

DBMS MINI-PROJECT REPORT

TOPIC: FANTASY CRICKET

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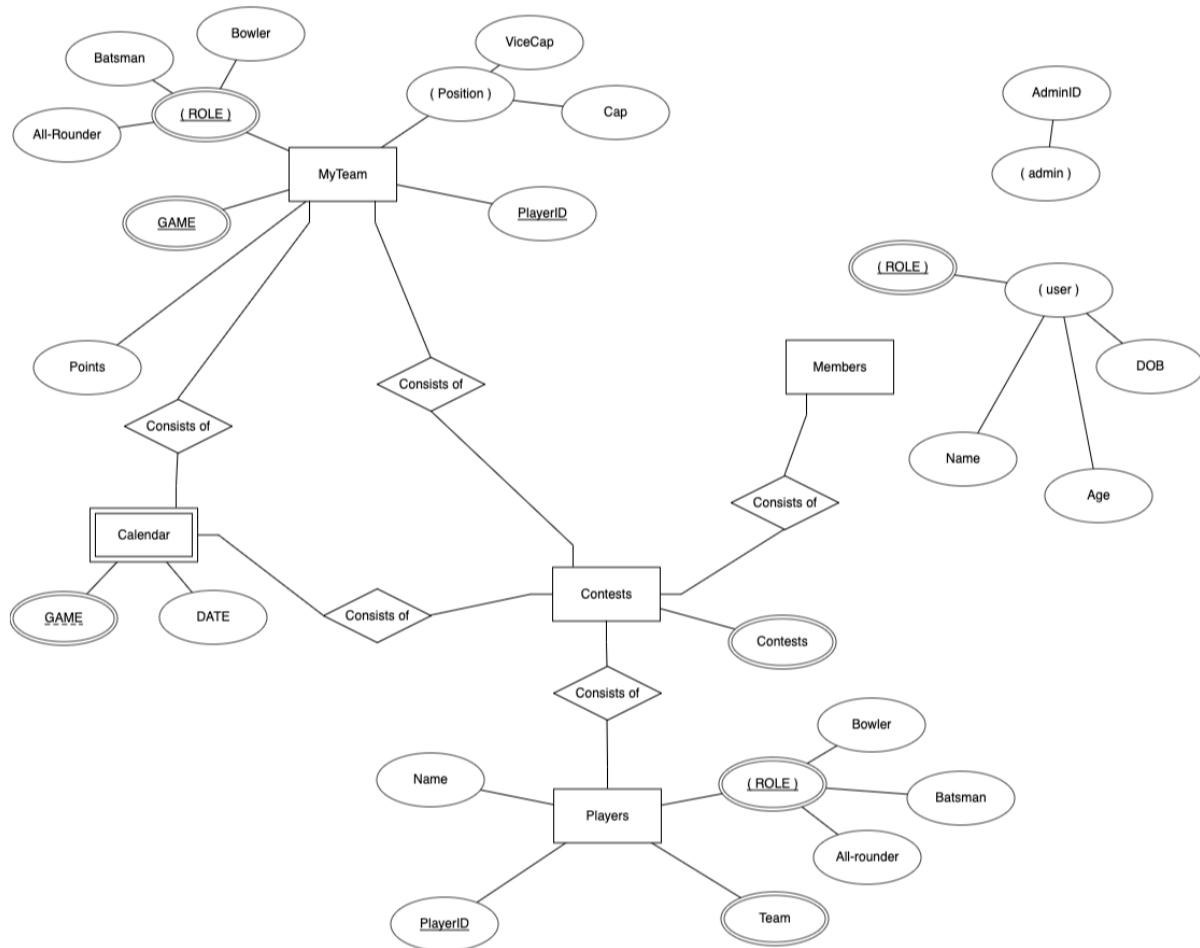
ABSTRACT:

The Fantasy Cricket Database Management System (FCDBMS) is an exciting platform tailored for fantasy cricket enthusiasts seeking a more enriched gaming experience. What sets it apart is its commitment to simplicity and user-friendly interactions, providing an accessible yet sophisticated environment. At its core, FCDBMS boasts a robust and scalable database structure proficiently handling extensive player statistics, match data, and user profiles. Navigating through the system is an easy task and can compete with your friends and peers, ensuring users can effortlessly create, personalize, and manage their fantasy teams, complete with unique team names and favorite player selections.

