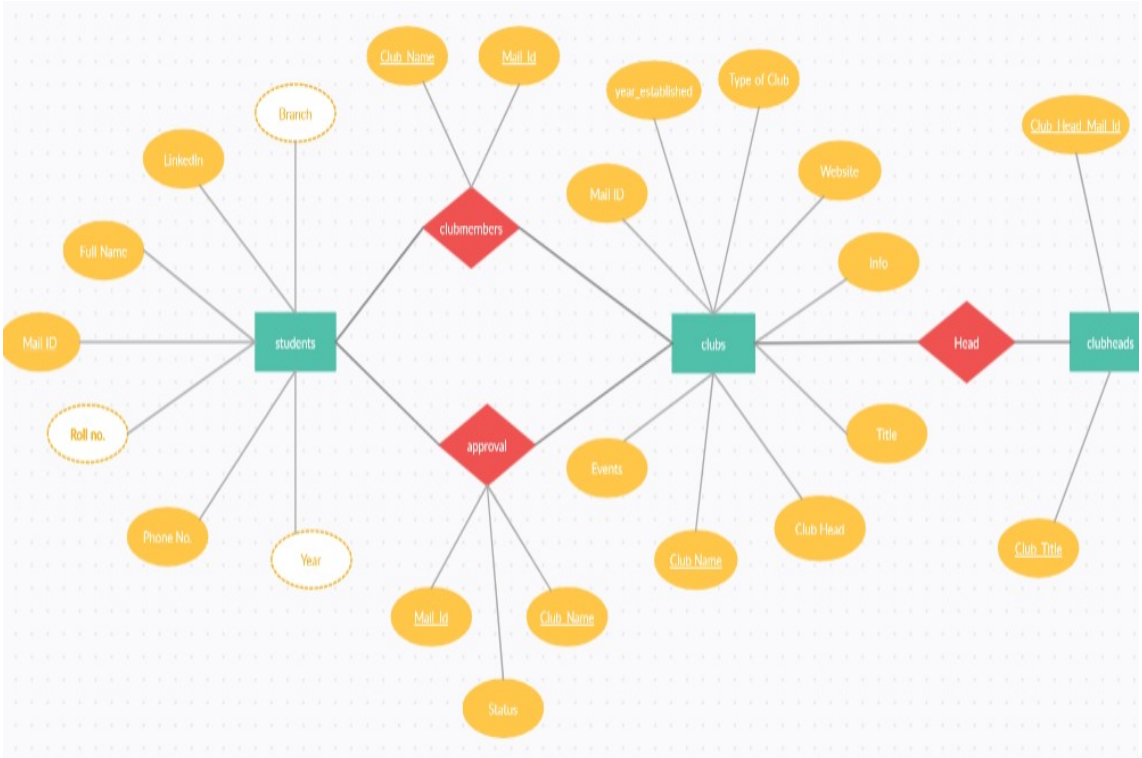

Figure 4: ER-Diagram

3.3 Activity Diagram

Figure 5 depicts the activity diagram for the entire flow of activities.

