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InScore: Realtime Scorecard Application

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Abstract: Digital technology is unlocking unprecedented opportunities for growth in the sports industry, offering the potential to draw fans closer through innovative and customized experiences.
Digitization of sports has solved many traditional flaws that had dwelled in the system. One such flaw that still lives is the lack of ease with which a centralized body can organize sports events on a small scale.
This project aims to resolve this issue and also simplify the process of scorekeeping at the same time. It is for a fact that, in any sports tournament or an event, keeping track of scores and the results could be quite a tedious job if there aren't proper tools available.
Thus, providing a platform accessible through a handheld mobile device that would allow users to digitize their experience while keeping track of the scores, results, player profiles, and match statistics is the final goal for the project.

Keywords: Scorecard, React-native, Sports management, Mobile application, Cross-platform, Android, IOS.

I. INTRODUCTION

This project aims to ease a tournament organizer's life by simplifying the process of scorekeeping and management as a whole. It is for a fact that, in any sports tournament or an event, keeping track of scores and the results could be quite a tedious job. A commonly noticed procedure is that organizers use the traditional pen and paper technique to track scores. Now while this process is easy and requires no addons, it is filled with flaws and isn't transparent at all.

The goal of this project is to provide a modern and user-friendly alternative to this method. We aim to bring forth a platform accessible through any handheld smartphone that would allow its users to manage tournaments, the teams involved in it, and track scores across all different sports that are a part of it.
With our app, we aim to simplify the traditional way of using pen and paper to keep track of the scores and results and allow the organizers to computationally count the scores which will reduce human error. Also, all the scores would be updated to a central database in real-time so users would be able to keep track of the performance of their team.

Also, by keeping a centralized record of the data and making it open to the users, we would be providing a layer of transparency for our users, and it'd be impossible for the organizing body to alter the records, thus keeping the procedure secure.
In these difficult times of covid lockdown, sports enthusiasts are having a tough time due to the unavailability of an inexpensive sports subscription. The second part of our application aims to help content enthusiasts by providing real-time and speedy news updates from around the globe.
InScore would not only benefit the organizers by easing the process but also add a layer of transparency to it, as the scores can be cross-checked by other parties involved.

II. LITERATURE SURVEY

The following chapter is a literature survey of the previous research papers and research which gives detailed information about the previous system along with its advantages and disadvantages to make the system more advanced.

Survey of Existing System

- Cricbuzz

Cricbuzz is an application available for web and mobile platforms which informs its users about the live/ongoing cricket matches happening across the world. While this app allows users to be up to date with cricket scores, it just broadcasts the results of international or popular cricket games unlike the case with Inscore, where even local and communal tournaments involving games other than cricket are given a platform to broadcast the live updates of their matches.
Advantages of this app include -

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Simple and user-friendly UI to view live scores of international games.
Up to date and extensive information with commentary for live matches.
Support for match results and point tables for leagues.
Disadvantages of this app -
Lack of support for other games than cricket.
No coverage for small-scale and local tournaments.
Does not allow users to create their own tournaments.

- CricHeroes

CricHeroes is another app available for mobile platforms which involves features like cricket tournament management, a marketplace for sports, and player profile management. This application provides an interface for its user to create and manage tournaments for Cricket, just like how Inscore does but unlike Inscore, CricHeroes lacks the ability to create a tournament involving other sports which makes it incompatible with handling our use case.
Advantages of this app-
Support for creating cricket tournaments.
Supports small-scale and communal tournaments.
Allows users to sell their goods on the platform.
Disadvantages of this app include -
Lacks support for games other than cricket.
Is not suitable for hosting multi-sport tournaments.
Does not allow users to create and add multi-sport teams.

III. PROPOSED SYSTEM AND IMPLEMENTATION

The proposed Real-Time Scorecard system is meant to ease the process of score-keeping and broadcasting these scores to people all around the globe. A wireframe prototype of the system is shown in Fig 3.1.

