

DBMS MINI PROJECT REPORT

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Section: L

PROJECT TITLE : Club Management System

Description

The Club Management System is a comprehensive solution designed to streamline and enhance the management of clubs within an organization or institution. This system provides a centralized platform for creating, organizing, and overseeing various club-related activities. Key features include user authentication, club creation and management, event coordination, and dynamic member interaction.

List of Softwares/Tools/Programming languages

1. Programming Languages:

i) General-Purpose Languages:

- JavaScript

2. Web Development:

i) HTML

ii) CSS

iii) JavaScript

3. Version Control Hosting Platforms:

i) GitHub

4. Web Development Frameworks:

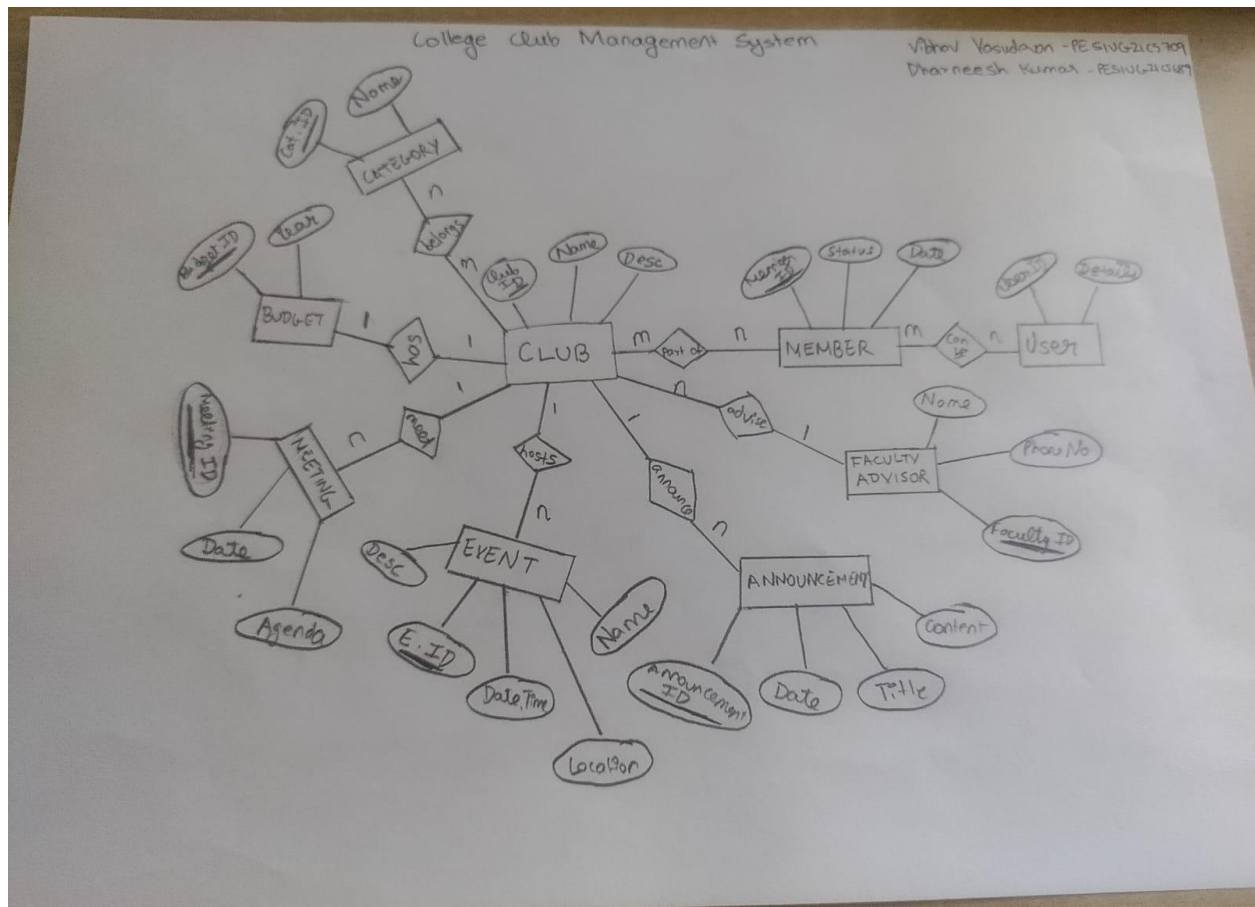
i) Front-End Frameworks:

- React.js

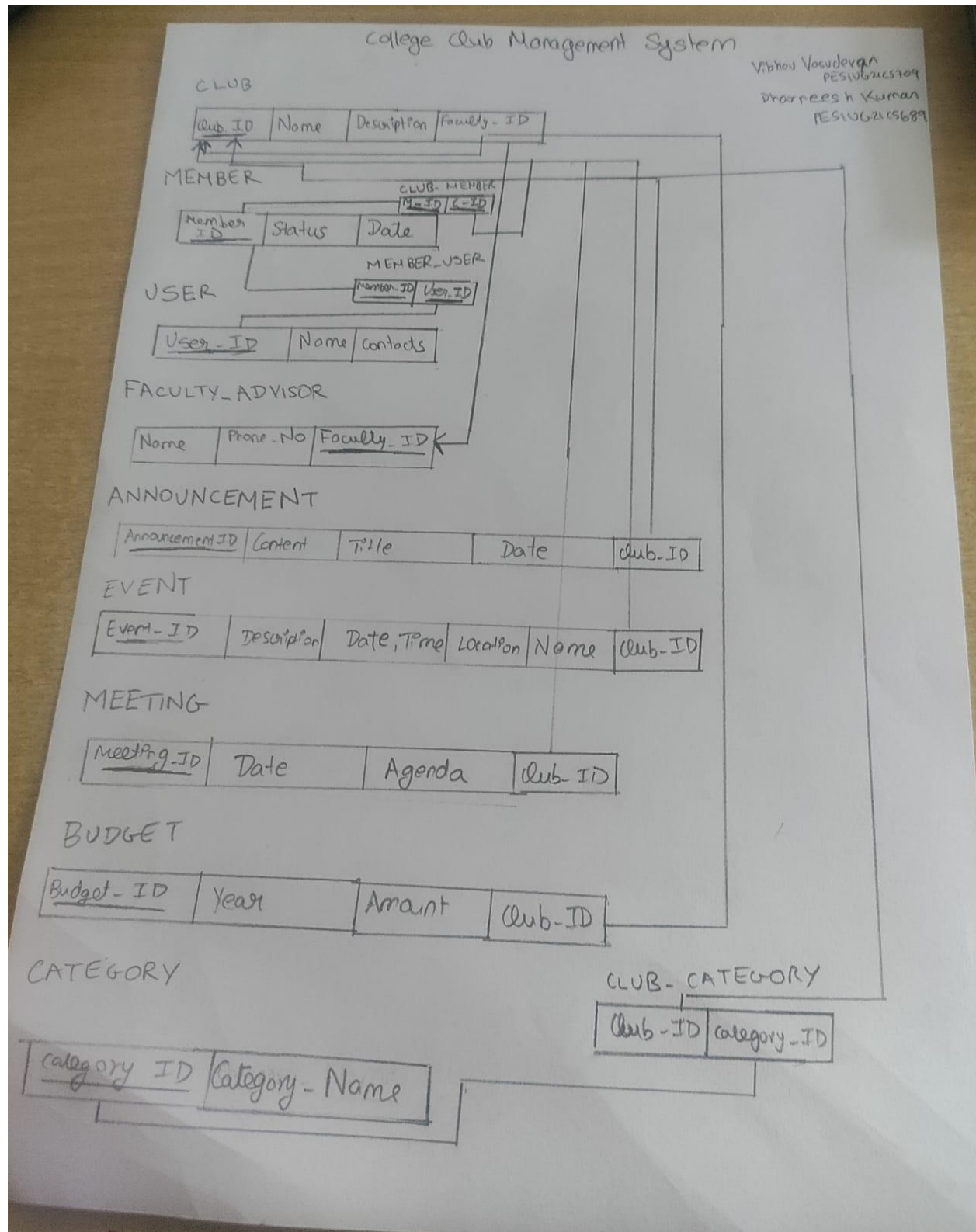
ii) Back-End Frameworks:

- Express.js (Node.js)

ER DIAGRAM



RELATIONAL SCHEMA



DDL SQL Commands

CREATE:

```
create table Club (ClubID int primary key, ClubName varchar(50),  
Description varchar(50), Advisor varchar(50));
```

```
create table announcement(Announcement_ID int,Content  
varchar(50),Title varchar(50),Date date);
```

```
create table budget(Budget_ID int primary key,year year,Amount  
mediumtext);
```

```
create TABLE club_category(Club_ID int, Category_ID int, primary  
key(Club_ID, Category_ID));
```

```
create table CLUB_MEMBER(club_id int, member_id int, primary  
key(club_id, member_id));
```

```
create table event(Event_ID int primary key,Description  
varchar(50),Location varchar(50),Date_Time datetime,Title  
varchar(50));
```

```
create table faculty_advisor(Name varchar(50),Phone_number  
mediumtext,Faculty_ID int primary key);
```

```
create table meetings(Meeting_ID int primary key,Date_Time
datetime,Agenda varchar(50));
```

```
create table users(Email varchar(50),Password
varchar(50),user_id int);
```

ALTER:

```
alter table Club add column Faculty_ID int;
```

```
alter table Club add constraint Fk1 foreign key CLub(Faculty_ID)
references FACULTY_ADVISOR(Faculty_ID);
```

```
alter table ANNOUNCEMENT add column Club_id int;
```

```
alter table ANNOUNCEMENT add foreign key
ANNOUNCEMENT(Club_id) references CLUB(Clubid);
```

```
alter table Event add column Club_id int;
```

```
alter table Event add foreign key Event(Club_id) references
CLUB(Clubid);
```

```
alter table Meeting add column Club_id int;
```

```
alter table Meeting add foreign key Meeting(Club_id) references  
CLUB(Clubid);
```

```
alter table Budget add column Club_id int;
```

```
alter table Budget add foreign key Budget(Club_id) references  
CLUB(Clubid);
```

```
alter table club_category add foreign key club_category(club_id)  
references CLub(clubid);
```

```
alter table club_category add foreign key  
club_category(category_id) references Category(category_id);
```

```
alter table CLUB_MEMBER add foreign key club_member(club_id)  
references club(clubid);
```

```
alter table CLUB_MEMBER add foreign key  
club_member(member_id) references member(member_id);
```