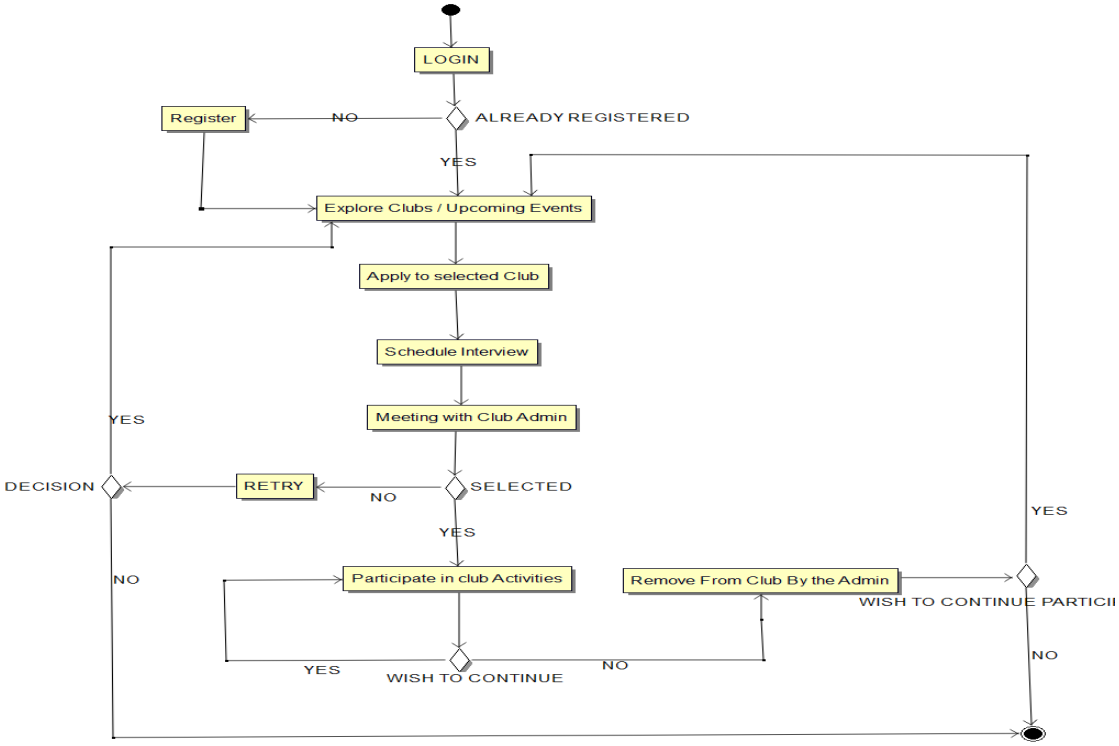

Figure 5: Activity Diagram

3.4 Sequence Diagram

Figure 6, 7 and 8 depicts the sequence diagram which show interactions between actors and the system and between system components.

