Software Requirements Specification

# PRJ566 – Fall 2023

# PRJ566 – Team No: 4

# Name of Project: Club-Hub

# Project Leader: Nishit Gaurang Shah

**Last updated: 7th April 2024**

**Team Members:**

1. **Nishit Gaurang Shah – 130176217**

**2. Priyansh Parikh – 158341214**

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**4. Yash Padwani – 169914215**

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# 1 - Introduction/Overview - Document Information

## 1.1 Document Authors

1. Nishit Gaurang Shah – 130176217
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## 1.2 Revision History

|  |  |
| --- | --- |
| Week 03 | **1. Introduction/Overview - Document Information**   1.1. Document Authors   1.2. Revision History (ongoing)  1.3. Document Conventions   1.4. Document Purpose   1.5. Intended Audience   1.6. Group Agreement  **2. Project Overview**   2.1. Project Proposal |
| Week 04 | **2. Project Overview**   2.2. Stakeholders and Users  2.3. Functional Requirements  2.4. Non-functional Requirements |
| Week 05 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **2. Project Overview**   2.5. Project Scope  2.6. System Risk  2.7. Operation Environment  2.8. UI/UX mock ups |
| Week 06 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **3. Process and Data modeling**   3.1. DFD and Activity diagrams |
| Week 07 | **1.** **Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **3.** **Process and Data modeling**   3.2. Use Case Specification  3.2.1. Business Rules   3.2.2. System Use Case Diagrams   3.2.3. Use Case Description Tables |
| Week 08 |  |
| Week 09 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **4. Domain Class Diagram** |
| Week 10 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **5. Database**  5.1. Entity Relationship Diagram  5.2. Data Dictionary |
| Week 11 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **6. Work Breakdown Structure** |
| Week 12 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **7. Implementation Schedule** |
| Week 13 | **1. Introduction/Overview - Document Information**   1.2. Revision History (ongoing)  **8. Implementation Schedule** |

## 1.3 Document Conventions

* Any text in red indicates an exception or error.
* Any text in blue is in-progress.
* Any text highlighted in yellow is an important point.
* Any text in green was recently added.
* Any text *italicized* represents definitions.
* Any text with ~~strike-through~~ is deleted.

## 1.4 Document Purpose

The purpose of this document is to provide a comprehensive overview of the Club-Hub project, a web application designed exclusively for Maple Leaf Public School. It outlines the key features, project needs, objectives, and reasons for its substantial two-semester duration. Additionally, it aims to guide the project's execution by clearly defining the goals, requirements, and expected outcomes. This document will serve as a reference for stakeholders, project managers, and development teams involved in the planning, implementation, and evaluation of Club-Hub.

## 1.5 Intended Audience

This document is intended for a diverse audience involved in the Club-Hub project, including school administrators, project managers, the development team, students, teachers, club organizers, as well as evaluators and assessors. School administrators will understand the impact of Club-Hub on student engagement, while project managers will gain insights into the project's goals and key features. The development team will grasp the technical and functional requirements, and students will be encouraged to actively participate. Teachers and club organizers will learn how Club-Hub can streamline activities, and evaluators will assess the project's success based on its outlined goals and objectives.

## 1.6 Group Agreement

**TEAM AGREEMENT**

**Team #: 04**

**Project Title: Club-Hub Web App**

**Project Time Frame: 8 months**

**Team Members: Priyansh Parikh, Nishit Gaurang Shah, Yuvraj Singh, Yash Padwani**

**Team Leadership: Nishit Gaurang Shah**

**Team Functions:**

**· We will cultivate a culture of open communication and transparency within the team, consistently sharing progress updates, challenges, and solutions to keep everyone well-informed.**

**· Conduct regular team meetings and share information through MS Teams to discuss project status, address any obstacles, and ensure alignment on project milestones and deadlines.**

**· Foster a constructive feedback culture, providing and seeking input regularly to facilitate the professional development and improvement of team members.**

**· Utilize tools like Git to manage code changes and maintain a dependable codebase.**

**· Establish an environment that encourages collaboration and teamwork, where the exchange of ideas and information is valued to enhance overall team effectiveness.**

**Team Meetings:**

**· We will gather twice a week with specific goals. On Wednesdays, after 4pm we will plan our tasks for the week. Then, on Saturdays after 6pm, we will check everyone's progress and put everything together before the final submission.**

**· Additionally, we'll explore the option of recording important meetings, especially for team members with busy schedules. Make sure that these recordings are readily available to all team members.**

**Team Problems:**

**· Due to the inability to commute to college daily, virtual meetings will be the primary mode of communication. We will promptly address problems and conflicts by engaging with the team leader and professor to prevent escalation.**

**· Early intervention is key in resolving issues. We will communicate promptly to address and fix problems, preventing them from worsening over time.**

**Team Commitment:**

**The undersigned members agree to work together on the project until the end of the PRJ666 next Semester. They recognize that as a team and individually they are responsible for the quality of all deliverables.**

|  |  |
| --- | --- |
| **Name** | **Date** |
| **Priyansh Parikh** | **January 28, 2024** |
| **Nishit Gaurang Shah** | **January 28, 2024** |
| **Yuvraj Singh** | **January 28, 2024** |
| **Yash Padwani** | **January 28, 2024** |

# 2 - Project Overview

## 2.1 Project Proposal

**Project Background**

Club-Hub is a cutting-edge web application designed specifically for Maple Leaf Public School to enrich the student experience by offering a centralized platform for discovering and participating in a variety of club activities. The project is aimed at tackling the current obstacles of insufficient knowledge and availability of diverse club options within the school.

**Problem Statement**

|  |  |
| --- | --- |
| The Problem of: | Limited awareness and accessibility to diverse club activities within Maple Leaf Public School. |
| Affects: | Students, club organisers, and the school community |
| The impact of which is: | Reduced student engagement, missed opportunities for personal development, and a fragmented sense of community. |
| A successful solution would: | Improve awareness, streamline club participation, and strengthen the sense of community through enhanced communication and interaction. |

**Product Vision**

|  |  |
| --- | --- |
|  |  |
| For | Maple Leaf Public School students |
| Who | seek diverse extracurricular experiences, |
| Club-Hub | is a comprehensive web application |
| That | centralizes club information, events, and interactions. |
| Unlike | traditional methods, |
| Our product | provides a user-friendly interface, encourages active engagement, and fosters a sense of belonging through seamless integration with the school's homepage. |

## 2.2 Stakeholders and Users

|  |  |
| --- | --- |
| Stakeholder Name/Identifier | Category |
| School Principal | Administration, Sponsor |
| School Administrators | Administration, User |
| Club Organizers | Administration, User |
| Students | Users |
| Parents | Users |
| Teachers | Users |
| Web Developers | Developers |
| IT Support Staff | Developers |

## 2.3 Functional Requirements

~~1. User Login and Signup / Registration:~~

* ~~Registration Process:~~
  + ~~To register, students need to provide essential information such as their name, student ID, and email. The system will implement a secure authentication process to verify the legitimacy of registered users, possibly through email verification or a verification code.~~
* ~~Logging In:~~
  + ~~Registered users will be able to log in securely with their credentials, granting them access to personalized content and features.~~

~~2. Homepage Displaying Upcoming Events:~~

* ~~Presentation of Events:~~ 
  + ~~The homepage ought to display a visually attractive layout that highlights the upcoming club events. Each event should comprise crucial details such as the event name, date, time, and a concise description.~~
* ~~User Alerts:~~ 
  + ~~The system should provide users with notifications of upcoming events through an alert mechanism, guaranteeing attentive participation and involvement.~~
* ~~Calendar Display:~~ 
  + ~~Users must be able to view scheduled activities in a calendar format, presenting a complete summary of upcoming events.~~

~~3. Club Discovery:~~

* ~~Streamlined Navigation:~~
  + ~~The platform should have a user-friendly interface that enables effortless navigation of different clubs. Users should be able to peruse clubs by categories or interests with ease.~~
* ~~Comprehensive Club Descriptions:~~
  + ~~Every club's profile must offer detailed information on its goals, events, and meeting times. To enhance the discovery process, users should have access to a search function and filters based on categories or keywords.~~

~~4. Reviews and Ratings:~~

* ~~User Interaction:~~ 
  + ~~The system should allow users to submit reviews and ratings for clubs, expressing their experiences and perspectives. Reviews should support text input for detailed feedback.~~
* ~~Aggregate Ratings:~~ 
  + ~~A 5-star rating system should be implemented, and the platform must display an aggregate rating for each club based on user reviews.~~
* ~~Visibility:~~
  + ~~Ratings and reviews should be prominently displayed on each club's profile, providing valuable insights to other users.~~

1. **Welcome Page:**

* Sign In/Register Button:

On the top right corner of the Welcome Page, users will find a button offering the option to sign in or register. This button will open a dropdown menu with choices for user and admin login.