INSERT:

```
INSERT INTO `club_management`.`event` (`Event_ID`,  
`Description`, `Location`, `Date_Time`, `Title`, `Club_id`) VALUES  
('2', 'RoadShow', 'PESU52', '2023-11-20 20:30:30', 'Roadshow', '2');
```

```
INSERT INTO `club_management`.`event` (`Event_ID`,  
`Description`, `Location`, `Date_Time`, `Title`, `Club_id`) VALUES  
('3', 'HashCode', 'MRD', '2023-11-21 20:00:00', 'HashCode', '2');
```

```
INSERT INTO `club_management`.`event` (`Event_ID`,  
`Description`, `Location`, `Date_Time`, `Title`, `Club_id`) VALUES  
('4', 'Robot-Wars', 'GJB', '2023-11-25 10:00:00', 'RW', '3');
```

```
INSERT INTO `club_management`.`event` (`Event_ID`,  
`Description`, `Location`, `Date_Time`, `Title`, `Club_id`) VALUES  
('5', 'Apple-Develop', 'PESU52', '2023-11-28 11:00:00', 'Developing',  
'3');
```

```
update event set CLub_ID = 1 where Title = 'Hallothon';
```

```
INSERT INTO `club_management`.`announcement`  
(`Announcement_ID`, `Content`, `Title`, `Date`, `Club_id`) VALUES  
('1', 'Join us for a seminar on ML', 'ML Seminar', '2023-11-23', '2');
```

```
INSERT INTO `club_management`.`announcement`  
(`Announcement_ID`, `Content`, `Title`, `Date`, `Club_id`) VALUES  
('2', 'Fashion Show', 'Fashion Show', '2023-11-24', '1');
```

```
INSERT INTO `club_management`.`announcement`  
(`Announcement_ID`, `Content`, `Title`, `Date`, `Club_id`) VALUES  
('3', 'PIL are Recruiting', 'PIL RAECRUITMENTS', '2023-11-30', '2');
```

```
INSERT INTO `club_management`.`announcement`  
(`Announcement_ID`, `Content`, `Title`, `Date`, `Club_id`) VALUES  
('4', 'ADG is recruiting!', 'ADG recruitments', '2023-11-28', '3');
```



```
INSERT INTO `club_management`.`category` (`Category_ID`,  
`Category_Name`) VALUES ('1', 'Technical');
```

```
INSERT INTO `club_management`.`category` (`Category_ID`,  
`Category_Name`) VALUES ('2', 'Cultural');
```

```
INSERT INTO `club_management`.`category` (`Category_ID`,  
`Category_Name`) VALUES ('3', 'RND');
```

```
INSERT INTO `club_management`.`category` (`Category_ID`,  
`Category_Name`) VALUES ('4', 'Music');
```

```
INSERT INTO `club_management`.`club` (`ClubID`, `ClubName`,  
`Description`, `Advisor`) VALUES ('4', 'Trance', 'Dance', 'Mr D');
```

```
INSERT INTO `club_management`.`club` (`ClubID`, `ClubName`,  
`Description`, `Advisor`) VALUES ('5', 'Ecell', 'Entrepreneurship', 'Mr  
E');
```

```
INSERT INTO `club_management`.`club` (`ClubID`, `ClubName`,  
`Description`, `Advisor`) VALUES ('1', 'Aatmatrisha', 'Feast  
commitee', 'Mr A');
```

```
INSERT INTO `club_management`.`club` (`ClubID`, `ClubName`,  
`Description`, `Advisor`) VALUES ('2', 'PES Innovation Lab',  
'Reasearch', 'Mr B');
```

```
INSERT INTO `club_management`.`club` (`ClubID`, `ClubName`,  
`Description`, `Advisor`) VALUES ('3', 'ADG', 'Development', 'Mr C');
```

```
INSERT INTO `club_management`.`faculty_advisor` (`Name`,  
`Phone_Number`, `Faculty_ID`) VALUES ('Mr A', '1111111111', '1');
```

```
INSERT INTO `club_management`.`faculty_advisor` (`Name`,  
`Phone_Number`, `Faculty_ID`) VALUES ('Mr B', '2222222222', '2');
```

```
INSERT INTO `club_management`.`faculty_advisor` (`Name`,  
`Phone_Number`, `Faculty_ID`) VALUES ('Mr C', '3333333333', '3');
```

```
UPDATE `club_management`.`club` SET `Faculty_ID` = '1' WHERE  
(`ClubID` = '1');
```

```
UPDATE `club_management`.`club` SET `Faculty_ID` = '2' WHERE  
(`ClubID` = '2');
```

```
UPDATE `club_management`.`club` SET `Faculty_ID` = '2' WHERE  
(`ClubID` = '3');
```

```
UPDATE `club_management`.`club` SET `Faculty_ID` = '3' WHERE  
(`ClubID` = '4');
```

```
UPDATE `club_management`.`club` SET `Faculty_ID` = '1' WHERE  
(`ClubID` = '5');
```

```
INSERT INTO `club_management`.`budget` (`Budget_id`, `year`,  
`Amount`, `Club_id`) VALUES ('1', 2023, '20000', '1');
```

```
INSERT INTO `club_management`.`budget` (`Budget_id`, `year`,  
`Amount`, `Club_id`) VALUES ('4', 2023, '30000', '2');
```

```
INSERT INTO `club_management`.`budget` (`Budget_id`, `year`,  
`Amount`, `Club_id`) VALUES ('4', 2023, '15000', '3');
```

```
INSERT INTO `club_management`.`budget` (`Budget_id`, `year`,  
`Amount`, `Club_id`) VALUES ('4', 2023, '27000', '4');
```

```
INSERT INTO `club_management`.`club_category` (`Club_ID`,  
`Category_ID`) VALUES ('1', '1');
```

```
INSERT INTO `club_management`.`club_category` (`Club_ID`,  
`Category_ID`) VALUES ('1', '2');
```

```
INSERT INTO `club_management`.`club_category` (`Club_ID`,  
`Category_ID`) VALUES ('2', '1');
```

```
INSERT INTO `club_management`.`club_category` (`Club_ID`,  
`Category_ID`) VALUES ('2', '3');
```

```
INSERT INTO `club_management`.`club_category` (`Club_ID`,  
`Category_ID`) VALUES ('3', '3');
```

```
INSERT INTO `club_management`.`meeting` (`Meeting_ID`,  
`Date_Time`, `Agenda`, `Club_id`) VALUES ('1', ' 2023-11-22  
21:30:00', 'RnD Discussion', '2');
```

```
INSERT INTO `club_management`.`meeting` (`Meeting_ID`,  
`Date_Time`, `Agenda`, `Club_id`) VALUES ('2', ' 2023-11-29  
19:00:00', 'Fest Discussion', '1');
```

```
INSERT INTO `club_management`.`meeting` (`Meeting_ID`,  
`Date_Time`, `Agenda`, `Club_id`) VALUES ('3', ' 2023-11-20  
18:00:00', 'Robotics Discussion', '2');
```

```
INSERT INTO `club_management`.`meeting` (`Meeting_ID`,  
`Date_Time`, `Agenda`, `Club_id`) VALUES ('4', ' 2023-11-25  
22:00:00', 'Apple Devs Meeting', '3');
```

```
INSERT INTO `club_management`.`users` (`Email`,`Password`)
VALUES ('ram@gmail.com','123');
```

```
INSERT INTO `club_management`.`users` (`Email`,`Password`)
VALUES ('joe@gmail.com','123');
```

```
INSERT INTO `club_management`.`users` (`Email`,`Password`)
VALUES ('jay@gmail.com','123');
```

```
INSERT INTO `club_management`.`users` (`Email`,`Password`)
VALUES ('vish@gmail.com','12345');
```

```
INSERT INTO `club_management`.`users` (`Email`,`Password`)
VALUES ('bob@gmail.com','abc');
```

```
INSERT INTO `club_management`.`member` (`Member_ID`,`Role`)
VALUES ('1','Head');
```

```
INSERT INTO `club_management`.`member` (`Member_ID`,`Role`)
VALUES ('2','Web Developer');
```