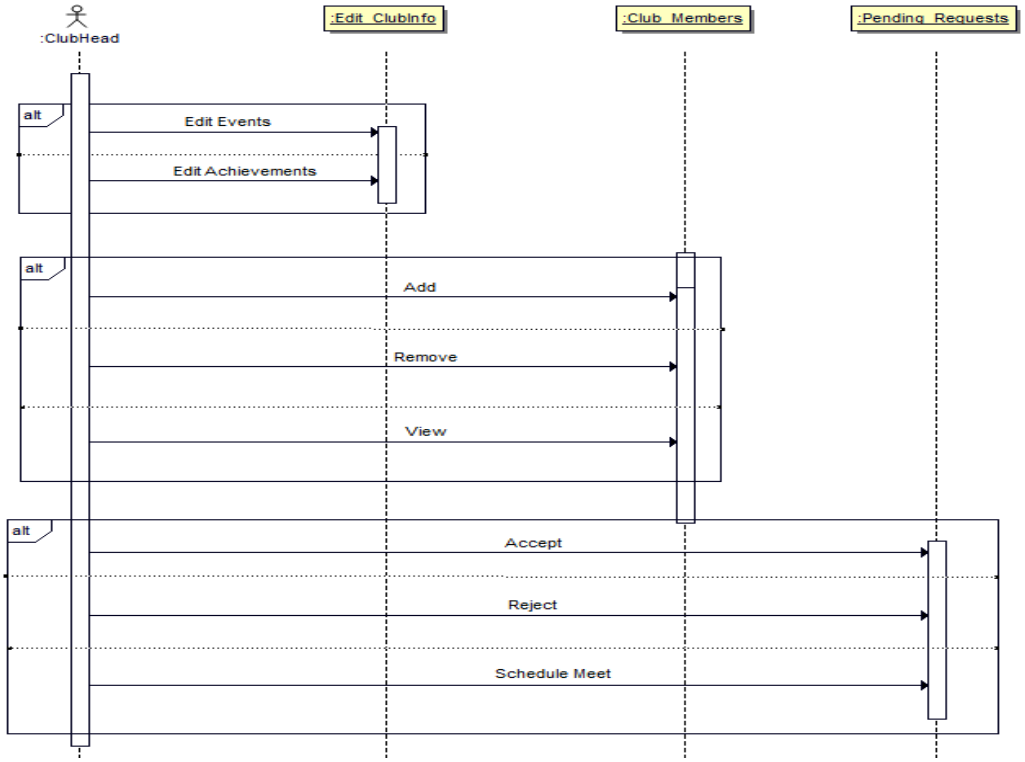

Figure 6: Club Head Sequence Diagram

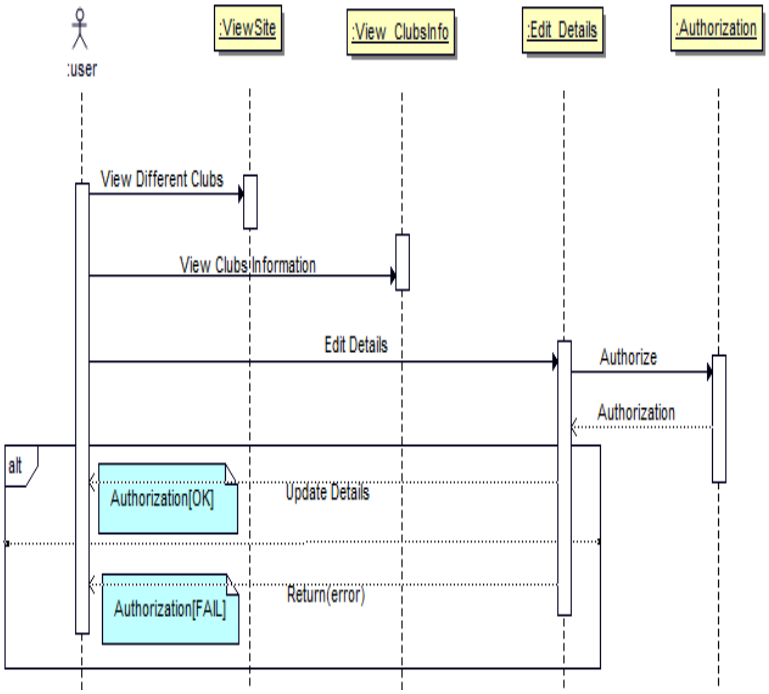

Figure 7: View and Edit user details

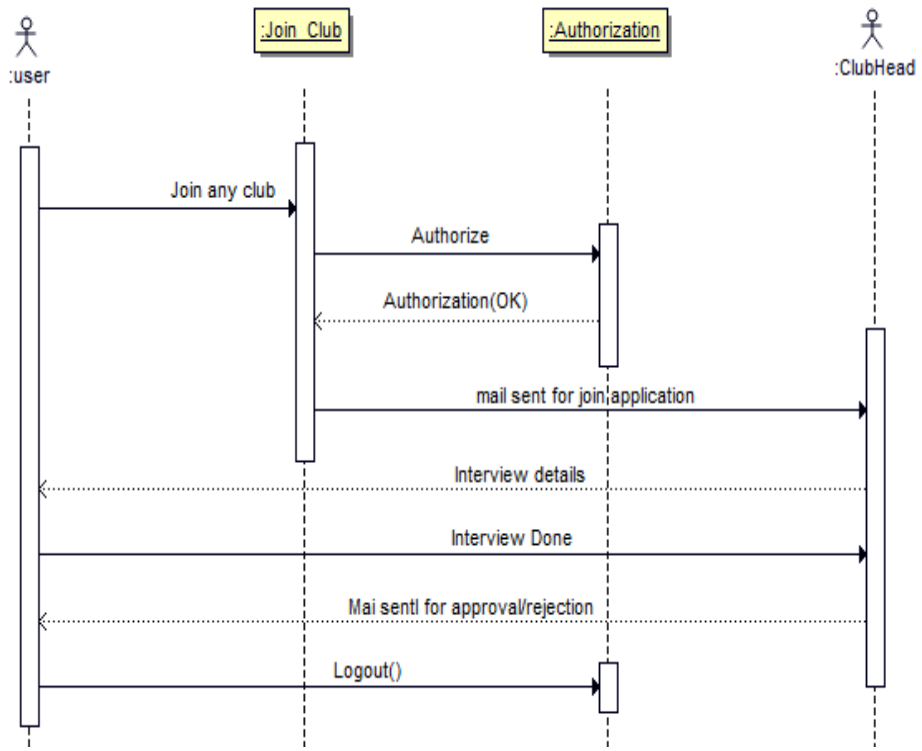

Figure 8: Join Club Sequence Diagram

3.5 Class Diagram

Figure 9 depicts the hierarchy of the users as shown:-

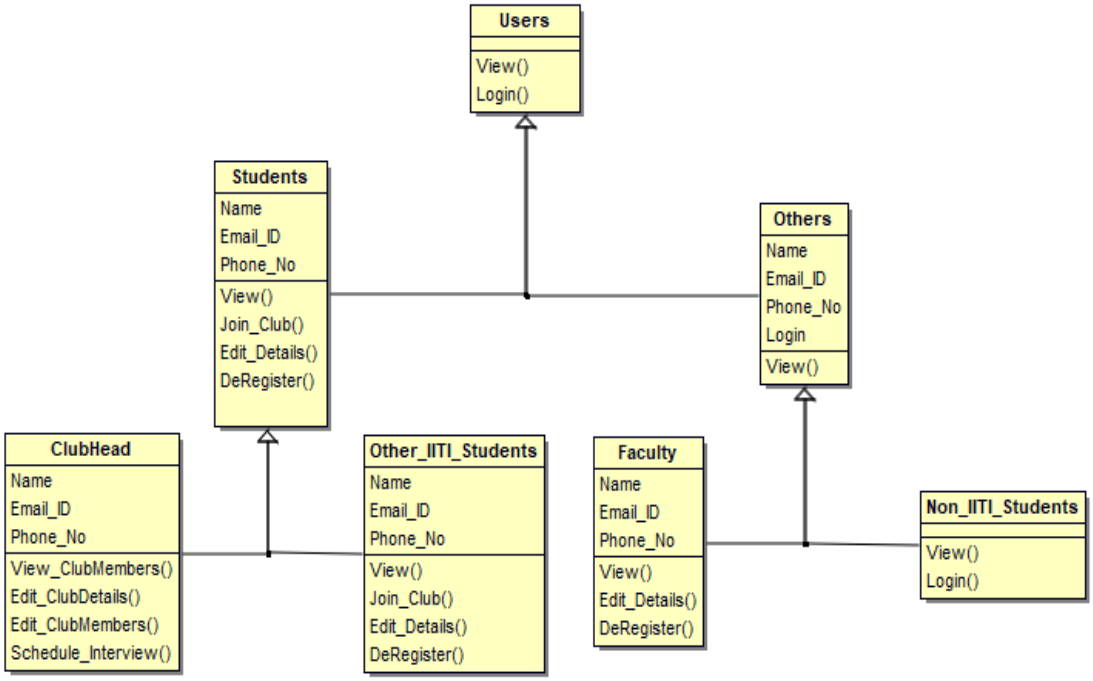

Figure 9: Class Model

4 Data Design

4.1 Data Description

The Information and Data Domain of the website is implemented by Python +Flask Framework with Database of the entire site is Implemented by MySQL which is fast and efficient.Unregistered or Registered when logged in,their EMAIL.ID is stored in the database for further identification of the user in future. The user can explore the Clubs activities, their Information and recent events which are fetched from the MySQL database in the back-end using flask and displayed and Populated in respective fields to the Front-end using CSS and Html. When a candidate wants to join a Club, he/she can fill the form and the send request to join.This very information is saved in a separate Table and used for further Meetings with the club head which is displayed on website.If joined, Information about the member is added in the members table for further use.

5 Component Design

In this section, we take a closer look at what each component does in a more systematic way. If you gave a functional description in section 3.2, provide a summary of your algorithm for each function listed in 3.2 in procedural description language (PDL) or pseudo-code. If you gave an OO description, summarize each object member function for all the objects listed in 3.2 in PDL or pseudo code. Describe any local data when necessary.

6 Interface Design

6.1 Overview of User Interface

The User Interface of the Website is crystal clean, sleek and simple with all the utilities and functionalities to compliment the user with the best services to provide best experience for club participation and joining activities which is the most crucial part of co-curricular activities. There is a Separate Web Page of every CLUB which describes its Summary (what it is About), its Events and Achievements along with a join Button if the user wants to join .The user gets the Notification in a menu drop down option at the dashboard section when the club head approves by choosing a suitable date and time in the form created in meetings page section.Now diving into the color schema of the website , its a combination of sapphire blue and cream white colors with a formal and sober look .The different clubs are being assembled in a GRID fashion along with their Official Club Logo , when clicked lands the user to its page.Website also displays a horizontal strip section which has recent Events of different clubs.