* Upcoming Events Module:

A dedicated module on the homepage will showcase upcoming events, providing users with an overview of scheduled activities within the school community. This module will feature details such as the event name, date, time, and a brief description to keep users informed about upcoming club events.

* Navigation Bar:

A navigation bar providing quick access to essential modules, including Home, Clubs, and Events will be featured.

1. **Sign-in/Registration:**

* Logging In: Registered users, both students and admin, will be able to log in securely with their credentials, granting them access to personalized content and features.
* To register, students need to provide essential information such as their username and password.
* Admin Access: Admins will not have a registration option; they are required to log in with the credentials provided by the college.

1. **Student Home Page:**

* Upcoming Events Module:

A dedicated module on the homepage will showcase upcoming events, providing users with an overview of scheduled activities within the school community. This module will feature details such as the event name, date, time, and a brief description to keep users informed about upcoming club events.

* User Clubs Module:  
  Users will have access to a module displaying the clubs they have joined. This section will provide a quick overview of the clubs the user is a part of, promoting seamless navigation and engagement.
* Navigation Bar:

A navigation bar providing quick access to essential modules, including Home, Clubs, and Events will be featured.

1. **Admin Home Page:**

* Club Details Management:

Admin can view the details of each club.

Edit Club Details: Admin can edit the club details by clicking the "Edit Club Details" button.

* Events Management:

Add or Delete Events: Below the club details, the admin can add or delete events to the club.

View All Club Events: Admin can view all the events they have added.

Edit Club Events: Admin has the option to edit existing events. Each event will display its details, and there will be buttons like "Edit Club Event" for modifications.

* Reviews and Ratings:

Admin can view all club reviews and ratings posted by students at the bottom of the page.

~~~This will be completed in next document~~~

1. **Club Browsing Page:**

* Description:  
  The page will present a comprehensive list of all available clubs.
* Details:  
  Users can view club names, categories, and brief descriptions.
* Sort Method:   
  Users can sort clubs based on relevant criteria.
* Search Bar:   
  A search bar enables users to search for specific clubs.
* Navigation Bar:

A navigation bar providing quick access to essential modules, including Home, Clubs, and Events will be featured.

1. **Club Details Page:**

* Description:   
  This page will showcase detailed information about a specific club.
* Details:   
  Users can see club name, description, rating, and other relevant details.
* Club Events:

The page will also display the events associated with the club.

* Interaction:   
  Users can join the club and rate it.
* Navigation Bar:

A navigation bar providing quick access to essential modules, including Home, Clubs, and Events will be featured.

1. **Event Browsing Page:**

* Description:   
  The page will provide an overview of all upcoming events.
* Details:   
  Users can see event names, dates, times, and brief descriptions.
* Interaction:   
  Users can add events to their Google Calendar.
* Navigation Bar:

A navigation bar providing quick access to essential modules, including Home, Clubs, and Events will be featured.

## 2.4 Nonfunctional Requirements

Operational Requirements:

* The system should be available for use 24/7, with scheduled maintenance communicated in advance to users.
* The platform should support a scalable number of users to accommodate the entire student body, teachers, administrators, and parents.
* The system must be compatible with commonly used web browsers, such as Chrome, Firefox, Safari, and Edge.

Performance Requirements:

* The response time for loading club information, events, and interactions should be within 3 seconds to provide a seamless user experience.
* Concurrent users should not experience a significant degradation in performance. The system should handle a minimum of 1000 simultaneous users without noticeable slowdowns.
* The platform should efficiently handle peak usage times, such as club registration periods or event sign-ups.

Security Requirements:

* User authentication and authorization should be implemented to ensure that only authorized individuals (students, teachers, administrators) can access specific features and data.
* All data transmission should be encrypted using HTTPS to protect user information during communication between the client and the server.
* Personal information, especially for students, should be handled in compliance with data protection regulations, ensuring confidentiality and privacy.

## 2.5 Project Scope

**Club-Hub: Igniting Student Engagement at Maple Leaf Public School**

**Introduction:**  
Maple Leaf Public School is on the verge of a transformative experience with the introduction of Club-Hub, a dynamic web application designed to enrich student life through seamless club engagement. Club-Hub aims to create a vibrant online community that fosters collaboration, creativity, and active participation in diverse extracurricular activities.

**Project Objectives:**The primary objectives of Club-Hub are:

* Club Discovery and Exploration:Enable students to easily discover and explore a wide range of club features based on their interests through an intuitive and user-friendly interface.
* Community Building:  
  Facilitate a sense of community by empowering students to organize events, collaborate on projects, and engage in open communication within the platform.
* Event Awareness and Participation:  
  Keep students informed about upcoming events and activities, encouraging active participation and involvement in the school's extracurricular scene.
* User Reviews and Ratings:  
  Implement a robust system for students to provide reviews and ratings for club, enhancing transparency and aiding others in making informed choices.
* Integration with School Digital Space:  
  Seamlessly integrate Club-Hub with Maple Leaf Public School's existing digital space, ensuring accessibility and connectivity for all students.

**Key Features:**

* User Authentication and Profiles:  
  Implement a secure user authentication system requiring students to register with essential information such as name, student ID, and email.
* Club Discovery and Navigation:  
  Provide an intuitive interface for students to navigate and discover clubs effortlessly, including search features, category filters, and personalized recommendations.
* Event Management and Calendar:  
  Enable club to create and manage events with details such as date, time, and location. Implement a centralized calendar for users to view and plan their participation.
* Community Forum and Collaboration Tools:  
  Develop a dynamic community forum within Club-Hub, fostering open communication, idea-sharing, and collaboration among students. Include tools for sharing resources and organizing collaborative projects.
* User Reviews and Ratings System:  
  Integrate a comprehensive system for users to submit reviews and ratings for clubs, promoting transparency and aiding in the decision-making process.
* Integration with School Resources:  
  Ensure seamless integration with Maple Leaf Public School's existing digital infrastructure, allowing students to access Club-Hub easily through official channels.

**Project Boundaries:**

While Club-Hub strives to enhance student engagement and community building, it's essential to recognize certain boundaries:

* Administrative Matters:  
  Club-Hub does not replace official communication channels for critical school announcements, grades, or other administrative matters.
* Technological Limitations:  
  The platform's features may be influenced by the availability of technological resources and infrastructure at Maple Leaf Public School.

**Success Criteria:**

* User Adoption Rates:  
  Achieve a targeted percentage of student registration and active engagement within the first semester.
* Positive User Feedback:  
  Gather positive feedback from user reviews, indicating satisfaction with Club-Hub's usability, features, and impact on student life.
* Increased Club Participation:  
  Measure an increase in the number of students actively participating in club events and activities facilitated through Club-Hub.

**Project Timeline:**The Club-Hub project is planned for completion within an eight-month timeframe, with key milestones identified for each phase, including development, testing, and implementation.

## 2.6 System Risks

|  |  |
| --- | --- |
| **Risk** | **Response** |
| **Data Security Breach:** There is a risk of unauthorized access to sensitive student data stored within the Club-Hub platform, leading to privacy breaches and potential legal ramifications. | Implement robust security measures such as encryption of data, secure authentication mechanisms, regular security audits, and compliance with relevant data protection regulations (such as GDPR or CCPA) to mitigate the risk of data breaches. |
| **Low User Adoption:** There is a risk that students may not fully adopt the Club-Hub platform, leading to underutilization and failure to achieve the project's objectives. | Conduct extensive user testing and gather feedback during the development phase to ensure the platform meets the needs and preferences of the target audience. Implement a comprehensive marketing and communication strategy to raise awareness and promote the benefits of Club-Hub among students, teachers, and parents. |
| **Technical Challenges with Integration:** Technical difficulties may arise during the integration of Club-Hub with Maple Leaf Public School's homepage, leading to delays or disruptions in access to the platform. | Thoroughly assess compatibility and conduct testing at each stage of integration to identify and address any technical issues promptly. Maintain open communication channels with the school's IT department and seek their assistance and expertise as needed to ensure a smooth integration process. |
| **Insufficient Club Organizer Participation:** There is a risk that club organizers may not actively participate in updating and managing their club information on the Club-Hub platform, resulting in outdated or incomplete content. | Provide comprehensive training and support to club organizers on using the platform effectively, emphasizing the benefits of maintaining up-to-date information for student engagement. Implement user-friendly tools and streamlined processes to make it easy for club organizers to contribute and update their club details regularly. |
