

# **SRS for Live Cricket Score for Inter/Intra University Tournaments**

## **Group 10**

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# 1. Introduction

## 1.1 Purpose

This Software Requirement Specification (SRS) document outlines the functional , non-functional requirements, design constraints for a software system designed to manage inter/intra university cricket tournaments. The purpose of this system is to provide an efficient and user friendly platform for administrators, organiser, players ,umpire & most importantly user to facilitate the organization,monitoring, track live scores, view player & Umpire profile , and access league statistics.This document serves as guide for developers,testers, and stakeholders to understand the system feature , scope & requirements.

## 1.2 Scope

The software will show tournament management by offering features. The system will be a web-based application with a mobile-friendly interface, ensuring accessibility for all user.The system enhances engagement by offering detailed analytics and real-time updates to all stakeholders.

**Administrator** : Control of application & Database, main work is to create, update , manage matches details, player & umpire details , Prepare stats of league , control all the sections

**Organiser** : To convey the onground match details / league details to administrator User : To access live score , match details, tournament details like stats

**Player /Umpire** : To view their profiles and performance statistics.

## 1.3 Intended Audience

This Document is intended for for following stakeholders :

**Developer:** To understand the system requirements and work as reference to develop the software accordingly.

**Testers** : To create test cases and validate the system against the specifications and all Functional requirements.

**Project Managers** : To monitor & plan the project's progress.

**Stakeholders** : To review & provide feedback on the system's functionality and scope.  
Legal Authority : Act as reference for any legal actions or claim.

## 1.4 Definition, Acronyms, and Abbreviations

**SRS:** software Requirements specification

**FR:** Functional Requirements

**UI:** User Interface

**DB:** Database

## 1.5 References

Proposal document for Group 5 (in google classroom)  
IEEE 830-1998 standard for SRS

## 1.6 Document Overview

**Section 1: Introduction** - Provides an overview of the system & document.

**Section 2: Overall Description** - Describes the system's key features.

**Section 3 : Function Requirements** - Detailed description of Functional Requirements

**Section 4: Non-Functional Requirements** -Outlined performance, security , usability , scalability requirements.

**Section 5: System Interfaces** - Interface for all users.

## 2. Overall Descriptions

The software is designed for managing and following inter/intra university cricket tournaments. It provide a comprehensive and user- friendly platform for administrators, organiser, Player & Umpire and most importantly users to interact with the system efficiently.

### 2.1 Key Feature Description:

**1. Match Management:** Administrators can create, update and manage matches with all the details (Date & time, venue,teams, squad, overs, match type , others). Admin can also make changes in player details as well as umpire details for player & umpire profile and to also prepare stats based upon this.

**2. Live Scoring:** A user-friendly interface that allows officials to update live match details. A scoreboard with live score section in the same page but with different components that will allow only live score components to reload frequently.

**3.Player & Umpire Profile :** Profile of players contains all the details related to player and for the umpire also like matches in which umpiring has been done. That will make it easier for the organiser to see stats for the umpire.

**4. League Features :** League can be managed by admin with the help of an organiser , for them an interface to be given to keep all the details then sent to admin to update as interface.

**5. User Access :** Users can access the platform to view all the details related to tournaments, match ,stats of player, profile of player & umpire and live score on its page.

**6.Organiser Interface :** Organiser will be given a user friendly interface for updating all the match & squad details and league details along with live score details ,and any uncertain event.

## 2.2 Operating Environment

### 2.2.1 Software Environment

- **Operating System:**
  - Linux or Windows Server for backend
  - Windows, macOS, or Linux for client devices
- **Database:** PostgreSQL 14.x or higher

### 2.2.2 Browser Compatibility

The following browsers are supported:

- Google Chrome (latest version)
- Mozilla Firefox (latest version)
- Apple Safari (latest version)
- Microsoft Edge (latest version)

### 2.2.3 Mobile Compatibility

While the main access for organizers might primarily be through laptops or desktop computers, the system should be accessible on mobile devices for users. Basic functionalities such as viewing live scores and checking statistics should be supported on mobile browsers.

## 3. Functional Requirements

### 3.1 Match Management

#### 3.1.1 Description

Match officials can create, update, and manage matches, including all the required details :

#### 3.1.2 Functional Requirements

**FR-1:** Official can create a new match ,

Details required : Date & Time, Venue , Teams ,Overs , Type of match (Like final , semi or regular match) and others required.