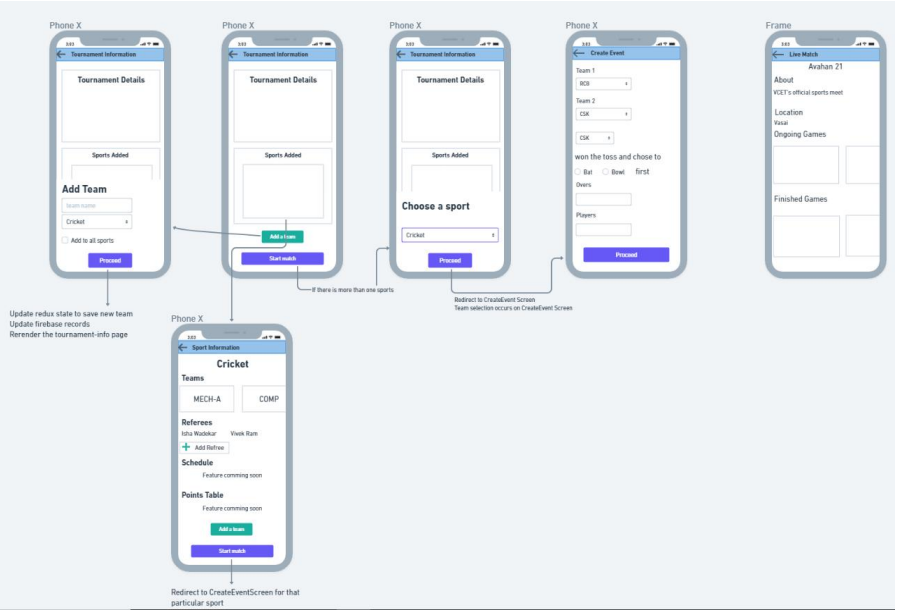

Fig 3.1 Wireframe of the system

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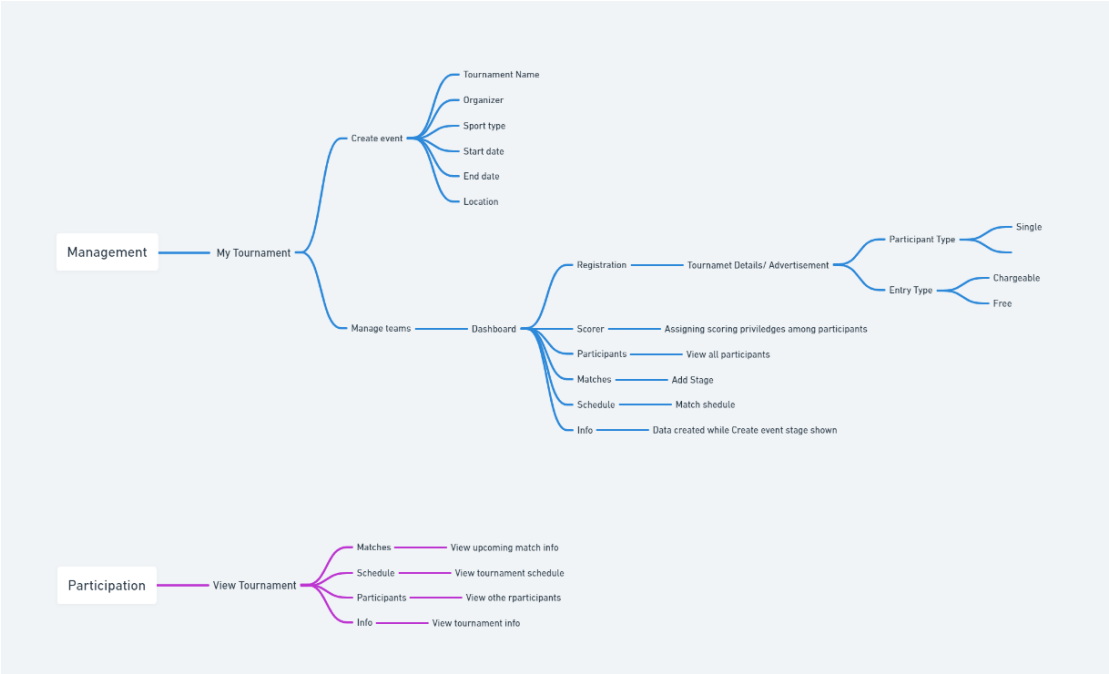