| **Unforeseen Technical Issues:** Unforeseen technical issues, such as server downtime or software bugs, may occur, disrupting the functionality and accessibility of the Club-Hub platform. | Establish a robust technical support system to promptly address and resolve any technical issues that arise. Implement regular maintenance schedules and backups to minimize downtime and ensure the stability and reliability of the platform. |

## 2.7 Operating Environment

The operational environment for the Club-Hub web application includes various components and requirements to ensure its smooth functioning and accessibility. Here's an overview:

**Web Server:**The web application will be hosted on a robust server that is capable of serving web pages and application logic. The system must support modern web technologies such as *HTML, CSS, and JavaScript*. Additionally, the chosen backend technology must be capable of handling server-side scripting languages such as *PHP, Python, or Node.js*. The server must also be equipped with sufficient resources to handle concurrent user requests and sudden traffic spikes.

The Club-Hub application's back-end will seamlessly manage essential functions such as data storage, retrieval, and business logic. The system will include a robust database to store club information, user data, event details, and user-generated content, like reviews and ratings. To accommodate a growing user base and data volume, the application will feature a scalable infrastructure. The front-end environment will provide an intuitive and engaging user experience.

Users will interact with the application through web browsers on various devices.

**Requirements:**Our platform is compatible with the latest web browsers, including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge. We also offer a responsive design that guarantees seamless usability and functionality across various screen sizes, ranging from desktops to smartphones and tablets. Moreover, we provide support for JavaScript frameworks and libraries used for front-end development, promoting dynamic and interactive user interfaces.

**Networking Infrastructure**:  
To ensure uninterrupted access to the Club-Hub application from multiple locations, reliable network connectivity is an absolute must. This includes:

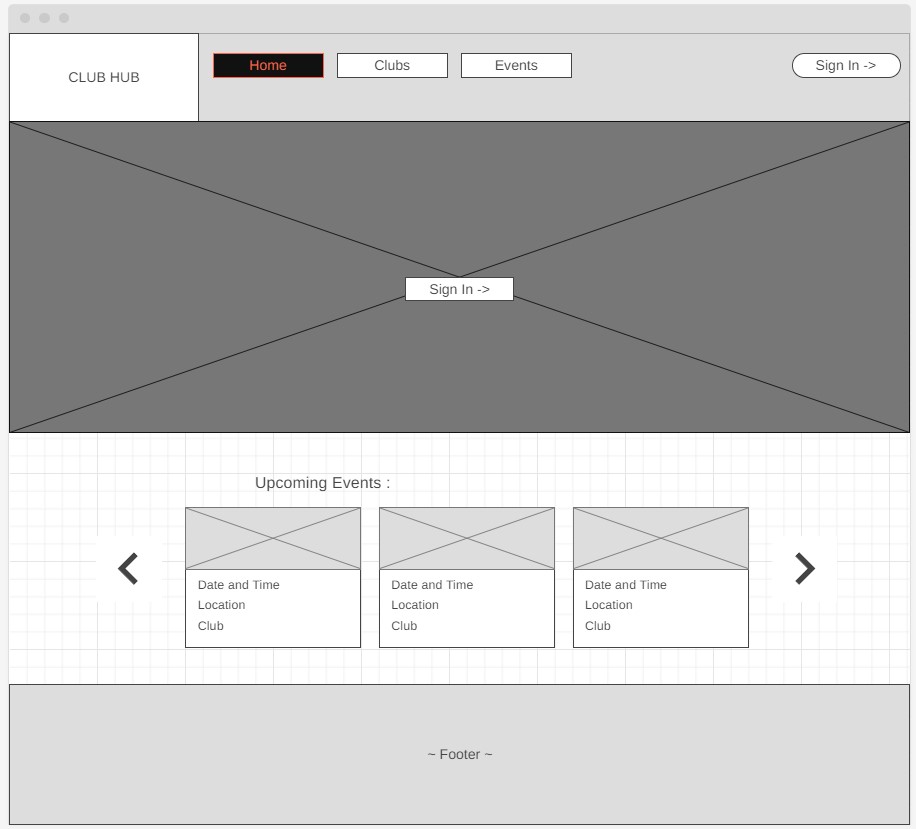
* Consistent internet connectivity to allow for seamless access by both users and backend servers.
* Robust security protocols, such as HTTPS encryption to protect data transmitted between clients and servers.
* Load balancing and content delivery networks (CDNs) to optimize performance and effectively distribute traffic.

**Development and Deployment Tools:**To effectively develop, test, and deploy applications, tools and platforms are essential. For frontend and backend development, Integrated Development Environments (IDEs) such as *Visual Studio Code* are necessary. Additionally, Version Control Systems like *Git* are crucial for managing code changes and promoting collaboration among team members. Finally, Continuous Integration and Deployment (CI/CD) pipelines are vital for automated testing, building, and deploying updates to production environments.

**Monitoring and Maintenance:**Continuous monitoring and maintenance are required to ensure the application's reliability, performance, and security.

**Requirements:**  
Monitoring tools for tracking server health, application performance, and user activity.   
Regular data backups to prevent loss in case of system failures or disasters.   
Security protocols and updates to mitigate potential vulnerabilities and ensure compliance with data protection regulations.

## 2.8 UI/UXD Interface Mock-ups

1. Welcome Page:  


2. Login Page:  
A screenshot of a login screen

Description automatically generated

Figure 1 Student/Admin Login

3. Register Page:

Figure 2 Student Registration

A screenshot of a computer

Description automatically generated  
  
4. Student Welcome Page:  
  
A screenshot of a web page

Description automatically generated

5. Club Browsing Page:  
A screenshot of a web page

Description automatically generated

6. Club Details Page:

Figure 3 Join/Rate Club

A screenshot of a login form

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7. Events Browser Page:

Figure 4 Add event to Calendar.

A screenshot of a web page

Description automatically generated  
  
8. Club Admin Welcome Page:

Figure 5 Create/Edit/Delete Club/Event Admin

A screenshot of a computer

Description automatically generated

# Process and Data Modeling

## **3.1 UML/DFD Modeling and Data Modeling**

**Data Flow Diagrams:  
1. User Authentication DFD:**

A diagram of a user registration

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**2. Welcome Page DFD:**A diagram of a computer program

Description automatically generated **3. Student Club and Event Management DFD:**A diagram of a diagram

Description automatically generated **4. Admin Club Management DFD:**A diagram of a function

Description automatically generated

**5. Club Browsing Page DFD:  
A diagram of a diagram

Description automatically generated**

**6. Club Details Page DFD:  
A diagram of a club

Description automatically generated**

**7. Event Browsing Page DFD:  
A diagram of events and events

Description automatically generated**

**Activity Diagrams:**

**1.** Login Process Student:

A diagram of a student

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**2.** Login Process Admin:

A screenshot of a computer

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**3.** Registration Process Student:

A diagram of a student

Description automatically generated

**4.** Join Club Student:

A diagram of a student

Description automatically generated

**5.** Rate Club Student:  
A diagram of a student

Description automatically generated

**6.** Add Event to Calendar Student:

A screenshot of a computer

Description automatically generated

**7.** Create Event Admin:

A screenshot of a diagram

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**8.** Edit Event Details Admin:

A screenshot of a diagram

Description automatically generated

**9.** Delete Club Admin:

A diagram of a system

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**10.** Edit Club Details Admin

A screenshot of a diagram

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## **3.2 Business Rules**

|  |  |  |
| --- | --- | --- |
| Business Rule Number | Business Rule Description | Related UC |
| BR01 | Only registered students and administrators are allowed to log in to the Club Hub platform. | UC01, UC02 |
| BR02 | Students must provide essential information, including a username and password, during the registration process. | UC03 |
| BR03 | Administrators are not allowed to register; they must log in using the credentials provided by the college. | UC02 |
| BR04 | Users can only join clubs after successfully logging in. | UC04 |
| BR05 | Students can rate clubs only if they have joined the respective club. | UC05 |
| BR06 | Events can only be added to Google Calendar by logged-in students. | UC06 |
| BR07 | Only administrators have the authority to create events on the Club Hub platform. | UC07 |
| BR08 | Only administrators have the authority to create events on the Club Hub platform. | UC08 |
| BR09 | Administrators are the only users authorized to delete clubs from the Club Hub platform. | UC09 |
| BR10 | Only administrators can edit club details on the Club Hub platform. | UC10 |
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## **3.3 Use Case Specifications with corresponding interface mockups:**

**Each use case needs to have the following:**

**1- Business Rules.**

**2- System Use Case Diagrams.**

**3- Use Case Descriptions.**

**4- Corresponding Mockups**

1. **Student Login:**

Business Rule: BR01

System Use Case Diagram:  
A diagram of a student login

Description automatically generated

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Student Login |
| Date Created | 2024-03-02 |
| Description | This use case outlines the process for a student to log in to the Club-Hub system. |
| Primary Actor | Student |
| Secondary Actor | Club System |
| Preconditions | 1. Student must be registered.  2. The student should be on the welcome page. |