**FR-2 :** Officials can edit the match details at any point of time.

**FR-3 :** Officials have the option to add or drop the players from squads.

**FR-4 :** Officials can Reschedule or Cancel the match with some description (if needed).

## **3.2 Live Scoring**

### **3.2.1 Description**

A user-friendly interface that allows officials to update scores . The scorecard display comprehensive view

### **3.2.2 Functional Requirements**

**FR-5:** Officials can update scores ball by ball (runs, wickets, extras) corresponding to each player that will be reflected on the dashboard.

**FR-6 :** Giving all the detail , the system automatically calculates total runs, total over, wicket fallen with extra.

**FR-7 :** The scoreboard displays statistics of individual players

Batsman : Run scored, Ball played, fours, sixes, strike rate (it got out : type of wicket like catch then who took , and corresponding bowler )

Bowler : Over bowled, wicket taken , maidens, economy of bowler

Scoreboard also shows the fall of wickets. And the captain as well as wicketkeeper beside the player.

**FR-8:** Fans can view live scores in real-time with total over and wickets.

## **3.3 Player Profiles**

### **3.3.1 Description**

Player's profile includes detailed batting & bowling records across all the matches he has played.

### **3.3.2 Functional Requirements**

**FR-9:** Database needed to maintain the player profile.

**FR-10:** Players can view their profiles and all the match data associated with them.

**FR-11:** Officials can change the profile when requested by the player.

## **3.4 League Features**

### **3.4.1 Description**

The software supports the functionality to manage point tables, match schedules , and the best players in the league.

### **3.4.2 Functional Requirements**

**FR-12 :** Officials can create and manage leagues including point table and match schedule.

**FR-13:** The software should also provide statistical insights like top scorer, top wicket-taker that will be automatically calculated from the available date of each player.

**FR-14:** Software should show league standing and match schedules.

## 3.5 User Access

### 3.5.1 Description

Fans and participants can view live scores, team standings, player profiles, and detailed match statistics.

### 3.5.2 Functional Requirements

**FR-15:** Users can register using its credentials and access the personalized content.

**FR-16:** Users can view live score , profile of players and all the features that are available for users like league standing , players statistics .

**FR-17:** Participants (players and officials) have restricted access based on their roles

## Functional Requirement USE CASE

### • Use Case 1: Create a New Match

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In

**Main Scenario:**

1. The user clicks on the “Create Match” button.
2. The user enters the all details
  - a. Date
  - b. Time
  - c. Venue
  - d. Team 1
  - e. Team 2
  - Over f.
  - g. Match type (final, semi-final, or regular)
  - h. Associated League
3. User clicks the “Submit” button to save the match details
4. The system validates the details and finally saves the match
5. The user is redirected to match management dashboard after clicking submit button

**Alternate Scenario:**

2 (a) If the user misses any required details mentioned above , then the system will prompt them to fill in the missing information before proceeding.

4(a) If the system failed to validate the details then an error message is displayed, and match is not saved

4(b) If the system fails to save the match then an error message is displayed and after that user can try again

### **• Use Case 2: Edit Match Details**

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In & match must already exist in the system

**Main Scenario:**

1. The user selects a match from the match management dashboard
2. The user clicks the “Edit Match Detail” button
3. The user updates the required match details or if there is any change
4. The user clicks the “Submit” button to save the changes
5. The Admin system validates the updated details and saves them
6. The user is redirected to match management dashboard after clicking submit button

#### **Alternate Scenario:**

- 3 (a) If the user makes no changes then the system will keep the existing details unchanged.
- 5(a) If the system failed to validate the details then an error message is displayed, and match is not saved
- 5(b) If the system fails to save the match then an error message is displayed and after that user can try again

### **• Use Case 3: Add or Remove Players from squads**

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In & match already exist

**Main Scenario:**

1. The user selects the specific match from the match management dashboard
2. The user clicks the “Manage Squad Team 1” button.
3. The user adds a new player or removes a player by clicking the “Add Player” or “Remove Player” button respectively from the squad.
4. The clicking on “Add Player” shows a list of all the players of the given team which are not already added. And “Remove Player” will be corresponding to each player which is already selected and can be removed by clicking.
5. After clicking the “Manage Squad Team 1” button, the interface should give a specific section for *Team Captain & Wicket Keeper* that can be added using the “Add Player” option.
6. The user clicks the “Submit” button to save the changes
7. The Admin system validates the updated details and saves them
8. The user is redirected to match management dashboard after clicking submit button

#### **Alternate Scenario:**

- 3 (a) If the user makes no changes then the system will keep the existing details unchanged.
- 4(a) If squad size will be more than team size (like 11 players) then clicking the “Add Player” button will popup an error message that “**Team Size is full**”.
- 6(a) If the system failed to validate the details then an error message is displayed, and match is not saved



6(b) If the system fails to save the match then an error message is displayed and after that user can try again

\* The same Process will be followed by clicking “Manage Squad Team 2”.