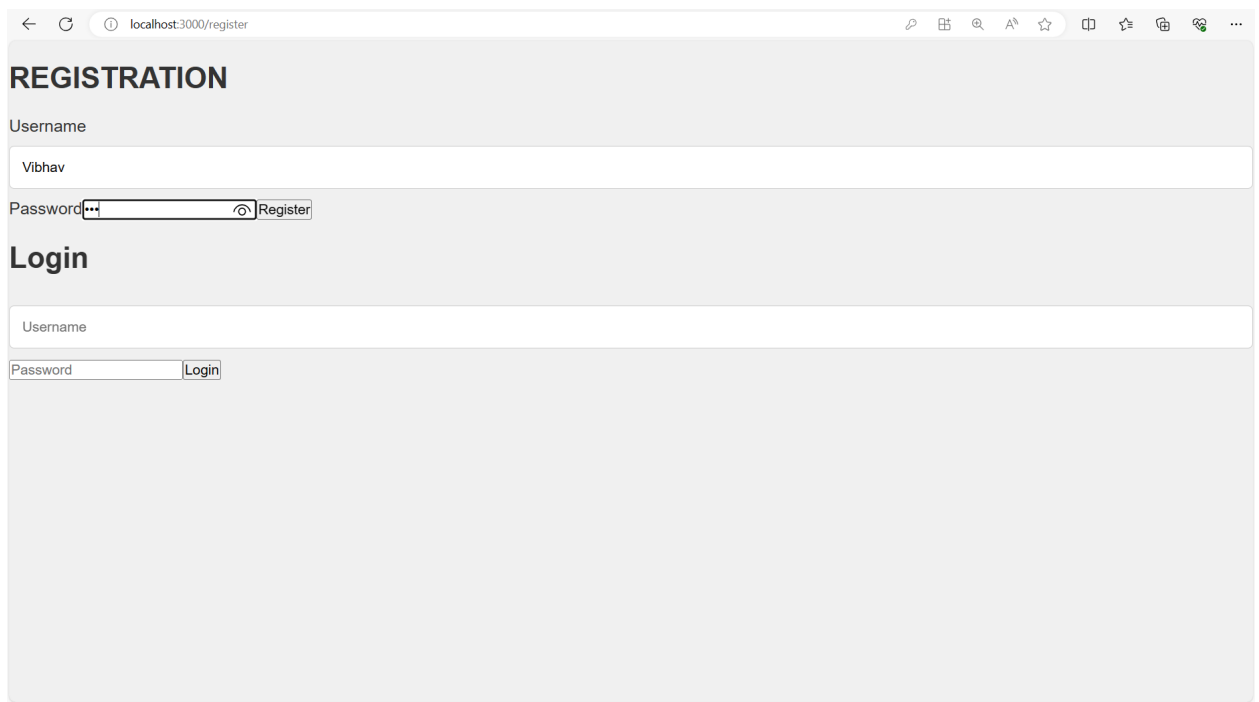
```
INSERT INTO `club_management`.`member` (`Member_ID`,`Role`)
VALUES ('3','Logistic');
```

```
INSERT INTO `club_management`.`member` (`Member_ID`,`Role`)
VALUES ('4','Operations');
```

```
INSERT INTO `club_management`.`member` (`Member_ID`,`Role`)
VALUES ('5','Events');
```

CRUD Operations and List of Functionalities of the project with its associated screenshots from front end

Registration/Login Page



← localhost:3000/register

REGISTRATION

Username

Vibhav

Password

Login

Username

Password

Club registration page - Here the user can enter the clubs they are part of so they received personalized information only for these clubs

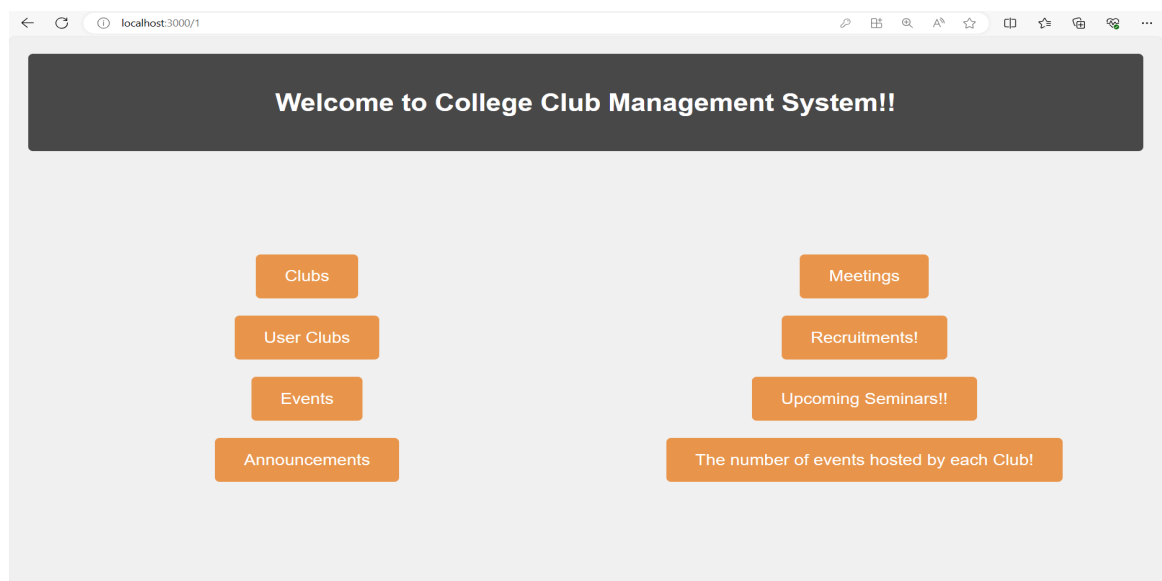
Club Registration

Enter the clubs you are part of (comma-separated):