7 Screen Images/Mock ups

7.1 Register Interface

After completing **Google Oauth**, new registered users have to first of all register by providing basic details like fullName, Roll number, EmailID, Bio etc. by filling a given Form which helps to comprehend the information of all new and current members of clubs
As shown in FIG.10

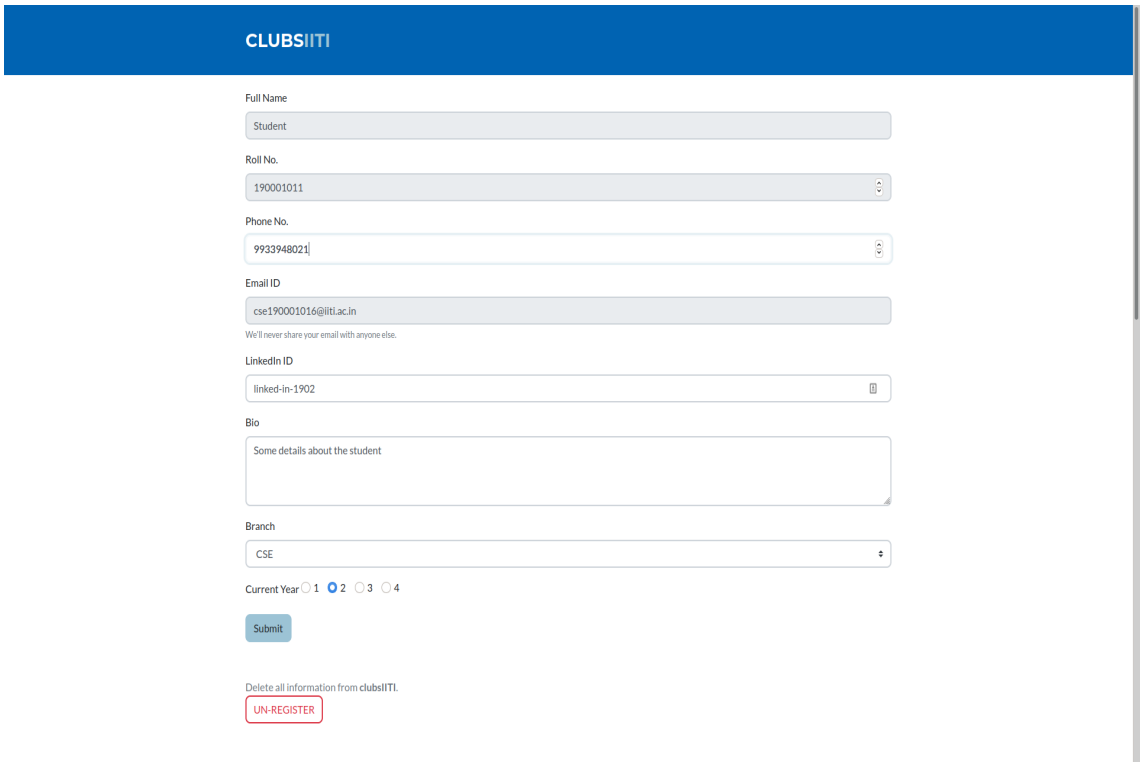

Figure 10: Register Page Prototype

7.2 Home Page

Home Page displays the different clubs and the current events of different clubs with a dashboard on the top with options menu of login,testinomials,apply etc.
as Shown in FIG.11 12