#### **• Use Case 4: Reschedule or Cancel a Match**

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In & match already exist

**Main Scenario:**

1. The user select the specific match form the match management dashboard
2. The user clicks the “Reschedule/Cancel Match” button.
3. The user chooses to either reschedule or cancel the match and provides a description (eg: Due to rain, others if needed)
4. The user clicks the “Submit” button to save the changes
5. The Admin system validates the updated details and saves them
6. The user is redirected to match management dashboard after clicking submit button

**Alternate Scenario:**

3 (a) If the user does not provide a description , the system will proceed with the action without it.

3(b) If the user makes no changes then the system will keep the existing details unchanged. This can be done by clicking the “Discard” button beside the “Submit” button.

5(a) If the system failed to validate the details then an error message is displayed, and match is not saved

5(b) If the system fails to save the match then an error message is displayed and after that user can try again

#### **• Use Case 5: Update Live Updates Ball by Ball**

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In & match in progres.

**Main Scenario:**

1. The user select specific match from In Progress Match list on dashboard
2. The user updates the details
  - A. At starting : Toss won Team , Batting Team , Fielding Team
  - B. In Progress :Striker Score, Non-Striker Score ,Total Score, Overs, Wickets ,Striker, Non-striker , Bowler, Balls.
3. The system automatically calculates the total runs, overs , and wickets along with stats of each player for that specific match.
4. The updated scores are displayed on the live scoreboard in real time.

**Alternate Scenario:**

2(a) If the user enters invalid data / missing data, the system will prompt them to enter valid information.

3(a) If the system fails to calculate the scores, then an error message will appear and scores are not updated.

### **Use Case 6: Display Player Statistics on Scoreboard**

**Primary Actor:** Admin system

**Pre Conditions:** Match in Progress or ended

**Main Scenario:**

1. The system automatically calculates player statistics, such as:
  - a. Batsman: Runs scored, balls faced, fours, sixes, strike rate, and dismissal details (if applicable).
  - b. Bowler: Overs bowled, wickets taken, maidens, and economy rate.
  - c. Captain & WicketKeeper denoted by C for captain Wk for wicketKeeper beside player name
  - d. Player get outs then type of out catch, bowled, wickettaker, catcher
  - e. Run rate,etc.
2. The system displays these statistics on the live scoreboard.
3. The system also shows the fall of wickets.

**Alternate Scenario:**

1(a) If for batsman no data is available means it have not played yet then those places will be blank

1(b) If the system fails to calculate the scores, then an error message will appear and scores are not updated.

### **Use Case 7: View Live Score & Commentary**

**Primary Actor:** Fan or User

**Pre Conditions:** User Logged in & Match exist

**Main Scenario:**

1. The user can navigate to the live score section
2. The system displays score , total over, striker and non-striker score with ball played, bowl in over , bowler, Inning first / second
3. The user can click “Live Commentary” to see the basic commentary transcript for each ball generated by the admin system based on per ball data.
4. The user can view detailed match statistics , scoreboard , league statistics, Player statistics.
5. The user can view player profile by clicking on it

**Alternate Scenario:**

2(a) If match is not in progress then it will show “Match to be started at time” or paused then show “ reason of pause”

3(a) If admin system is unable to generate the commentary then error message will appear that “UNABLE TO FIND COMMENTARY”

**Use Case 8: Watch Live Match**

**Primary Actor:** Fan or User

**Pre Conditions:** User Logged in & Match exist

**Main Scenario:**

1. The user can navigate to the Live Match section
2. The system displays live matches provided by the organizer.

**Alternate Scenario:**

2(a) If match is not in progress then it will show “Match to be started at time” or paused then show “ reason of pause”

2(b) If no live streaming is provided then display a error message that “NO LIVE STREAMING AVAILABLE FOR MATCH”

**Use Case 9: Maintain Player/Umpire Profiles**

**Primary Actor:** Admin system

**Pre Conditions:** Player data must exist in the database.

**Main Scenario:**

1. The system maintains a database of players profile ,including batting ,bowling and fielding records
2. Details for specific league should be extracted to maintain the league statistics
3. Players can view the profiles and associated match data.
4. Admin can update the player profiles upon request

**Alternate Scenario:**

2(a) If player profile data is missing, then the system displays a message indicating incomplete data

5(a) If Admin fails to update the profile , then an error message is displayed.