| Postconditions | 1. Student successfully logs in.  2. The system navigates to the student's home page. |
| Normal Flow | 1. Student selects the "Student Login" option on the welcome page.  2. System navigates to the Student Login Page.  3. Student enters their username and password.  4. System validates the entered credentials.  5. If valid, the system navigates to the student's home page. |
| Alternate Flows and Exceptions | 1. If the entered credentials are invalid, the system prompts the student to re-enter.  2. If the student is not registered, they are prompted to register first. |
| Special Requirements | Secure storage and validation of student login credentials. |
| Assumptions | Students have valid usernames and passwords. |

Corresponding Mockup: Figure 1 Student/Admin Login

1. **Admin Login:**

Business Rule: BR01, BR03

System Use Case Diagram:  
A diagram of a login system

Description automatically generated

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Admin Login |
| Date Created | 2024-03-02 |
| Description | This use case outlines the process for a club admin to log in to the Club-Hub system. |
| Primary Actor | Admin |
| Secondary Actor | Club System |
| Preconditions | The club admin must have valid credentials. |
| Postconditions | Admin gains access to the club admin home page. |
| Normal Flow | 1. Admin selects the 'Club Admin Login' option on the welcome page.  2. System navigates to the club admin login page.  3. Admin enters a username and password.  4. System validates the entered credentials.  5. If valid, the system navigates to the club admin home page. |
| Alternate Flows and Exceptions | If the entered credentials are invalid, the system prompts the admin for correction. |
| Special Requirements | Secure storage and validation of admin login credentials. |
| Assumptions | Each club admin is provided with unique login credentials. |

Corresponding Mockup: Figure 1 Student/Admin Login

1. **Student Registration:**

Business Rule: BR02

System Use Case Diagram:  
A diagram of a diagram

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Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Student Registration |
| Date Created | 2024-03-02 |
| Description | This use case outlines the process for a student to register a new account in the Club-Hub system. |
| Primary Actor | Student |
| Secondary Actor | Club System |
| Preconditions | None |
| Postconditions | 1. Student's new account is created in the system.  2. The system navigates to the student's home page. |
| Normal Flow | 1. Student selects the 'Register' option on the login page.  2. System navigates to the student registration page.  3. Student enters a new profile photo, username, and password.  4. System confirms the availability of the username and password.  5. If available and valid, the system saves and creates a new account and navigates to the student home page. |
| Alternate Flows and Exceptions | If the entered credentials are not available, the system prompts the student to re-enter. |
| Special Requirements | 1. The entered username must be the student's official college username.  2. The entered password must match the student's official college password. |
| Assumptions | Students are required to provide a profile photo during registration. |

Corresponding Mockup: Figure 2 Student Registration

1. **Join Club Student:**

Business Rule: BR04

System Use Case Diagram:  
**A blue screen with text and circles

Description automatically generated with medium confidence**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Join Club |
| Date Created | 2024-03-02 |
| Description | This use case describes the process by which a student can join a club within the Club-Hub management system. |
| Primary Actor | Student |
| Secondary Actor | Club System |
| Preconditions | 1. Student must be registered and logged into the system.  ~~2. Student is not a member of another club.~~ |
| Postconditions | 1. Student's current Club ID is updated. 2. Club's current members count is incremented. |
| Normal Flow | 1. Student selects the 'Join' button on the club details page.  2. System updates the student's current Club ID and the club's current members count. 3. A success message is displayed to the student. |
| Alternate Flows and Exceptions | If the student is already a member of a club or if a system error occurs, the process is halted, and an error message is displayed. |
| Special Requirements | Operation must complete within a specified time frame, ensuring atomicity and consistency. |
| ~~Assumptions~~ | ~~A student can only be a member of one club at a time.~~ |

Corresponding Mockup: Figure 3 Join/Rate Club

1. **Rate Club Student:**

Business Rule: BR05

System Use Case Diagram:  
**A blue screen with text and black circles

Description automatically generated with medium confidence**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Rate Club |
| Date Created | 2024-03-02 |
| Description | This use case outlines the process for a student to rate and comment on a club they are a member of. |
| Primary Actor | Student |
| Secondary Actor | Club System |
| Preconditions | 1. Student must be registered and logged into the system.  2. Student must be a member of the club. |
| Postconditions | 1. Club's rating and comments are updated. 2. New club rating is displayed. |
| Normal Flow | 1. Student selects the 'Rate' button on the club details page.  2. Student enters a rating and comment and presses 'enter'.  3. System validates and updates club's rating and comments. |
| Alternate Flows and Exceptions | If the student has already rated, prevent another rating. If the comment is invalid, prompt for correction. |
| Special Requirements | Rating validation and comment adherence to content guidelines within a specified time frame. |
| Assumptions | Each student is allowed to rate a club only once. |

Corresponding Mockup: Figure 3 Join/Rate Club

1. **Add Event to Calendar Student:**

Business Rule: BR06

System Use Case Diagram:  
**A blue rectangular object with a dotted line

Description automatically generated with medium confidence**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Add Event to Google Calendar |
| Date Created | 2024-03-02 |
| Description | This use case allows a student to add an event to their Google Calendar from the Club-Hub system. |
| Primary Actor | Student |
| Secondary Actor | Google Calendar System |
| Preconditions | 1. Student must be logged into the Club-Hub system. 2. The event details must be available. |
| Postconditions | 1. The event is added to the student’s Google Calendar. |
| Normal Flow | 1. Student selects 'Add to Google Calendar' button. 2. System generates a link to add to Google Calendar. 3. Student is navigated to Google Calendar in a new window. |
| Alternate Flows and Exceptions | If the link generation fails, an error message is displayed. |
| Special Requirements | The link must be correctly formatted to create an event in Google Calendar. |
| Assumptions | Student has a Google account and access to Google Calendar. |

Corresponding Mockup: Figure 5 Add event to Calendar.

1. **Create Event Admin:**

Business Rule: BR07

System Use Case Diagram:  
**A diagram of a club management system

Description automatically generated**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Create Event |
| Date Created | 2024-03-02 |
| Description | This use case enables an admin to create a new event within the Club-Hub system. |
| Primary Actor | Admin |
| Secondary Actor | Club-Hub System |
| Preconditions | Admin must be logged into the system with administrative privileges. |
| Postconditions | A new event is created and displayed on the Club-Hub system with the details provided by the admin. |
| Normal Flow | 1. Admin selects the 'create event' option. 2. System prompts for all event details. 3. Admin enters all details. 4. System validates details. 5. If valid, creates an event with given details. 6. Refreshes page and displays new event. |
| Alternate Flows and Exceptions | If the entered details are not valid, the system does not create the event and asks for valid input. |
| Special Requirements | Event creation should adhere to data validation rules such as correct date format and non-empty fields. |
| Frequency of Use | As often as new events need to be created by the admin. |
| Assumptions | The admin has the necessary information to create an event. |

Corresponding Mockup: Figure 5 Create/Edit/Delete Club/Event Admin

1. **Edit Event Admin:**

Business Rule: BR08