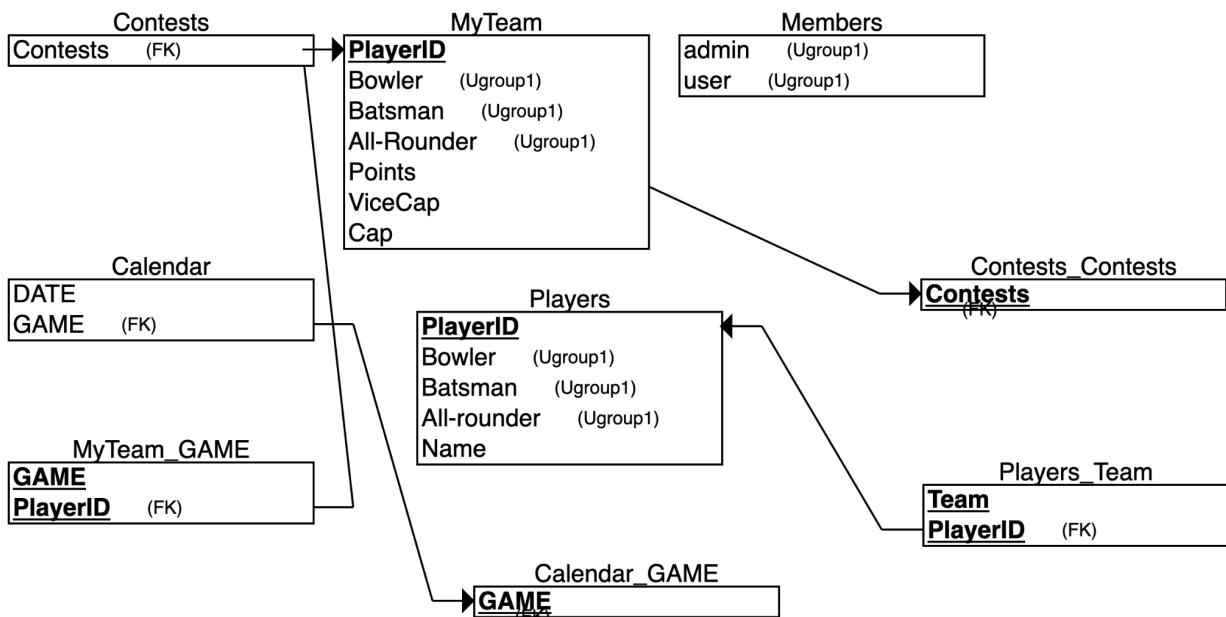
One of the system's standout features is the ability for users to tailor their experience through customizable scoring systems, adding a layer of personalization to leagues and contests. This flexibility empowers administrators to craft diverse league and contest formats, fostering a dynamic and engaging gaming atmosphere. FCDBMS excels in scalability, guaranteeing a smooth and responsive experience even during peak usage periods. This adaptability ensures that users can enjoy their fantasy cricket pursuits without interruption, regardless of the platform's popularity.

In essence, FCDBMS represents a paradigm shift in fantasy cricket platforms, not only for its technological prowess but also for its emphasis on user engagement and individual expression. It provides a welcoming space where enthusiasts can immerse themselves in the excitement of the game, armed with the latest data and strategic depth, while also connecting with a broader community of cricket enthusiasts who share their passion for the sport.

ER DIAGRAM:



RELATIONAL SCHEMA:



DDL SQL COMMANDS/CRUD OPERATIONS:

Create operations to create tables in the database.

```

CREATE TABLE player_data (
    Player_name VARCHAR(19) NOT NULL,
    Team_name VARCHAR(4) NOT NULL,
    Season VARCHAR(10) NOT NULL,
    GameNumber INT NOT NULL,
    no_of_runs INT NOT NULL,
    no_of_4s INT NOT NULL,
    no_of_6s INT NOT NULL,
    half_century INT NOT NULL,
    century INT NOT NULL,
    no_of_catches INT NOT NULL,
    no_of_wickets INT NOT NULL,
    maiden_overs INT NOT NULL,
    hat_trick INT NOT NULL,
    total_points FLOAT NOT NULL,
    economy FLOAT NOT NULL,
    Strike_rate FLOAT NOT NULL,
    Role VARCHAR(13) NOT NULL,
    PRIMARY KEY (Player_name, Team_name, Season, GameNumber),
    FOREIGN KEY (Team_name, Season) REFERENCES calendar(Team_name1, Match_date)
);

CREATE TABLE myteams (
    Player_name VARCHAR(25) ,
    Team_name VARCHAR(25) ,
    Points FLOAT (3),
    user_id INT (2),
    PRIMARY KEY (Player_name, Team_name, user_id),
    FOREIGN KEY (Player_name, Team_name) REFERENCES player_data(Player_name, Team_name)
);

```

Select query to view my teams for logged in user.

```

$sql = "SELECT * FROM MyTeams WHERE user_id=$user_id";
$result = mysqli_query($conn, $sql);

```

Insert query into Myteams table after choosing 11 team players

```

$teamInsertQuery = "INSERT INTO Myteams (user_id, player_name, Team_name, points) VALUES ";
$teamInsertQuery .= implode(' ', $values);

```

Insert into user table on successful sign up

```

$sql="INSERT INTO `user`(`name`, `phone`, `pw`, `dob`, `role`) VALUES ('$name', '$phone', '$pw', STR_TO_DATE('$dob', '%Y-%m-%d'), 'user')";
$query= mysqli_query($conn,$sql);

```

Update query for admin to update when the contest is live.

```

$conquery= "UPDATE contest SET Live = '$isLive' WHERE ID = '$contestNumber'";
$res = mysqli_query($conn, $conquery);

```

Delete query where Admin can choose to delete selected users.

```

$sqlDelete = "DELETE FROM user WHERE ID = '$userId'";
$resultDelete = mysqli_query($conn, $sqlDelete);

```

Select query (nested) to select the schedule

```
$sql1 = "SELECT formatted_date, Team_name1, Team_name2
FROM (
    SELECT DATE_FORMAT(Match_date, '%d/%m') AS formatted_date, Team_name1, Team_name2
    FROM Calendar
) AS nested_query;
";
$result = mysqli_query($conn, $sql1);
```

Query using aggregate function (MAX)