## **Use Case 10: Creates and Mange League**

**Primary Actor:** Match Organiser

**Pre Conditions:** User Logged In

**Main Scenario:**

1. The user clicks the “Create League” button.
2. The user enters all the league details : Name of league ,Team, Match Schedule , Point Table & Pool , team in specific pool ,Type of match
3. The user clicks the “Submit: button to save the changes
4. The Admin system validates the updated details and saves them
5. The user is redirected to the league management dashboard

**Alternate Scenario:**

- 2(a) If the user enters invalid data / missing data, the system will prompt them to enter valid information.
- 4(a) If the system fails to validate, then an error message will appear and the league is not saved.
- 4(b) If the system fails to save the league, then an error message is shown, and the user can try again

## **Use Case 11: View League Standings and Statistics**

**Primary Actor:** Fan or User

**Pre Conditions:** User Logged In

**Main Scenario:**

1. The user navigates to the league section
2. The system displays league standings. Match schedules, and players statistics which includes A. Most Runs  
B. Most wickets  
C. Most Catches  
D. Best Bowling  
E. Most Boundaries and others
3. The user can view detailed insights and analytics

**Alternate Scenario:**

- 2(a) If no league data is available, then the system displays a message indicating no data is found.
- 2(b) if specific data is not available for given statistics then that statistics will not be shown

## **Use Case 12: Manage Tournament Brackets**

**Primary Actor:** Match Organiser

**Pre Conditions:** Tournament has been created

**Main Scenario:**

1. The official navigates to the tournament management section
2. The official updates the tournament bracket based on match result leading to advanced and disqualification of teams for next round
3. The updated bracket is displayed on the tournament for match schedule

**Alternate Scenario:**

- 2(a) if the organiser does not update the bracket then the system prompts then to do so

## **Use Case 13: Signup**

**Primary Actor:** Fan or User / Player/ Umpire / Match Organiser

**Pre Conditions:** Gmail account available / Authority No

**Main Scenario:**

1. User solves the Captcha
2. User clicks on "Sign in using Google"
3. User enters the email and password
4. Google-Auth verifies the email and password and user gets redirected to website
5. System checks if the user email has not been used before as Recruiter/Applicant
6. System generates a cookie which is stored in the browser
7. System stores the details of User
8. User is logged in and is redirected to Profile page

**Alternate Scenario:**

- 1 (a) User does not solve Captcha → User would not be able to click on the Sign in button
- 3 (a) User puts in wrong Google email/password → Google will inform the user about the Error
- 5 (a) Email provided is already in use → Login screen will be displayed and relevant error message will be shown
- 6 (a) System fails to store Cookie → System will show error message to user
- 7 (a) System fails to store information of New User → System will show error message to user.

\*Depending upon the user i.e. Fan, Player/Umpire, Organiser ,each will have separate signup page and slight information variation will added for each of then like for organiser it may be organiser ID etc

### **Use Case 14: Login**

**Primary Actor:** User/ Player/Umpire/Organiser

**Pre Conditions:** Already signed up before

#### **Main Scenario:**

1. System checks if cookie is absent in browser
2. User solves the Captcha
3. User clicks on "Sign in using Google"
4. User enters the email and password
5. Google-Auth verifies the email and password and user gets redirected to website
6. System checks if the user details are stored already and verifies the role that User wants to log-in to
7. System replaces cookie in browser with the updated one
8. User is logged in and redirected to Dashboard

#### **Alternate Scenario:**

- 1 (a) System auto logs-in the user and user is redirected to dashboard
- 2 (a) User does not solve Captcha → User would not be able to click on the Sign in button
- 4 (a) User puts in wrong Google email/password → Google will inform the user about the error
- 6 (a) Email provided is not used before → Login screen will be displayed and relevant error message will be shown
- 6 (b) User tries to login to a different Role → Correct Role login page is displayed
- 7 (a) System fails to store Cookie → System will show error message to user

\*Depending upon the user i.e. Fan, Player/Umpire, Organiser each will have separate login page and slight information variation will added for each of them like for organise it may be organiser ID etc

### **Use Case 15: Logout**

**Primary Actor:** User/ Player/Umpire/Organiser

**Pre Conditions:** Already logged in before

#### **Main Scenario:**

1. User clicks on "Logout" button present in Navbar
2. System removes cookie in browser
3. User is logged out and redirected to login page

**Alternate Scenario :**

- 2 (a) System fails to delete Cookie → System will show error message to user

## **4.Non-Functional Requirements**

### **4.1 Authentication Requirement**

1. User data must be encrypted using SSL/TLS.
2. Enforce role-based authorization to restrict access to sensitive data.
3. Securely manage user permissions and privileges.