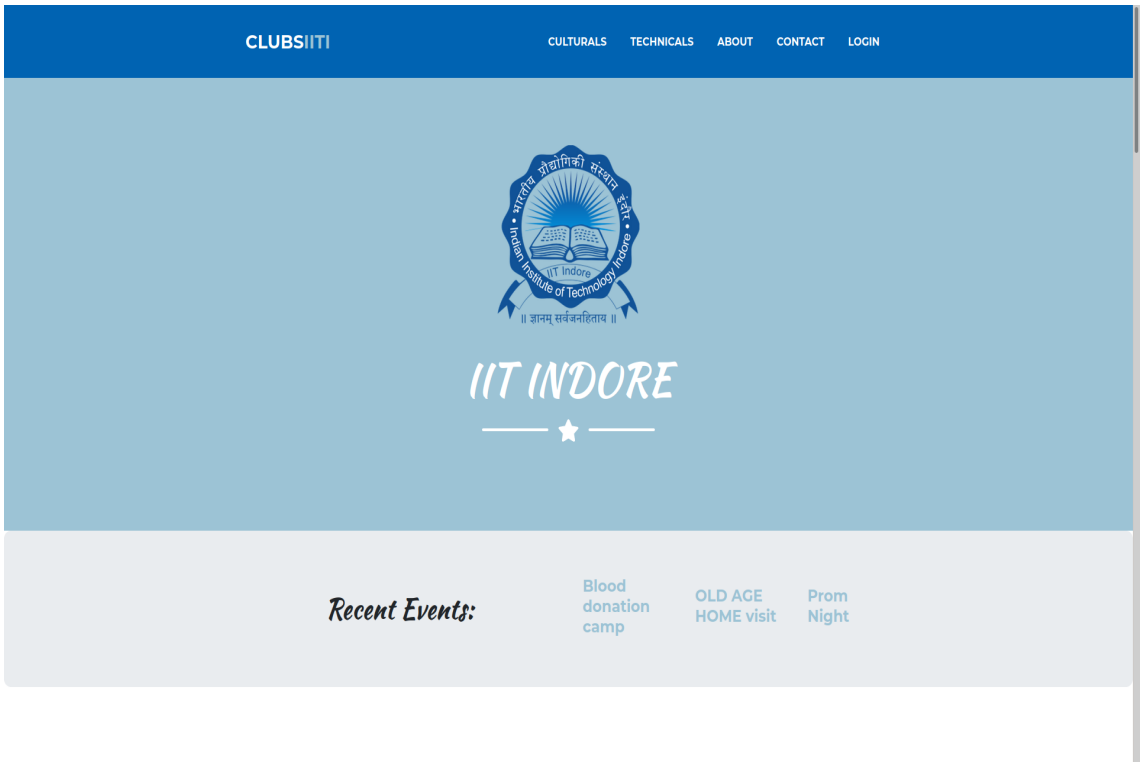

Figure 11: Home Page Prototype

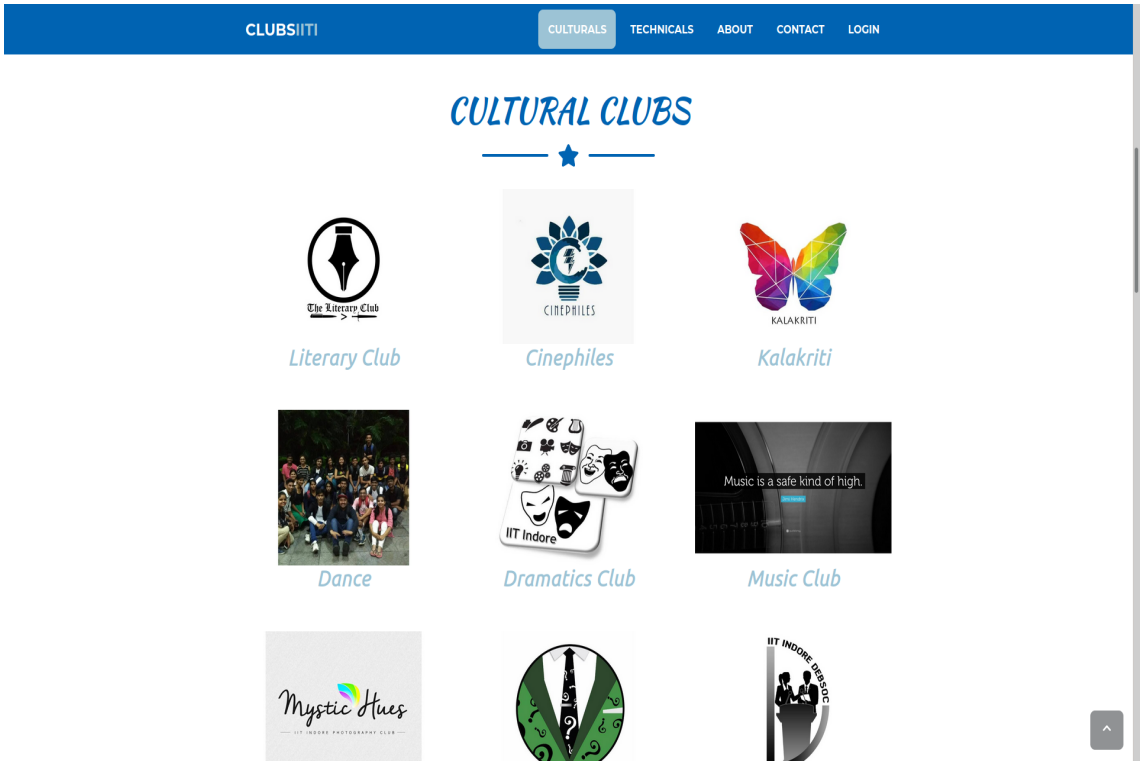

Figure 12: All Available Clubs Prototype

7.3 Club Home Page