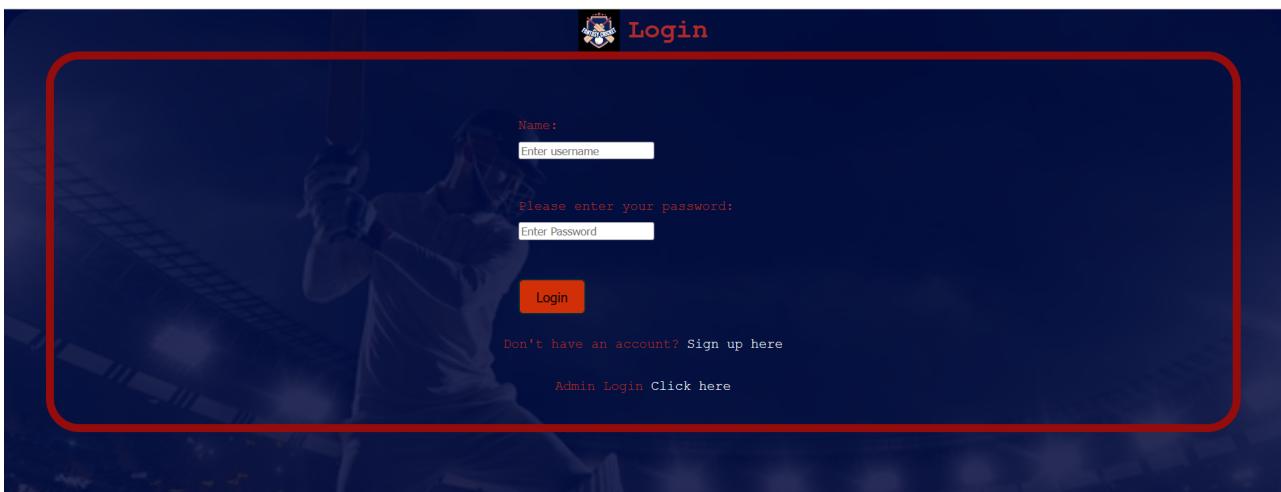
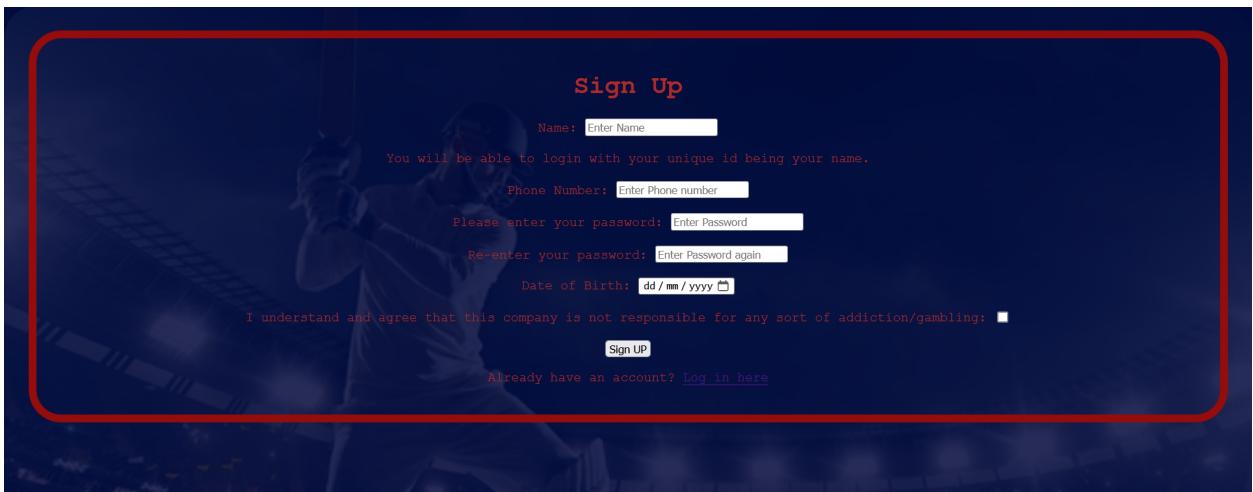
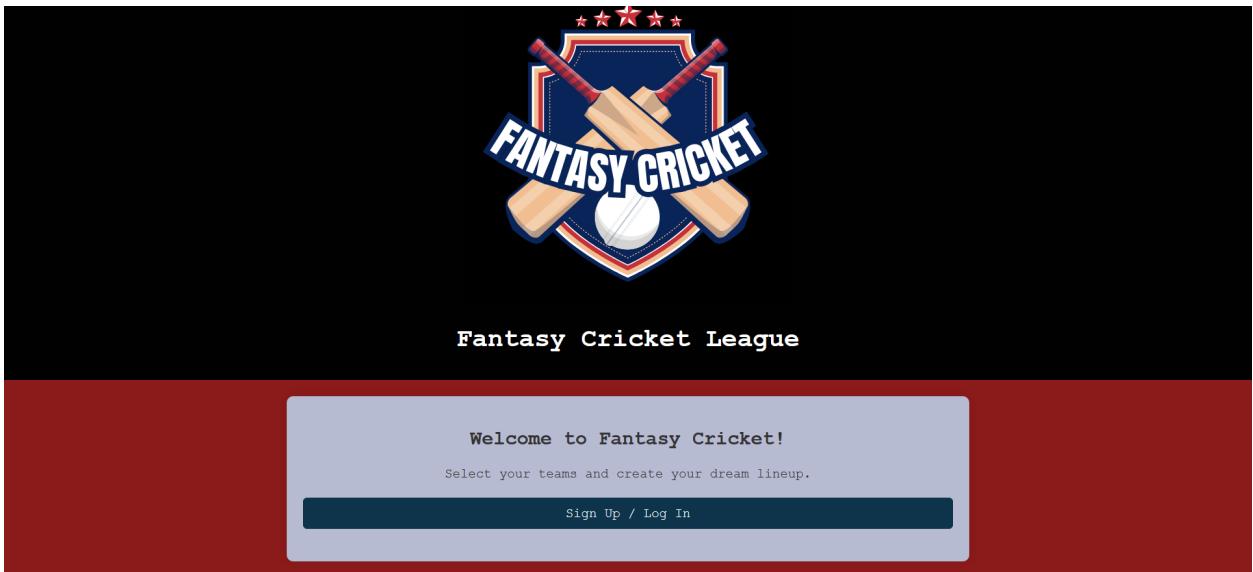
```
$sql = "SELECT user_name, Team_name, user_id, MAX(Points) as max_points FROM game GROUP BY user_name, Team_name, user_id ORDER BY max_points DESC";
$result = mysqli_query($conn, $sql);
```