### **4.2 Code Maintainability Requirement**

1. Ensure the modular code structure for scalability and maintainability.
2. Maintain clear documentation to support future enhancements.

### **4.3 Usability Requirements**

1. The UI must be intuitive and require minimal training for officials.
2. The system must be accessible on mobile devices and user pages specifically should be designed for mobile view.

### **4.4 Performance Requirements**

1. The system must support up to 10,000 concurrent users.
2. Live score updates must be reflected in real-time (less than 2-second delay).

### **4.5 Reliability Requirements**

1. The system must have 99.9% uptime during tournaments.
2. Data backups must be performed daily.

### **4.6 Scalability Requirements**

1. The system must be scalable to handle additional tournaments and users.

## **5.Future Enhancements**

### **5.1 Predictive Analytics**

Use machine learning to predict match outcomes and player performance. Enhances strategic planning and fan engagement.

### **5.2 Mobile Apps with Push Notifications**

Develop native iOS and Android apps for live updates, scores, and reminders. Improves accessibility and user experience.

### **5.3 AI-Powered Commentary**

Use AI to generate automated match commentary based on live data. Adds a dynamic and engaging element to matches.

### **5.4 Weather Integration**

Integrate weather APIs to predict match delays or cancellations. Helps in better scheduling and planning.

### **5.5 Monetization via Ads and Subscriptions**

Offer ad space for sponsors and premium features for subscribers. Generates revenue for the platform.

### **5.6 Multilingual Support**

Add support for multiple languages to cater to a diverse user base. Expands the platform's

global reach.

### **5.7 Gamification with Leaderboards**

Introduce leaderboards and rewards for fantasy cricket and quizzes. Increases user retention and engagement.

### **5.8 Two-Factor Authentication (2FA)**

Enhance account security with 2FA for all users. Protects user data and builds trust.

### **5.9 Feedback System**

Enable users to provide feedback on matches and platform features. Helps in continuous improvement and user satisfaction.

### **5.10 Merchandise Store Integration**

Add an online store for team merchandise and tickets. Creates additional revenue streams.

### **5.11 Chatbot Support**

Introduce a chatbot for FAQs, match schedules, and player stats. Improves user support and experience.

## **6.Appendix**

### **Cricket Tournament Management System - UI Design**

#### **Login Page**

**Login Page**  
  
Username:   
Password:   
**Login Button**  
Don't have an account? **Sign up here**



## Signup Page (With Role-Specific Fields)

**Signup Page**  
  
Name:   
Email:   
Password:   
Confirm Password:   
Select Role: (User / Player / Organizer)  
If Player: Player ID, Team Name, Role  
If Organizer: Organization Name  
**Signup Button**

## User Dashboard

**User Dashboard**  
  

**Live Scores** (Click to view real-time updates)

**Statistics** (Click to view player/team rankings)

**Upcoming Matches** (Click to view schedule)

## Statistics - Player & Team Rankings

### Statistics

Top Players: Player X (500 runs), Player Y (450 runs)  
Top Teams: Team A (8 wins), Team B (7 wins)

## Upcoming Matches - Schedule

### Upcoming Matches

Match 1: Team A vs Team C - Date: 10th Oct, Time: 4 PM  
Match 2: Team B vs Team D - Date: 11th Oct, Time: 6 PM

## Organizer Dashboard

**Organizer Dashboard**

Manage Matches (Create, Modify, Cancel Matches)

Set Up Live Score Updates (Update Scores in Real-time)

Player & Umpire Management (Assign Roles, Edit Details)

## Live Scores - Real-Time Updates

**Live Scores**

Current Match: Team A vs Team B - Score: 150/4 (17.2 overs)  
Batting: Player X (50\*), Player Y (20)  
Bowling: Player Z (2/30)

## Manage Matches

### Manage Matches

Create New Match (Select Teams, Date, Venue)  
Modify Existing Match (Reschedule, Change Venue)  
Cancel Match (Notify Teams)

## Set Up Live Score Updates

### Set Up Live Score

Input Runs, Wickets, Overs in Real-time  
Update Player Stats (Batting, Bowling)  
Provide Commentary Updates

## Manage Player & Umpire Data

### Manage Player & Umpire Data

Add New Players (Assign Team, Role)  
Edit Player Details (Performance, Availability)  
Add/Remove Umpires  
Assign Umpires to Matches