System Use Case Diagram:  
**A diagram of a club management system

Description automatically generated**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Edit Event Details |
| Date Created | 2024-03-02 |
| Description | This use case describes the process by which an admin can edit the details of an existing event. |
| Primary Actor | Admin |
| Secondary Actor | Club-Hub System |
| Preconditions | Admin must be logged into the system with administrative privileges. |
| Postconditions | The event details are updated in the Club-Hub system and displayed to the users. |
| Normal Flow | 1. Admin selects the 'change event details' option. 2. System prompts for all event details. 3. Admin edits event details and presses enter. 4. System validates details. 5. If valid, updates event details. 6. Refreshes page and displays new event details. |
| Alternate Flows and Exceptions | If the event details are not valid, the system prompts the admin to correct the input. |
| Special Requirements | Validation rules must ensure the edited details are consistent with event data requirements. |
| Assumptions | The admin is knowledgeable about the event details and has the authority to edit them. |
| Notes and Issues | The system must ensure that changes do not conflict with existing event schedules and information. |

Corresponding Mockup: Figure 5 Create/Edit/Delete Club/Event Admin

1. **Delete Club Admin:**

Business Rule: BR09

System Use Case Diagram:  
**A diagram of a club management system

Description automatically generated**

Use Case Description:

|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Delete Club Event |
| Date Created | 2024-03-02 |
| Description | This use case details the process by which an admin can delete an event in the Club-Hub system. |
| Primary Actor | Admin |
| Secondary Actor | Club-Hub System |
| Preconditions | Admin must be logged into the system with administrative privileges. |
| Postconditions | The specified event is deleted from the system, and the events list is updated. |
| Normal Flow | 1. Admin selects the 'delete event' option. 2. System displays all event details and prompts for confirmation.  3. Admin confirms deletion. 4. System validates confirmation. 5. If valid, deletes the event. 6. Refreshes page and displays other events. |
| Alternate Flows and Exceptions | If the admin does not confirm deletion, or the system validation fails, the event is not deleted. |
| Special Requirements | There must be safeguards to prevent accidental deletion of events. |
| Assumptions | The admin has the necessary permissions to delete events. |
| Notes and Issues | The system should log all deletions for auditing purposes. |

Corresponding Mockup: Figure 5 Create/Edit/Delete Club/Event Admin

1. **Edit Club Details Admin:**

Business Rule: BR10

System Use Case Diagram:  
**A diagram of a club management system

Description automatically generated**

Use Case Description:

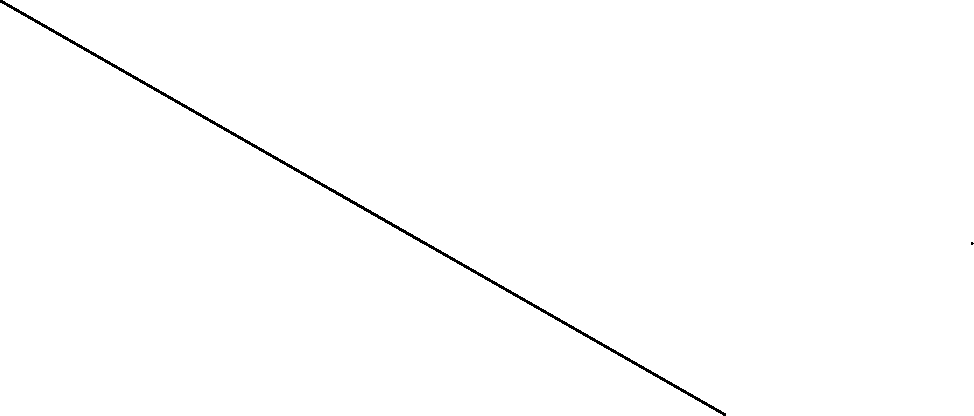
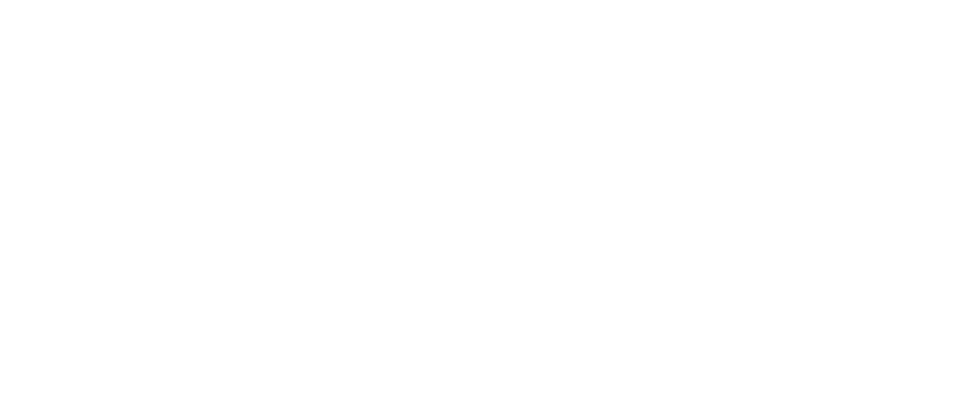
|  |  |
| --- | --- |
| **Element** | **Description** |
| Use Case Name | Edit Club Details |
| Date Created | 2024-03-02 |
| Description | This use case describes the process by which an admin can edit the details of a club in the system. |
| Primary Actor | Admin |
| Secondary Actor | Club-Hub System |
| Preconditions | Admin must be logged into the system with administrative privileges. |
| Postconditions | The club details are updated in the system, and the updated details are displayed. |
| Normal Flow | 1. Admin selects the 'change club details' option. 2. System prompts for all club details. 3. Admin edits club details and presses enter. 4. System validates details. 5. If valid, updates club details. 6. Refreshes page and displays new club details. |
| Alternate Flows and Exceptions | If the admin does not provide valid details, the system prompts the admin to correct the input. |
| Special Requirements | Validation rules must ensure the edited details meet the club information requirements. |
| Assumptions | The admin is knowledgeable about the club details and has the authority to edit them. |
| Notes and Issues | The system should ensure that changes are consistent and do not conflict with existing club information. |

Corresponding Mockup: Figure 5 Create/Edit/Delete Club/Event Admin

# Domain Class Diagram

A diagram of a computer

Description automatically generated



A diagram of a computer program

Description automatically generated

# Database

## 5.1 Entity Relationship Diagram

A diagram of a student

Description automatically generated

## 5.2 Data Dictionary

Student Table:

studentID: Primary Key. A unique identifier assigned to each student in the system.  
userName: The student's chosen username for account access and identification within the system.  
password: A hashed and secure password associated with the student's account for authentication.  
profilePhoto: The file path or a binary data type storing the student's profile image.  
clubIDset: Foreign Key. A list of identifiers linking the student to the clubs they are part of. This establishes a many-to-many relationship between students and clubs.

Club Table:

clubID: Primary Key. A unique identifier for each club entity within the system.  
clubName: The official name of the club, used for recognition and representation.  
category: A classification term that describes the type of activities the club is involved in.  
clubDescription: A textual description providing details about the club's purpose and activities.  
studentIDset: Foreign Key. A collection of identifiers for the students who are members of the club.  
eventIDset: Foreign Key. A collection of identifiers for events that the club organizes.  
adminID: Foreign Key. The identifier of the administrator responsible for managing the club.  
feedbackIDset: Foreign Key. A collection of identifiers for feedback entries related to the club.

Admin Table:

adminID: Primary Key. A unique identifier that is assigned to an administrator.  
adminUserName: The username used by the administrator to log in to the system.  
adminPassword: A secure password for the administrator's account access.  
clubID: Foreign Key. The identifier of the club the administrator manages. This establishes a one-to-one relationship between an admin and a club.

Event Table:

eventID: Primary Key. A unique identifier for each event created in the system.  
eventName: The name given to the event, which is used for listing and promotion.  
date: The scheduled date on which the event will take place.  
time: The specific time at which the event will start.  
location: The physical or virtual location where the event is to be held.  
eventDescription: A detailed narrative explaining what the event is about.  
clubID: Foreign Key. The identifier of the club to which the event is associated. This establishes a one-to-many relationship between a club and its events.

Feedback Table:

feedbackID: Primary Key. A unique identifier for each piece of feedback given.  
feedbackDesc: A text description that contains the content of the feedback.  
rate: A numerical rating associated with the feedback, typically on a predefined scale.  
clubID: Foreign Key. The identifier of the club to which the feedback is directed. This allows for collating all feedback specific to a club.

**Create Table Statements:**

Student Table:

CREATE TABLE Student (

studentID NUMBER PRIMARY KEY,

userName VARCHAR2(50) NOT NULL,

password VARCHAR2(50) NOT NULL,

profilePhoto BLOB,

clubID NUMBER,

FOREIGN KEY (clubID) REFERENCES Club(clubID)

);

Club Table:

CREATE TABLE Club (

clubID NUMBER PRIMARY KEY,

clubName VARCHAR2(100) UNIQUE,

category VARCHAR2(50),

clubDescription VARCHAR2(500),

studentIDset NUMBER UNIQUE,

eventIDset NUMBER UNIQUE,

adminID NUMBER UNIQUE,

feedbackIDset NUMBER UNIQUE,

FOREIGN KEY (studentIDset) REFERENCES Student(studentID),

FOREIGN KEY (eventIDset) REFERENCES Event(eventID),

FOREIGN KEY (adminID) REFERENCES Admin(adminID),

FOREIGN KEY (feedbackIDset) REFERENCES Feedback(feedbackID)

);

Event Table:

CREATE TABLE Event (

eventID NUMBER PRIMARY KEY,

eventName VARCHAR2(100) NOT NULL,

date DATE,

time TIMESTAMP,

location VARCHAR2(100),

eventDescription VARCHAR2(1000),

clubID NUMBER,

FOREIGN KEY (clubID) REFERENCES Club(clubID)

);

Feedback Table:

CREATE TABLE Feedback (

feedbackID NUMBER PRIMARY KEY,

feedbackDesc VARCHAR2(1000),

rate NUMBER,

clubID NUMBER,

FOREIGN KEY (clubID) REFERENCES Club(clubID)

);

Admin Table:

CREATE TABLE Admin (