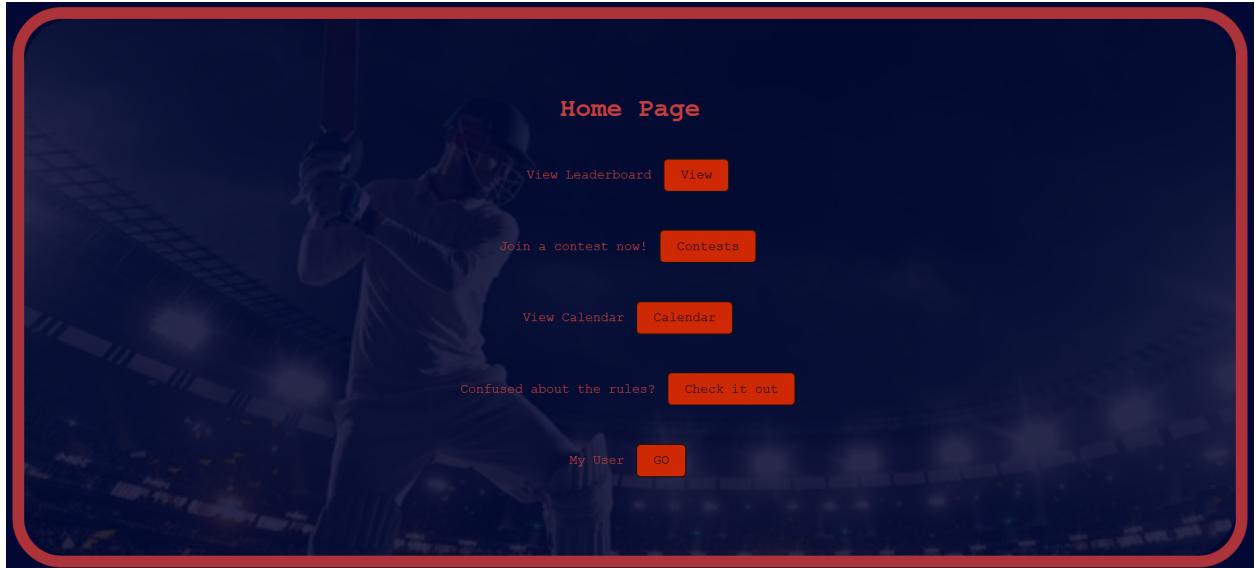
Join query to select team players

```
$sql1="SELECT
    pd.Player_name,
    pd.Team_name,
    pd.Strike_rate,
    pd.Economy,
    pd.Role
FROM
    player_data pd
JOIN
    calendar c ON (pd.Team_name = c.Team_name1)
WHERE c.Match_date =CURDATE()";

$result1 = mysqli_query($conn, $sql1);
```

SCREENSHOTS:





LIST OF FUNCTIONALITIES:

Our functionalities include viewing the leaderboard, creation of contests by the user and checking out the competition schedule.

1. Leaderboard

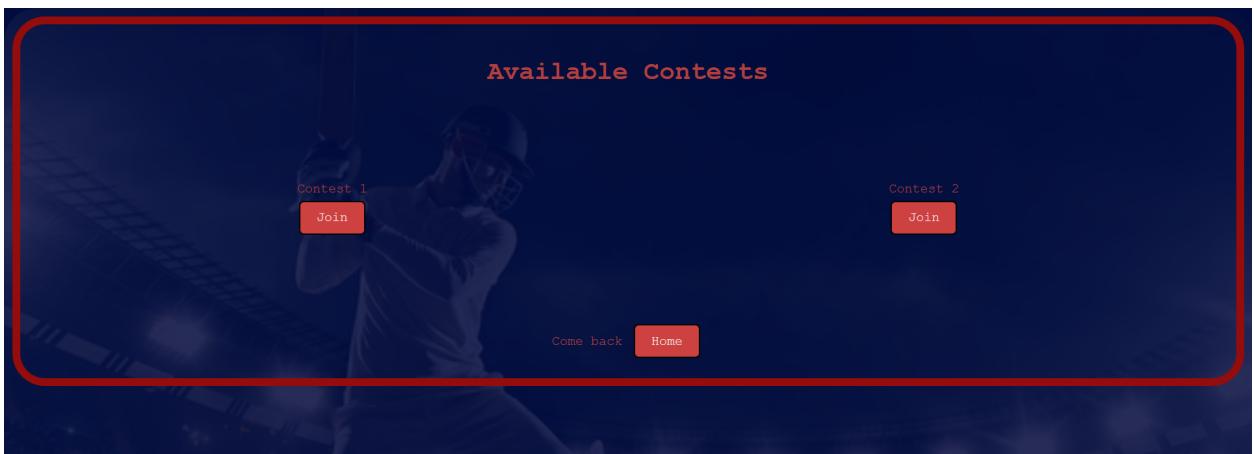
A screenshot of the Leaderboard page. At the top center, it says "LEADERBOARD". Below that is a large, semi-transparent background image of a basketball player in mid-air, performing a layup. The main content is a table showing the top four players:

User Name	Team Name	Player ID	Total Points
rohit	ro hawks	124	762
suraJ	rao riders	4	654
Rohan	team1	3	649
Suj	hel	1	595

Multiple winners today! Check out the leaderboard.