Home page of club containing description, events, members of the club as shown in FIG.13

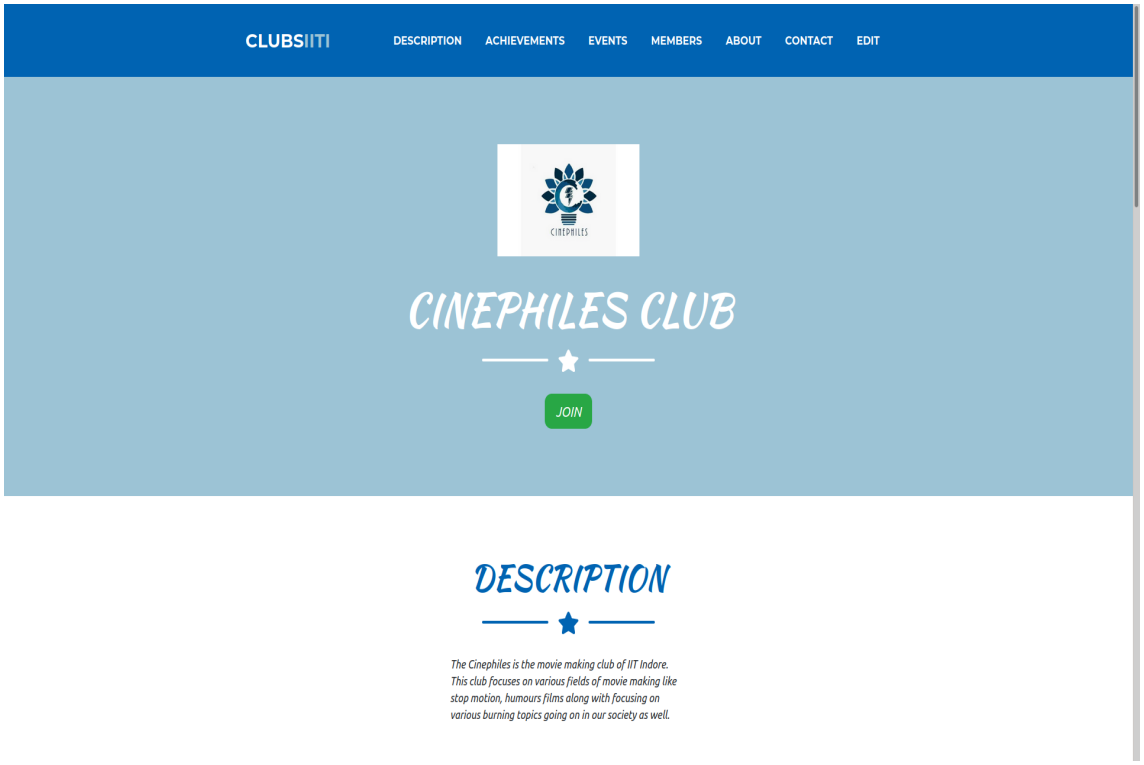

Figure 13: Each Club's Home Page Prototype