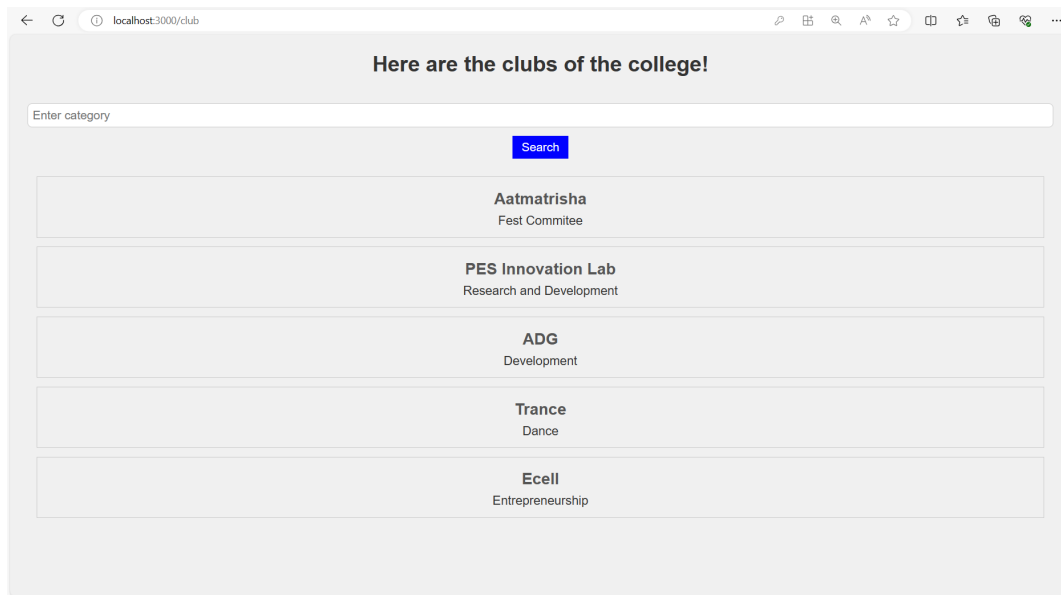
ADG,Trance

Register Clubs

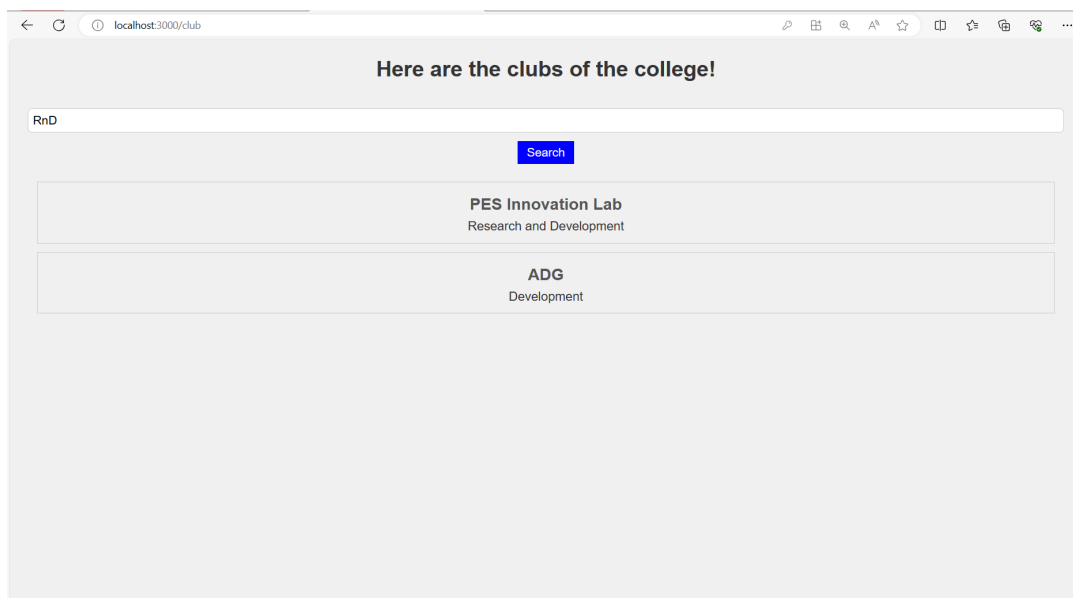
Home page - This page has all the buttons which route to their respective functionalities. Also, as you can see in the URL, the userId is stored so the user only receives the information they have access to and not all the information available.



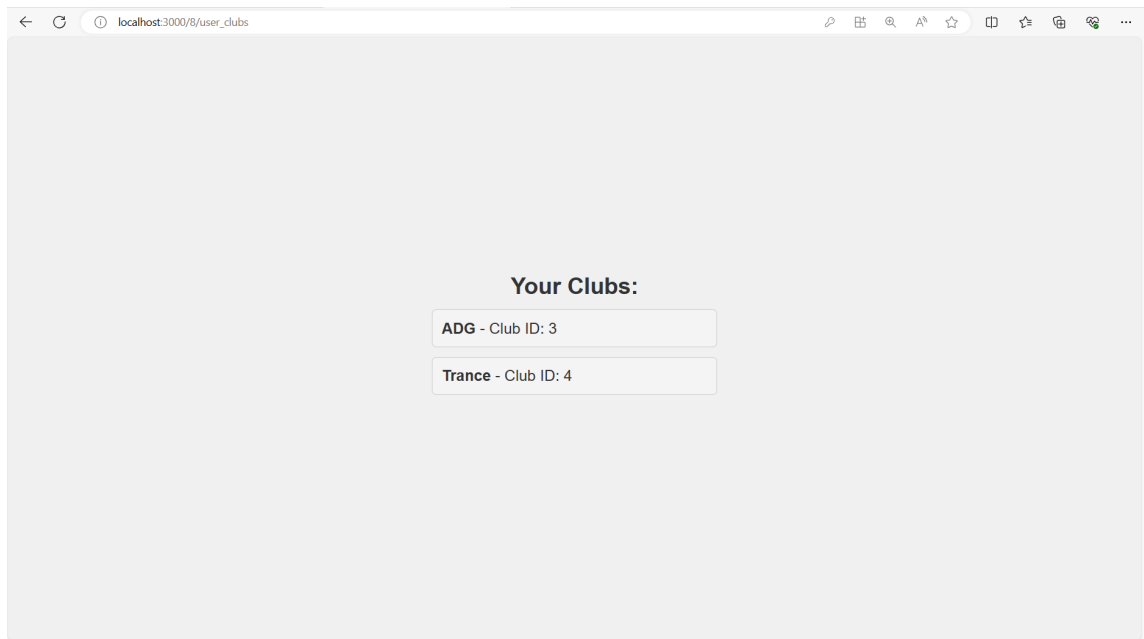
Clubs - When this button is clicked, you can view all the clubs that are present in the college. In addition to this, the clubs can be filtered based on the category provided. This operation was done using an inner join query.



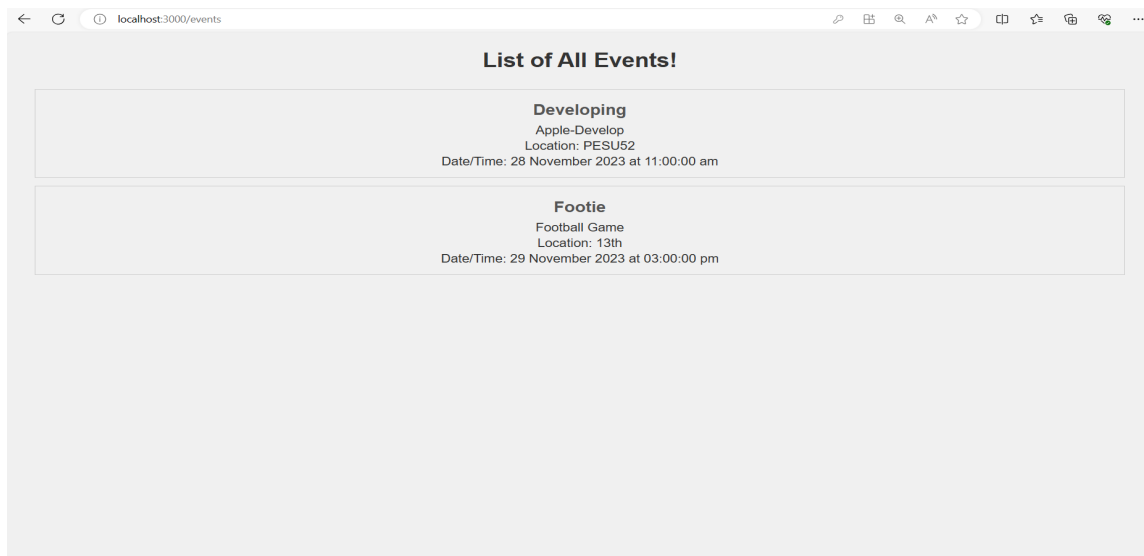
When the clubs are filtered, with category - 'RnD':