Come back [Home](#)

2. Join Contests

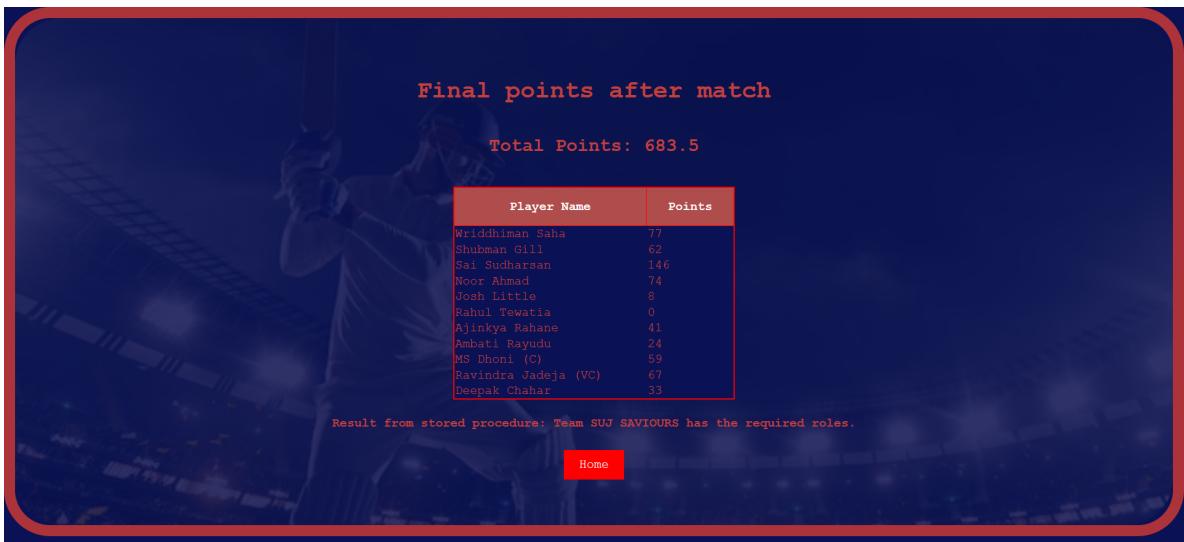
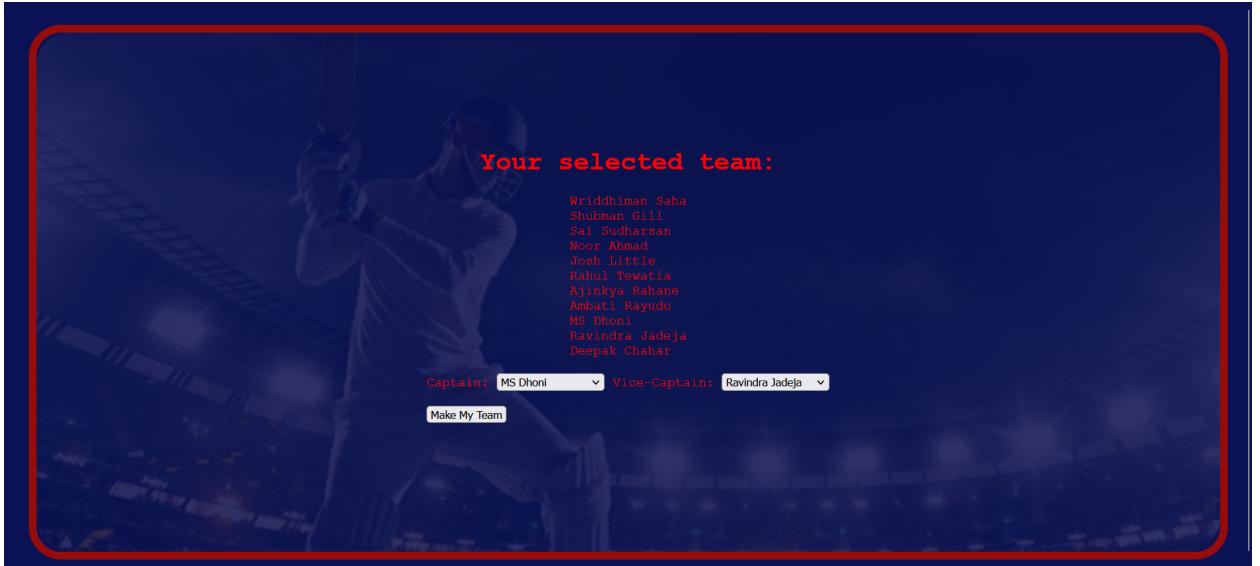


The image shows the "Contest 1" selection screen. At the top, the title "CONTEST 1" is displayed. Below it, a message states "Today's match is between the following teams" and "Select 11 players from both teams:". A text input field says "Enter Your Team Name: SUJ SAVIOURS". Two tables of player statistics are shown, one for each team. At the bottom, a "Make Team" button is visible.