adminID NUMBER PRIMARY KEY,

adminUserName VARCHAR2(100),

adminPassword VARCHAR2(100),

clubID NUMBER UNIQUE,

FOREIGN KEY (clubID) REFERENCES Club(clubID)

);

**Inserting Sample data into the tables:**

Inserting data into the Student Table:

INSERT INTO Student (studentID, userName, password, profilePhoto, clubID)

VALUES

(1, 'john\_doe', 'password1', EMPTY\_BLOB(), 1),

(2, 'jane\_smith', 'password2', EMPTY\_BLOB(), 2),

(3, 'mike\_jones', 'password3', EMPTY\_BLOB(), 3),

(4, 'emily\_brown', 'password4', EMPTY\_BLOB(), 4),

(5, 'chris\_evans', 'password5', EMPTY\_BLOB(), 5),

(6, 'sarah\_parker', 'password6', EMPTY\_BLOB(), 6),

(7, 'alex\_garcia', 'password7', EMPTY\_BLOB(), 7),

(8, 'olivia\_white', 'password8', EMPTY\_BLOB(), 8),

(9, 'david\_clark', 'password9', EMPTY\_BLOB(), 9),

(10, 'amy\_taylor', 'password10', EMPTY\_BLOB(), 10),

(11, 'ryan\_miller', 'password11', EMPTY\_BLOB(), 1),

(12, 'jennifer\_hill', 'password12', EMPTY\_BLOB(), 2),

(13, 'matthew\_young', 'password13', EMPTY\_BLOB(), 3),

(14, 'samantha\_lee', 'password14', EMPTY\_BLOB(), 4),

(15, 'daniel\_rodriguez', 'password15', EMPTY\_BLOB(), 5),

(16, 'natalie\_scott', 'password16', EMPTY\_BLOB(), 6),

(17, 'justin\_kelly', 'password17', EMPTY\_BLOB(), 7),

(18, 'amanda\_green', 'password18', EMPTY\_BLOB(), 8),

(19, 'brandon\_carter', 'password19', EMPTY\_BLOB(), 9),

(20, 'stephanie\_hall', 'password20', EMPTY\_BLOB(), 10),

(21, 'sam\_jackson', 'password21', EMPTY\_BLOB(), 1),

(22, 'lily\_adams', 'password22', EMPTY\_BLOB(), 2),

(23, 'nathan\_wood', 'password23', EMPTY\_BLOB(), 3),

(24, 'hannah\_murphy', 'password24', EMPTY\_BLOB(), 4),

(25, 'jacob\_lee', 'password25', EMPTY\_BLOB(), 5),

(26, 'rebecca\_turner', 'password26', EMPTY\_BLOB(), 6),

(27, 'michael\_roberts', 'password27', EMPTY\_BLOB(), 7),

(28, 'sophia\_baker', 'password28', EMPTY\_BLOB(), 8),

(29, 'tyler\_hall', 'password29', EMPTY\_BLOB(), 9),

(30, 'oliver\_cook', 'password30', EMPTY\_BLOB(), 10),

(31, 'emma\_bell', 'password31', EMPTY\_BLOB(), 1),

(32, 'william\_gomez', 'password32', EMPTY\_BLOB(), 2),

(33, 'ava\_howard', 'password33', EMPTY\_BLOB(), 3),

(34, 'ethan\_king', 'password34', EMPTY\_BLOB(), 4),

(35, 'mia\_rivera', 'password35', EMPTY\_BLOB(), 5),

(36, 'james\_campbell', 'password36', EMPTY\_BLOB(), 6),

(37, 'madison\_mitchell', 'password37', EMPTY\_BLOB(), 7),

(38, 'logan\_hernandez', 'password38', EMPTY\_BLOB(), 8),

(39, 'amelia\_young', 'password39', EMPTY\_BLOB(), 9),

(40, 'benjamin\_turner', 'password40', EMPTY\_BLOB(), 10),

(41, 'chloe\_harris', 'password41', EMPTY\_BLOB(), 1),

(42, 'dylan\_perez', 'password42', EMPTY\_BLOB(), 2),

(43, 'harper\_bailey', 'password43', EMPTY\_BLOB(), 3),

(44, 'sebastian\_martin', 'password44', EMPTY\_BLOB(), 4),

(45, 'sophie\_kelly', 'password45', EMPTY\_BLOB(), 5),

(46, 'jackson\_richardson', 'password46', EMPTY\_BLOB(), 6),

(47, 'eva\_wood', 'password47', EMPTY\_BLOB(), 7),

(48, 'aiden\_cox', 'password48', EMPTY\_BLOB(), 8),

(49, 'avery\_diaz', 'password49', EMPTY\_BLOB(), 9),

(50, 'zoey\_james', 'password50', EMPTY\_BLOB(), 10);

Inserting data into the Club Table:

INSERT INTO Club (clubID, clubName, category, clubDescription, eventIDset, adminID, feedbackIDset)

VALUES

(1, 'Chess Club', 'Hobby', 'A club for chess enthusiasts', 1, 1, 1),

(2, 'Debate Society', 'Academic', 'Engage in intellectual discussions and debates', 2, 2, 2),

(3, 'Photography Club', 'Arts', 'Capture moments through the lens', 3, 3, 3),

(4, 'Sports Club', 'Sports', 'Stay fit and competitive through various sports activities', 4, 4, 4),

(5, 'Music Band', 'Arts', 'Create melodies and harmonies together', 5, 5, 5),

(6, 'Coding Club', 'Technology', 'Learn and practice coding skills', 6, 6, 6),

(7, 'Environmental Club', 'Social', 'Work towards a greener and sustainable future', 7, 7, 7),

(8, 'Dance Team', 'Arts', 'Express yourself through dance', 8, 8, 8),

(9, 'Literature Society', 'Academic', 'Explore the world through literature', 9, 9, 9),

(10, 'Community Service Club', 'Social', 'Make a difference in the community', 10, 10, 10);

Inserting data into the Event Table:

INSERT INTO Event (eventID, eventName, date, time, location, eventDescription, clubID)

VALUES

(1, 'Chess Tournament', TO\_DATE('2024-04-10', 'YYYY-MM-DD'), TO\_TIMESTAMP('12:00:00', 'HH24:MI:SS'), 'Main Hall', 'Annual chess competition', 1),

(2, 'Debate Night', TO\_DATE('2024-04-15', 'YYYY-MM-DD'), TO\_TIMESTAMP('18:00:00', 'HH24:MI:SS'), 'Auditorium', 'Engaging debates on current affairs', 2),

(3, 'Photography Workshop', TO\_DATE('2024-04-20', 'YYYY-MM-DD'), TO\_TIMESTAMP('10:00:00', 'HH24:MI:SS'), 'Photography Studio', 'Learn photography techniques', 3),

(4, 'Basketball Match', TO\_DATE('2024-04-25', 'YYYY-MM-DD'), TO\_TIMESTAMP('14:00:00', 'HH24:MI:SS'), 'Outdoor Court', 'Inter-club basketball championship', 4),

(5, 'Concert Night', TO\_DATE('2024-04-30', 'YYYY-MM-DD'), TO\_TIMESTAMP('19:30:00', 'HH24:MI:SS'), 'Concert Hall', 'Performance by local bands', 5),

(6, 'Coding Bootcamp', TO\_DATE('2024-05-05', 'YYYY-MM-DD'), TO\_TIMESTAMP('09:00:00', 'HH24:MI:SS'), 'Computer Lab', 'Intensive coding sessions', 6),

(7, 'Environmental Cleanup', TO\_DATE('2024-05-10', 'YYYY-MM-DD'), TO\_TIMESTAMP('08:00:00', 'HH24:MI:SS'), 'Community Park', 'Cleaning up local parks', 7),

(8, 'Dance Competition', TO\_DATE('2024-05-15', 'YYYY-MM-DD'), TO\_TIMESTAMP('17:00:00', 'HH24:MI:SS'), 'Dance Studio', 'Inter-club dance showdown', 8),

(9, 'Book Reading', TO\_DATE('2024-05-20', 'YYYY-MM-DD'), TO\_TIMESTAMP('11:00:00', 'HH24:MI:SS'), 'Library', 'Reading session for literary enthusiasts', 9),

(10, 'Blood Donation Drive', TO\_DATE('2024-05-25', 'YYYY-MM-DD'), TO\_TIMESTAMP('09:00:00', 'HH24:MI:SS'), 'School Auditorium', 'Contribute to saving lives', 10),

(11, 'Chess Workshop', TO\_DATE('2024-06-01', 'YYYY-MM-DD'), TO\_TIMESTAMP('13:00:00', 'HH24:MI:SS'), 'Classroom 101', 'Learn chess strategies', 1),

(12, 'Debate Tournament', TO\_DATE('2024-06-05', 'YYYY-MM-DD'), TO\_TIMESTAMP('09:00:00', 'HH24:MI:SS'), 'Debate Hall', 'Inter-college debate competition', 2),

(13, 'Photography Exhibition', TO\_DATE('2024-06-10', 'YYYY-MM-DD'), TO\_TIMESTAMP('11:00:00', 'HH24:MI:SS'), 'Art Gallery', 'Display of student photography', 3),

(14, 'Football Match', TO\_DATE('2024-06-15', 'YYYY-MM-DD'), TO\_TIMESTAMP('16:00:00', 'HH24:MI:SS'), 'Football Ground', 'Inter-school football championship', 4),

(15, 'Music Concert', TO\_DATE('2024-06-20', 'YYYY-MM-DD'), TO\_TIMESTAMP('20:00:00', 'HH24:MI:SS'), 'Open Air Stadium', 'Live performance by renowned artists', 5),

(16, 'Hackathon', TO\_DATE('2024-06-25', 'YYYY-MM-DD'), TO\_TIMESTAMP('10:00:00', 'HH24:MI:SS'), 'IT Building', '24-hour coding marathon', 6),

(17, 'Tree Plantation Drive', TO\_DATE('2024-07-01', 'YYYY-MM-DD'), TO\_TIMESTAMP('08:30:00', 'HH24:MI:SS'), 'City Park', 'Promoting environmental sustainability', 7),

(18, 'Dance Workshop', TO\_DATE('2024-07-05', 'YYYY-MM-DD'), TO\_TIMESTAMP('14:00:00', 'HH24:MI:SS'), 'Dance Studio', 'Learn new dance styles', 8),

(19, 'Literary Quiz', TO\_DATE('2024-07-10', 'YYYY-MM-DD'), TO\_TIMESTAMP('12:00:00', 'HH24:MI:SS'), 'Auditorium', 'Test your knowledge of literature', 9),

(20, 'Community Cleanup', TO\_DATE('2024-07-15', 'YYYY-MM-DD'), TO\_TIMESTAMP('09:00:00', 'HH24:MI:SS'), 'Community Center', 'Cleaning up the neighborhood', 10),

(21, 'Chess Coaching Session', TO\_DATE('2024-07-20', 'YYYY-MM-DD'), TO\_TIMESTAMP('15:00:00', 'HH24:MI:SS'), 'Chess Club Room', 'Guidance for chess enthusiasts', 1),

(22, 'Debate Workshop', TO\_DATE('2024-07-25', 'YYYY-MM-DD'), TO\_TIMESTAMP('13:00:00', 'HH24:MI:SS'), 'Debate Hall', 'Improve debating skills', 2),

(23, 'Photography Contest', TO\_DATE('2024-08-01', 'YYYY-MM-DD'), TO\_TIMESTAMP('10:00:00', 'HH24:MI:SS'), 'Art Gallery', 'Showcase your photography talent', 3),

(24, 'Basketball Training', TO\_DATE('2024-08-05', 'YYYY-MM-DD'), TO\_TIMESTAMP('16:00:00', 'HH24:MI:SS'), 'Indoor Court', 'Skill enhancement for basketball players', 4),

(25, 'Music Workshop', TO\_DATE('2024-08-10', 'YYYY-MM-DD'), TO\_TIMESTAMP('18:00:00', 'HH24:MI:SS'), 'Music Room', 'Learn musical instruments', 5),

(26, 'Coding Competition', TO\_DATE('2024-08-15', 'YYYY-MM-DD'), TO\_TIMESTAMP('10:00:00', 'HH24:MI:SS'), 'Computer Lab', 'Test coding skills in a competitive environment', 6),

(27, 'Environmental Awareness Seminar', TO\_DATE('2024-08-20', 'YYYY-MM-DD'), TO\_TIMESTAMP('11:00:00', 'HH24:MI:SS'), 'Seminar Hall', 'Educating about environmental conservation', 7),