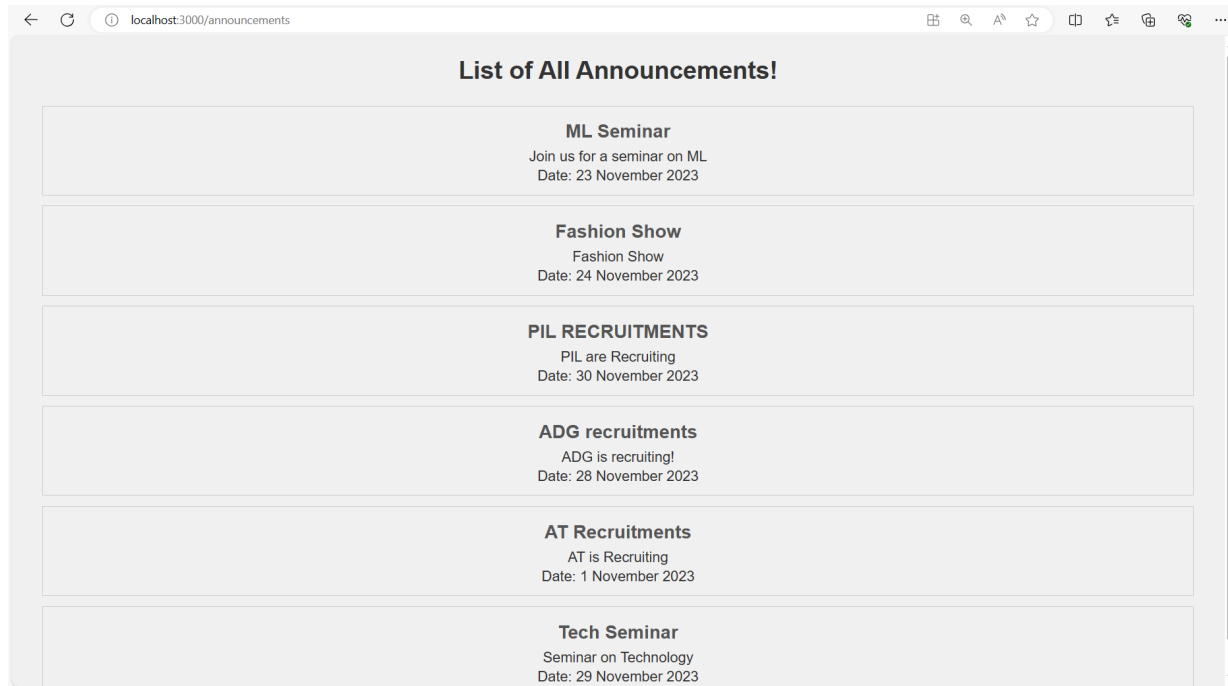
User-Clubs - The user can view which all clubs they are part of along with their Club ID.



Events - The user can view the list of all events that are upcoming. We have used the curtime() function in order to only retrieve the events after the present moment.

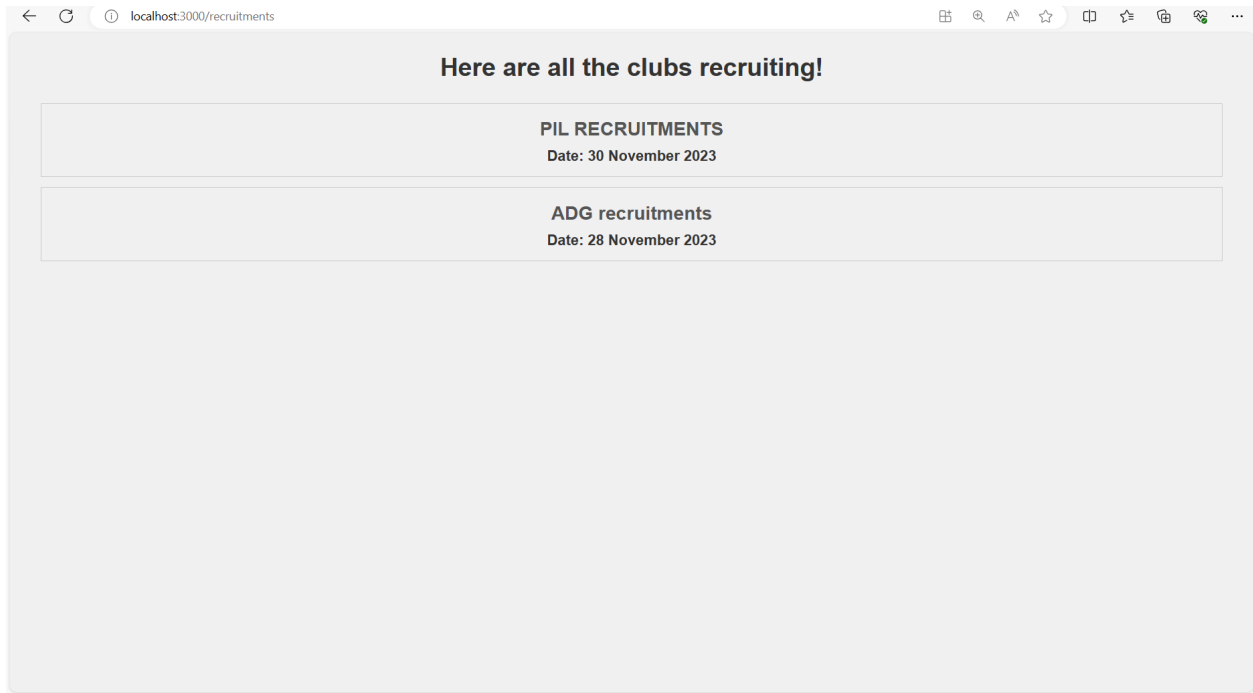


Announcements - The user can view all the announcements that have been made.