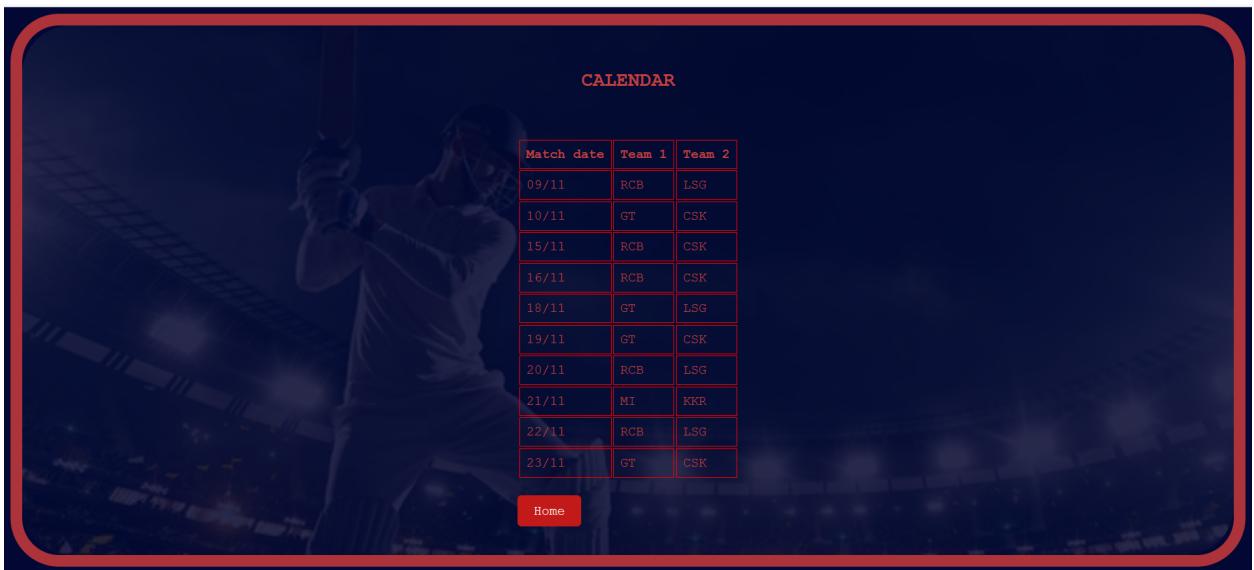
Player Name	Team Name	Strike Rate	Economy	Role	Select
Wridhiman Saha	GT	128.05	0	Wicket Keeper	<input checked="" type="checkbox"/>
Shubman Gill	GT	134.07	0	Batsman	<input checked="" type="checkbox"/>
Sai Sudharsan	GT	137.04	0	Batsman	<input checked="" type="checkbox"/>
Hardik Pandya	GT	131.27	8.19	All Rounder	<input type="checkbox"/>
Rashid Khan	GT	0	8.67	Bowler	<input type="checkbox"/>
Mohammed Shami	GT	0	13.92	Bowler	<input checked="" type="checkbox"/>
Noor Ahmad	GT	0	7.82	Bowler	<input type="checkbox"/>
Josh Little	GT	0	9.81	Bowler	<input type="checkbox"/>
Mohit Sharma	GT	0	8.65	Bowler	<input type="checkbox"/>
Rahul Tewatia	GT	147.62	7.91	All Rounder	<input checked="" type="checkbox"/>
David Miller	GT	139.03	0	Batsman	<input checked="" type="checkbox"/>
Vijay Shankar	GT	165.83	0	Batsman	<input type="checkbox"/>

Player Name	Team Name	Strike Rate	Economy	Role	Select
Ruturaj Gaikwad	CSK	135.52	0	Batsman	<input type="checkbox"/>
Devon Conway	CSK	139.7	0	Batsman	<input type="checkbox"/>
Shivam Dube	CSK	141.79	7.33	All Rounder	<input checked="" type="checkbox"/>
Ajinkya Rahane	CSK	123.42	0	Batsman	<input type="checkbox"/>
Ambati Rayudu	CSK	127.29	0	Batsman	<input checked="" type="checkbox"/>
MS Dhoni	CSK	135.96	0	Wicket Keeper	<input checked="" type="checkbox"/>
Ravindra Jadeja	CSK	131.06	6.23	All Rounder	<input checked="" type="checkbox"/>
Deepak Chahar	CSK	0	7.93	Bowler	<input checked="" type="checkbox"/>
Tushar Deshpande	CSK	0	10.17	Bowler	<input type="checkbox"/>
Maheesh Theekshana	CSK	0	7.77	Bowler	<input type="checkbox"/>

[Make Team](#)