Fig 3.2 Mindmap

The system consists of the following modules:

- Team Management
- Scorer
- Viewer

A. Team Management

The creator of the event or tournament manages the registration and creation of the event. The creator specifies the tournament name, the date of the tournament, and the games within it. The data of a tournament is updated on firebase, and it is synced on all the devices on the network. Thus, viewers can see the newly created tournament. Furthermore, the creator can assign the role of a scorer to authorized participants thereby eliminating questionable practices. Inviting participants and assigning different roles such as player/scorer/manager/skipper is also facilitated along with scheduling the events, updating any changes with respect to schedule, and otherwise. Thus, the creator can manage multiple teams and events at once.

B. Scorer

The scorer or the umpire keeps the track of scores for an event/game. The scorer can thus keep a valid record of the scores and also undo an incorrect entry. The scores entered are updated on the firebase, which is then synced across devices, enabling transparency between viewers and the scorer. This allows users to keep track of the score and enjoy club and school tournaments that are not televised. Fig 3.2, shows the score logging screen available to the scorer. This screen logs the score of cricket, thus, it is customized to account for all the possible scores and wickets. An option to undo an operation is also provided to the scorer, to correct any human error while logging the score. The history of scores at each delivery of the ball is also visible.

C. Viewer

The viewers are able to see the history of the games, tournaments, and the scores of a game, along with all the live updates. As firebase is used at the backend, syncing of the data is done seamlessly. Fig 3.4 shows the viewer's view of the app.

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IV. RESULT

1. This project provides the users a friendly and simple interface using which they can create, manage and organize their tournaments.
2. Users can add multiple sports and teams within each tournament.
3. Organizers can post live updates for matches within their tournaments.
4. The users will also be able to track their daily games in an efficient way.
5. Tournament viewers will be able to view the live updates for a match, and see the list of past matches.
6. Users can also use the app to keep themselves up-to-date with sports news from across the globe.

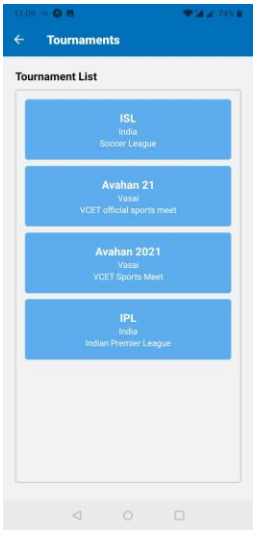

Fig 4.1 Created Tournaments

Fig 4.2 Scorer Screen

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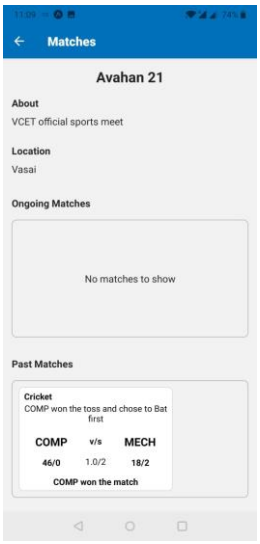

Fig 4.3 Viewer Screen

V. CONCLUSION

The system successfully replaces the traditional methods of score-keeping by introducing a more robust and user-friendly and transparent solution. It also allows the viewers to watch the scores from anywhere without being present at the match venue thereby promoting the sport further to the masses who likely would not be interested if the system did not exist.

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