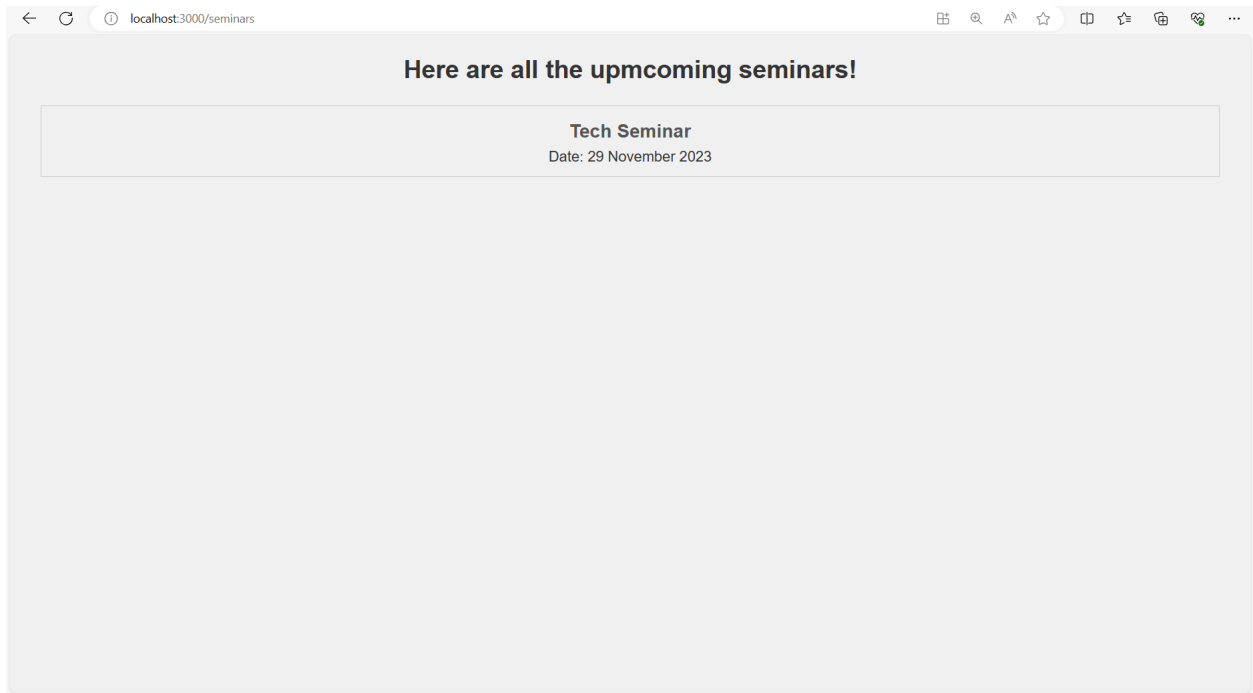


Recruitments and Seminars - The user can view all the recruitments made by clubs and also the upcoming seminars. We have done this using a function to retrieve only those announcements that satisfy the criterion provided in the function.

Recruitments:



Seminars:



Meetings:

The user will be able to view all the meetings of the clubs he/she belongs to only. The user will also have the option to create new meetings, update existing meetings and also delete meetings for the clubs they belong to.

Initial page when Meetings button is clicked on the home page:

The screenshot shows a web browser window with the address bar displaying 'localhost:3000/8/meetings'. The page title is 'User Meetings'. It contains two existing meeting entries, each with an agenda, a date-time, and 'Update' and 'Delete' buttons. Below these is a form to create a new meeting, consisting of an 'Agenda:' label, an input field, a 'Date_Time:' label, a date-time picker, and a 'Create Meeting' button.

User Meetings

Agenda: Apple Devs Meeting
Date_Time: 25/11/2023, 10:00:00 pm
[Update](#) [Delete](#)

Agenda: New Meeting
Date_Time: 25/11/2023, 5:00:00 pm
[Update](#) [Delete](#)

Agenda:

Date_Time:

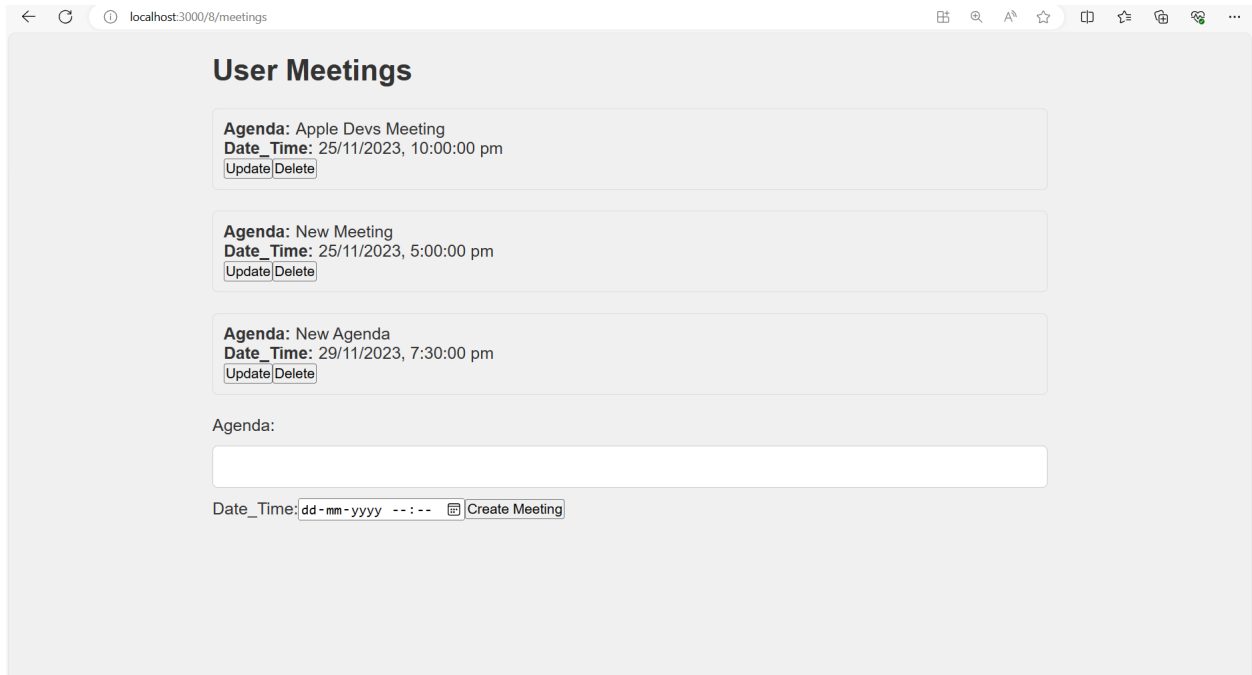
Creating a new meeting:

The screenshot shows the 'Creating a new meeting' form. It includes an 'Agenda:' label, an input field with the text 'New Agenda', a 'Date_Time:' label, a date-time picker showing '29-11-2023 19:30', and a 'Create Meeting' button.