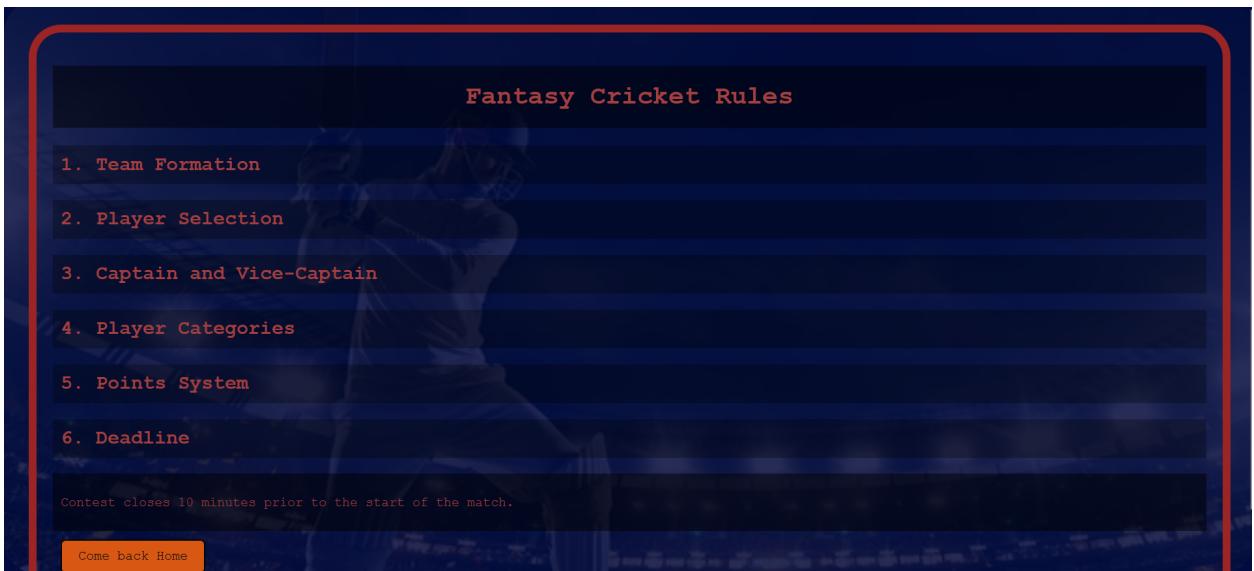
3. View Match Schedule



CALENDAR

Match date	Team 1	Team 2
09/11	RCB	LSG
10/11	GT	CSK
15/11	RCB	CSK
16/11	RCB	CSK
18/11	GT	LSG
19/11	GT	CSK
20/11	RCB	LSG
21/11	MI	KKR
22/11	RCB	LSG
23/11	GT	CSK

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Fantasy Cricket Rules

1. Team Formation
2. Player Selection
3. Captain and Vice-Captain
4. Player Categories
5. Points System
6. Deadline

Contest closes 10 minutes prior to the start of the match.

[Come back Home](#)

User Information

Thank you for playing.

My Team My Information Home Log Out

USER INFO

phone	Date of Birth	User Name
1222	1983-10-01	rohit

Home

On logging out the user is brought to the initial page.

Admin Login

ID:

Password:

ADMIN HOME PAGE

[View Leaderboard](#)

[Check User Info](#)

[Add contest](#)

[Schedule Match](#)

[View Database](#)

[Logout](#)

LEADERBOARD

User Name	Team Name	Player ID	Total Points
rohit	ro hawks	124	762
rohit	SUJ SAVIOURS	124	684
suraj	rao riders	4	654
Rohan	team1	3	649
Suj	hel	1	595

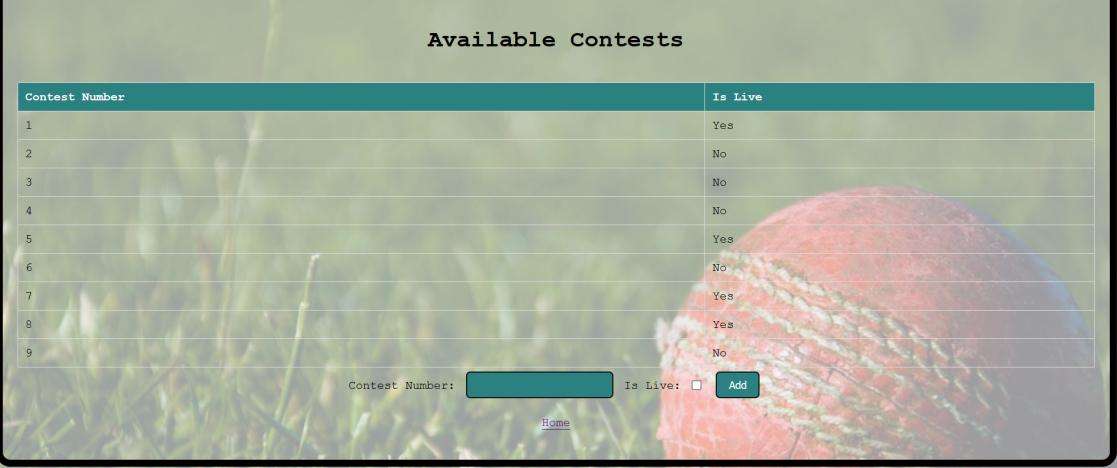
Come back

Available Contests

Contest Number	Is Live
1	Yes
2	No
3	No
4	No
5	Yes
6	No
7	Yes
8	Yes
9	No

Contest Number: Is Live: [Add](#)

[Home](#)