(28, 'Dance Showcase', TO\_DATE('2024-08-25', 'YYYY-MM-DD'), TO\_TIMESTAMP('19:00:00', 'HH24:MI:SS'), 'Dance Studio', 'Display of dance performances', 8),

(29, 'Literary Festival', TO\_DATE('2024-09-01', 'YYYY-MM-DD'), TO\_TIMESTAMP('12:00:00', 'HH24:MI:SS'), 'Library', 'Celebrating literature through various activities', 9),

(30, 'Blood Donation Camp', TO\_DATE('2024-09-05', 'YYYY-MM-DD'), TO\_TIMESTAMP('09:00:00', 'HH24:MI:SS'), 'Community Center', 'Contribute to the noble cause of blood donation', 10);

Inserting data into the Feedback Table

INSERT INTO Feedback (feedbackID, feedbackDesc, rate, clubID)

VALUES

(1, 'Great club activities!', 5, 1),

(2, 'Enjoyed the event very much.', 4, 2),

(3, 'Amazing photography workshop.', 5, 3),

(4, 'Basketball match was exciting.', 4, 4),

(5, 'Concert was fantastic!', 5, 5),

(6, 'Coding club is very informative.', 4, 6),

(7, 'Appreciate the environmental cleanup effort.', 5, 7),

(8, 'Dance showcase was impressive.', 4, 8),

(9, 'Book reading session was enlightening.', 5, 9),

(10, 'Blood donation camp was well-organized.', 4, 10),

(11, 'Chess tournament was challenging.', 5, 1),

(12, 'Debate night sparked interesting discussions.', 4, 2),

(13, 'Photography workshop helped improve skills.', 5, 3),

(14, 'Football match was intense.', 4, 4),

(15, 'Music concert had great performances.', 5, 5),

(16, 'Hackathon was a learning experience.', 4, 6),

(17, 'Tree plantation drive was meaningful.', 5, 7),

(18, 'Dance workshop was fun.', 4, 8),

(19, 'Literary quiz was challenging.', 5, 9),

(20, 'Community cleanup was fulfilling.', 4, 10),

(21, 'Chess coaching session was helpful.', 5, 1),

(22, 'Debate workshop improved my debating skills.', 4, 2),

(23, 'Photography contest was competitive.', 5, 3),

(24, 'Basketball training helped improve techniques.', 4, 4),

(25, 'Music workshop was enjoyable.', 5, 5),

(26, 'Coding competition was tough but rewarding.', 4, 6),

(27, 'Environmental awareness seminar was informative.', 5, 7),

(28, 'Dance showcase had great performances.', 4, 8),

(29, 'Literary festival celebrated literature well.', 5, 9),

(30, 'Blood donation camp was a noble cause.', 4, 10),

(31, 'Great club activities!', 5, 1),

(32, 'Enjoyed the event very much.', 4, 2),

(33, 'Amazing photography workshop.', 5, 3),

(34, 'Basketball match was exciting.', 4, 4),

(35, 'Concert was fantastic!', 5, 5),

(36, 'Coding club is very informative.', 4, 6),

(37, 'Appreciate the environmental cleanup effort.', 5, 7),

(38, 'Dance showcase was impressive.', 4, 8),

(39, 'Book reading session was enlightening.', 5, 9),

(40, 'Blood donation camp was well-organized.', 4, 10),

(41, 'Chess tournament was challenging.', 5, 1),

(42, 'Debate night sparked interesting discussions.', 4, 2),

(43, 'Photography workshop helped improve skills.', 5, 3),

(44, 'Football match was intense.', 4, 4),

(45, 'Music concert had great performances.', 5, 5),

(46, 'Hackathon was a learning experience.', 4, 6),

(47, 'Tree plantation drive was meaningful.', 5, 7),

(48, 'Dance workshop was fun.', 4, 8),

(49, 'Literary quiz was challenging.', 5, 9),

(50, 'Community cleanup was fulfilling.', 4, 10);

Inserting data into the Admin Table:

INSERT INTO Admin (adminID, adminUserName, adminPassword, clubID)

VALUES

(1, 'admin1', 'password1', 1),

(2, 'admin2', 'password2', 2),

(3, 'admin3', 'password3', 3),

(4, 'admin4', 'password4', 4),

(5, 'admin5', 'password5', 5),

(6, 'admin6', 'password6', 6),

(7, 'admin7', 'password7', 7),

(8, 'admin8', 'password8', 8),

(9, 'admin9', 'password9', 9),

(10, 'admin10', 'password10', 10);

# Work Breakdown Structure (WBS)

## Work Breakdown Structure

A diagram of a company

Description automatically generated

## Milestones and Acceptance Criteria

Milestones:

Milestone 1: Setup Project, Setup Database and Basic UI

- Set up Next.js project structure, create database on MongoDB and populate it with mock data and initialize a Git repository.  
- Implement basic UI components for the Welcome page, including the sign-in/register button and navigation bar.  
- Address any issues discovered during testing and deploy the application to a hosting platform.

Milestone 2: User Authentication and Welcome Page Functionality

- Develop user authentication system using Next.js authentication libraries or custom implementation.  
- Create functionality for the sign-in/register dropdown menu and integrate it with the authentication system.  
- Implement upcoming events module on the welcome page, fetching data from MongoDB and displaying event details.  
- Address any issues discovered during testing and re-deploy the application to a hosting platform.

Milestone 3: Student Home Page

- Design and implement the student home page layout with the upcoming events module and user clubs module.  
- Ensure seamless navigation through the navigation bar using Next.js routing.  
- Address any issues discovered during testing and re-deploy the application to a hosting platform.

Milestone 4: Admin Home Page and Basic Admin Functionality

- Develop admin home page layout with club details management, events management, and reviews/ratings sections.  
- Implement basic admin functionalities such as viewing club details, adding/deleting events, and viewing reviews/ratings.  
- Address any issues discovered during testing and re-deploy the application to a hosting platform.

Milestone 5: Club Browsing Page and Club Details Page

- Create club browsing page displaying a list of available clubs with sorting options and a search bar, fetching data from MongoDB.  
- Design club details page showcasing detailed information about a specific club, including events and interaction options.  
- Address any issues discovered during testing and re-deploy the application to a hosting platform.

Milestone 6: Event Browsing Page, Replacing mock data with real data and Final Testing

- Implement event browsing page showing upcoming events with the option to add them to Google Calendar.  
- Replace mock data with real data.  
- Conduct thorough testing of the entire application, including functionality, performance, and security.  
- Address any issues discovered during testing and re-deploy the application to a hosting platform.

Acceptance Criteria:

Milestone 1: Setup and Basic UI

Acceptance Criteria:  
- Git repository created and shared among team members.  
- Basic Next.js project structure and database with mock data set up and running.  
- Welcome page UI implemented with the sign-in/register button and navigation bar.

Milestone 2: User Authentication and Welcome Page Functionality

Acceptance Criteria:  
- User authentication system implemented with secure sign-in and registration functionality.  
- Dropdown menu for sign-in/register working correctly.  
- Upcoming events module integrated on the welcome page, displaying event details fetched from MongoDB.

Milestone 3: Student Home Page

Acceptance Criteria:  
- Student home page layout designed and implemented with the upcoming events module and user clubs module.  
- Navigation bar functioning properly, allowing seamless navigation between pages.

Milestone 4: Admin Home Page and Basic Admin Functionality

Acceptance Criteria:  
- Admin home page layout created with sections for club details management, events management, and reviews/ratings.  
- Basic admin functionalities implemented, including viewing club details, adding/deleting events, and viewing reviews/ratings.

Milestone 5: Club Browsing Page and Club Details Page

Acceptance Criteria:  
- Club browsing page displaying a list of clubs with sorting options and a search bar.  
- Club details page showing detailed information about a specific club, including events and interaction options, fetched from MongoDB.

Milestone 6: Event Browsing Page and Final Testing

Acceptance Criteria:  
- Event browsing page showing upcoming events with the option to add them to Google Calendar.  
- Thorough testing conducted, covering functionality, performance, and security aspects of the application.  
- Ensure seamless integration with the database once it's ready, replacing mock data with real data.  
- All identified issues addressed and resolved.  
- Application deployed to a hosting platform and accessible for users.

# Implementation Schedule

Link to Sprint Schedule : [Github](https://github.com/SENECA-PRJ566-NBB/ClubHub/milestones?direction=asc&sort=title&state=open)

# Client / Faculty Sign-off

**Date: \_\_14th April, 2024\_\_**

Nishit

Yuvraj

Priyansh

Yash.

Name of Client/Rep/Professor