Agenda:

Date_Time:

After creation of new meeting:



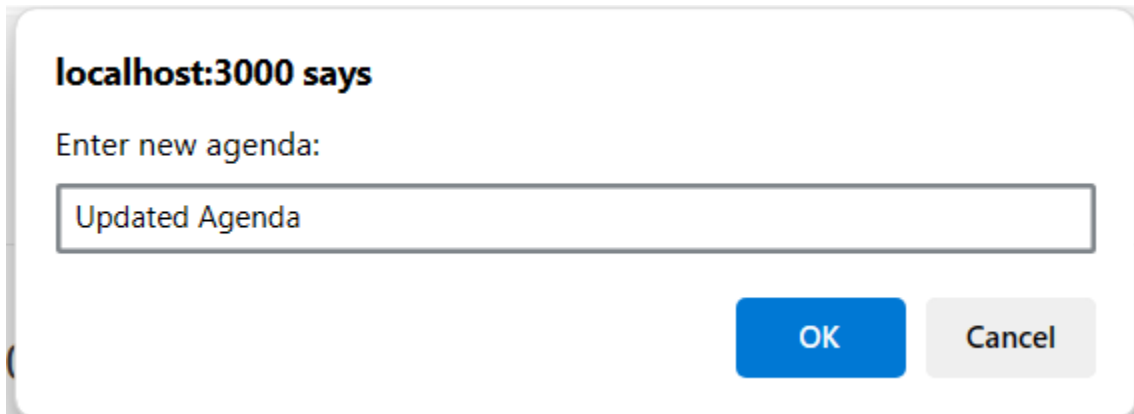
The screenshot shows a web browser window with the address bar displaying 'localhost:3000/8/meetings'. The page title is 'User Meetings'. It contains a list of three meetings, each with an agenda, date, time, and 'Update' and 'Delete' buttons. Below the list is a form to create a new meeting, including a text input for the agenda, a date-time input, and a 'Create Meeting' button.

Agenda	Date_Time	Update	Delete
Apple Devs Meeting	25/11/2023, 10:00:00 pm	Update	Delete
New Meeting	25/11/2023, 5:00:00 pm	Update	Delete
New Agenda	29/11/2023, 7:30:00 pm	Update	Delete

Agenda:

Date_Time:

Updating meeting:



The screenshot shows a dialog box with the title 'localhost:3000 says'. It contains a text input field with the value 'Updated Agenda' and two buttons: 'OK' and 'Cancel'.

localhost:3000 says

Enter new agenda:

OK Cancel

localhost:3000 says
Enter new Date_Time:

OK

Cancel

After the meeting has been updated:

← ↻ ⓘ localhost:3000/8/meetings

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User Meetings

Agenda: Apple Devs Meeting
Date_Time: 25/11/2023, 10:00:00 pm

Update>Delete

Agenda: New Meeting
Date_Time: 25/11/2023, 5:00:00 pm

Update>Delete

Agenda: Updated Agenda
Date_Time: 29/11/2023, 8:00:00 pm

Update>Delete

Agenda:

Date_Time:

Create Meeting

Deleting a meeting:

← localhost:3000/8/meetings

User Meetings

Agenda: Apple Devs Meeting
Date_Time: 25/11/2023, 10:00:00 pm
[Update](#) [Delete](#)

Agenda: New Meeting
Date_Time: 25/11/2023, 5:00:00 pm
[Update](#) [Delete](#)

Agenda:

Date_Time: [Create Meeting](#)

Viewing number of events hosted by each club - The user can view the number of events each club has hosted. We have used a nested query for this purpose.

← localhost:3000/club_events_count

Number of Events Hosted by Each Club

Club ID	Club Name	Event Count
1	Aatmatrishha	3
2	PES Innovation Lab	3
3	ADG	3
4	Trance	0
5	Ecell	0

NESTED QUERY:

```
SELECT * FROM meetings WHERE Club_ID IN (SELECT ClubID FROM
Club_User WHERE User_ID = ?)
```

```
SELECT club.clubid, club.ClubName, (
    SELECT COUNT(*) FROM event WHERE event.club_id = club.clubid
) AS event_count
FROM club
```

UPDATE QUERY:

```
UPDATE meetings SET Agenda = ?, Date_Time = ? WHERE Meeting_ID = ?
AND Club_ID IN (SELECT ClubID FROM Club_User WHERE User_ID = ?)
```

DELETE QUERY:

```
DELETE FROM meetings WHERE Meeting_ID = ? AND Club_ID IN (SELECT
ClubID FROM Club_User WHERE User_ID = ?)
```

JOIN:

```
SELECT club.*
FROM club
    INNER JOIN club_category ON club.clubid = club_category.Club_id
    INNER JOIN category ON club_category.category_id =
category.category_id
WHERE category.category_name = ?;
```

TRIGGER DEFINITION:

```
CREATE TRIGGER increment_user_id BEFORE INSERT ON users
FOR EACH ROW
SET NEW.user_id = IFNULL((SELECT MAX(user_id) FROM users),0)+1;
```

AGGREGATE QUERY:

```
SELECT club.clubid, club.ClubName, (
```

```
SELECT COUNT(*) FROM event WHERE event.club_id = club.clubid  
) AS event_count  
FROM club;
```

```
CREATE TRIGGER increment_user_id BEFORE INSERT ON users  
FOR EACH ROW  
SET NEW.user_id = IFNULL((SELECT MAX(user_id) FROM users),0)+1;
```

PROCEDURE DEFINITION:

Procedure 1:

GetUserClubs - To retrieve the clubs the user belongs to

```
PROCEDURE `GetUserClubs`(IN userId INT)  
BEGIN  
    SELECT club.clubid, club.ClubName  
    FROM club  
    INNER JOIN Club_User ON club.clubid = Club_User.ClubID  
    WHERE Club_User.User_ID = userId;  
END
```

Procedure 2:

SelectAnnouncementsWithSearchTerm - Retrieving specific announcements according to a search term

```
PROCEDURE `SelectAnnouncementsWithSearchTerm`(IN search_term  
VARCHAR(255))
```



```
BEGIN
    SET @query = CONCAT('SELECT * FROM ANNOUNCEMENT WHERE
CONTENT LIKE "%', search_term, '%" AND DATE > CURDATE();');
    PREPARE stmt FROM @query;
    EXECUTE stmt;
    DEALLOCATE PREPARE stmt;
END
```