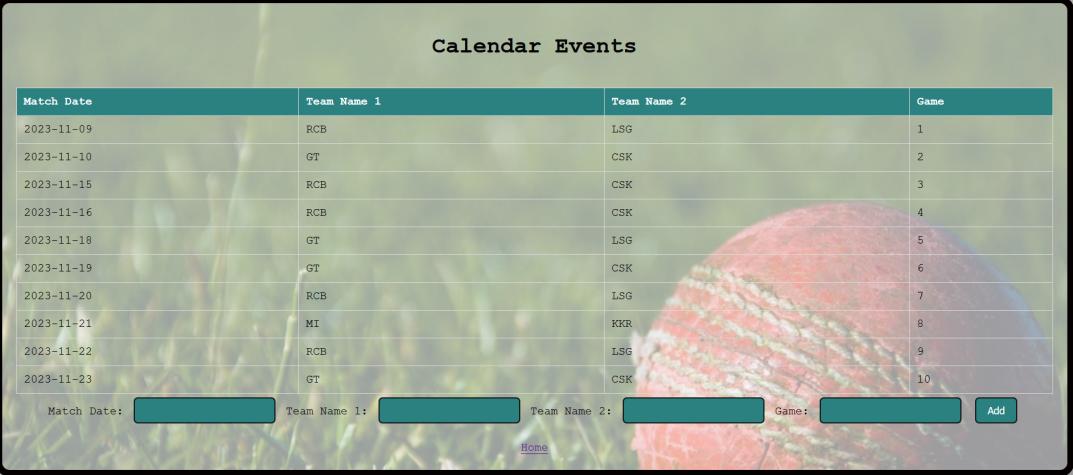


Calendar Events

Match Date	Team Name 1	Team Name 2	Game
2023-11-09	RCB	LSG	1
2023-11-10	GT	CSK	2
2023-11-15	RCB	CSK	3
2023-11-16	RCB	CSK	4
2023-11-18	GT	LSG	5
2023-11-19	GT	CSK	6
2023-11-20	RCB	LSG	7
2023-11-21	MI	KKR	8
2023-11-22	RCB	LSG	9
2023-11-23	GT	CSK	10

Match Date: Team Name 1: Team Name 2: Game: [Add](#)

[Home](#)



PROCEDURES, TRIGGERS AND FUNCTIONS:

MySQL Server page:

The screenshot shows the MySQL Server interface with the 'Structure' tab selected. The main pane displays a list of tables: calendar, contest, game, myteams, player_data, and user. Each table entry includes icons for Browse, Structure, Search, Insert, Empty, Drop, and a star icon. Below the table list, it says '6 tables' and 'Sum'. At the bottom of the table list, it shows '119 InnoDB utf8mb4_0900_ai_ci 176.0 KiB 0 B'. Below the table list is a 'Filters' section with a search input field. At the bottom of the main pane are 'Check all' and 'With selected...' buttons. Below the main pane is a toolbar with 'Print' and 'Data dictionary' buttons. A 'Create new table' dialog is open, showing fields for 'Table name' (empty) and 'Number of columns' (set to 4), with a 'Create' button.

Trigger to calculate the total points of each player

```

DELIMITER //

• CREATE TRIGGER calculate_total_points
  BEFORE INSERT ON player_data
  FOR EACH ROW
    BEGIN
      SET NEW.total_points = (
        NEW.no_of_runs + 2 * NEW.no_of_6s + NEW.no_of_4s +
        8 * NEW.half_century + 16 * NEW.century +
        25 * NEW.no_of_wickets + 8 * NEW.maiden_overs +
        16 * NEW.hat_trick + 8 * NEW.no_of_catches
      );
    END//

DELIMITER ;

```

Procedure to check if each team has atleast 1 batsman, bowler and wicketkeeper.

```

CREATE PROCEDURE CheckTeamRole()
BEGIN
    DECLARE currentTeam VARCHAR(255);
    DECLARE done BOOLEAN DEFAULT FALSE;

    DECLARE teamCursor CURSOR FOR
        SELECT DISTINCT Team_name FROM myTeams;

    DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

    OPEN teamCursor;

teamLoop: LOOP
    FETCH teamCursor INTO currentTeam;
    IF done THEN
        LEAVE teamLoop;
    END IF;

    -- Check if each team has at least 1 batsman, 1 bowler, and 1 wicketkeeper
    IF (
        (SELECT COUNT(*) FROM player_data WHERE Team_name = currentTeam AND Role = 'Batsman') >= 1 AND
        (SELECT COUNT(*) FROM player_data WHERE Team_name = currentTeam AND Role = 'Bowler') >= 1 AND
        (SELECT COUNT(*) FROM player_data WHERE Team_name = currentTeam AND Role = 'Wicketkeeper') >= 1
    ) THEN
        -- Do nothing or log success
        -- You can modify this part based on your requirements
        SELECT CONCAT('Team ', currentTeam, ' has the required roles.') AS Result;
    ELSE
        -- Print or log a message indicating missing roles
        SELECT CONCAT('Team ', currentTeam, ' does not have the required roles.') AS Result;
    END IF;
END IF;
END LOOP;
END IF;
END;

```

Granting privileges to user and admin roles

```

CREATE ROLE user;
GRANT SELECT ON calendar TO user;
GRANT SELECT ON contest TO user;
GRANT SELECT ON myteams TO user;
GRANT SELECT ON player_data TO user;
GRANT SELECT ON game TO user;
CREATE ROLE admin;
GRANT ALL PRIVILEGES ON project TO admin;
DELIMITER //
CREATE PROCEDURE GrantUserRole()
BEGIN
    DECLARE done INT DEFAULT FALSE;
    DECLARE user_id INT;

    -- Cursor to iterate over users with role='user'
    DECLARE cur CURSOR FOR SELECT user_id FROM `user` WHERE role = 'user';
    DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

    OPEN cur;
read_loop: LOOP
    FETCH cur INTO user_id;
    IF done THEN
        LEAVE read_loop;
    END IF;

    -- Grant 'user' role to the current user
    SET @sql = CONCAT('GRANT user TO ', QUOTE(user_id));
    PREPARE stmt FROM @sql;
    EXECUTE stmt;
    DEALLOCATE PREPARE stmt;
END LOOP;
END;

```