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Data-Driven Decision Making in Institutional Sports: Developing a Comprehensive Database and Analytics Framework for Tournament Management and Performance Analysis

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1. INTRODUCTION

- **Overview of the Project:** This paper explores the design and development of a website to manage championship point tables and records, typically used in sports or competitions. The website allows users to view standings, records, and statistics in real time.
- **Purpose of the Website:** To create an efficient and dynamic system where users can check the points, rankings, and historical data of various competitions or sports.
- **Target Audience:** Sports fans, event organizers, and statisticians.

2. Technology Stack

- **Frontend:**
  - HTML, CSS, and JavaScript (for dynamic interactions and rendering)
  - Bootstrap CSS (for responsive design)
- **Backend:**
  - **PHP:** The server-side language to handle data manipulation, such as updating records, retrieving points, and generating rankings.
  - **MySQL:** Database management system to store data (user profiles, event details, match results, points, etc.)
- **Web Hosting:** Use shared or dedicated hosting services or cloud solutions like AWS or DigitalOcean.
- **Version Control:** GitHub for managing code versions and collaboration.

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3. Database Design

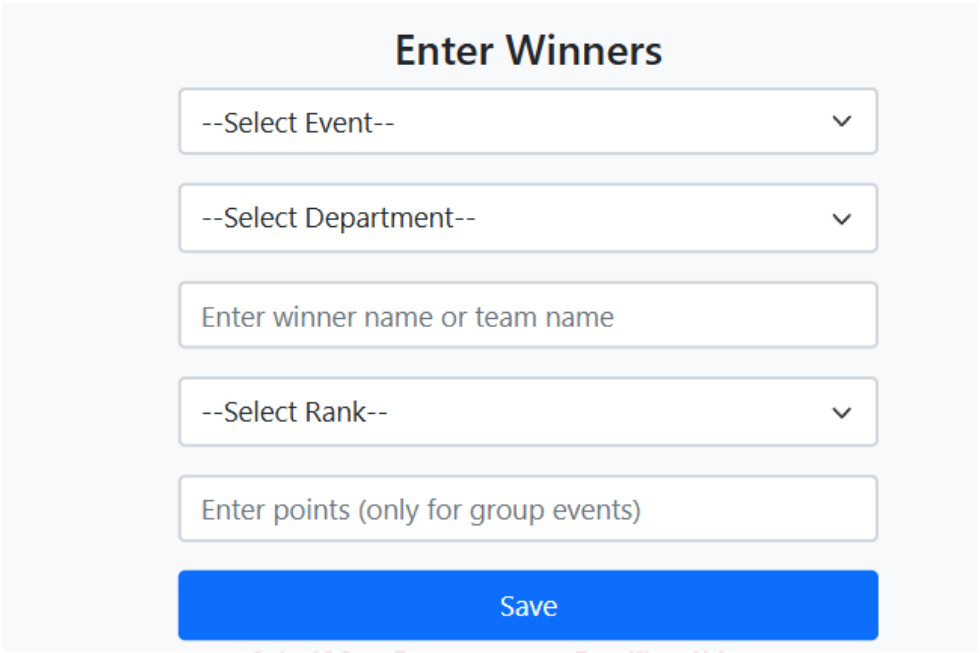
- **Tables**:
  - **Users Table**: Stores information about participants or teams, including their name, class, ranking, etc.
  - **Events Table**: Stores details of the events/competitions (e.g., event name, date, and location).
  - **Matches Table**: Stores individual match results (team 1, team 2, score, etc.).
  - **Points Table**: Stores points awarded for each match result based on the type of competition.
  - **Records Table**: Stores historical records, such as most points, highest scores, etc.

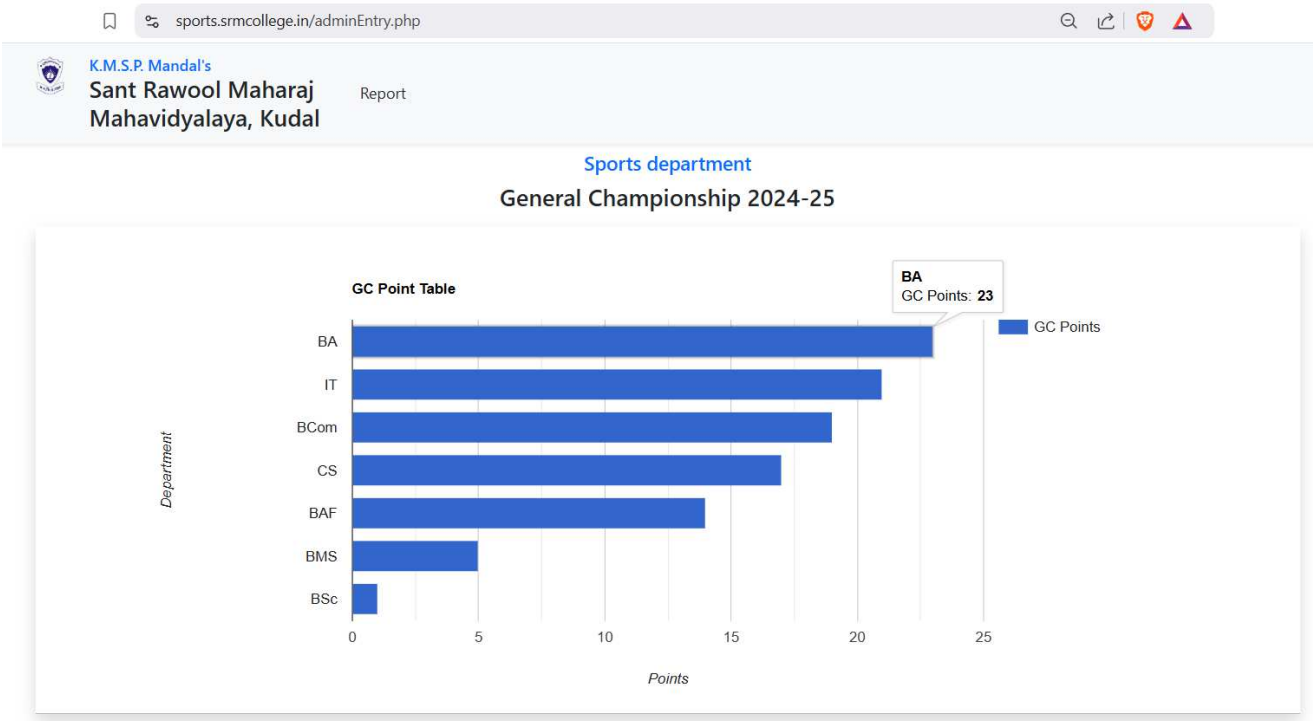
4. Website Functionality

- **Homepage**: The homepage displays a summary of the most recent championship standings, recent matches, upcoming events, etc.
- **Champion Table**: A dynamic table that shows participants/teams and their respective points, rank, and performance across various events. The table should be sortable and filterable by various criteria (e.g., event name, date, ranking, etc.).
- **Match Results**: A page that displays individual match results with relevant data (teams, scores, points awarded).
- **Record Keeping**: Display records like highest score, longest streak, or other specific achievements in the competition.

- **User Management**: Include a login system where participants can update their profile or view their performance in different events.
- **Admin Panel**: Admins can manage users, events, and match results, and adjust points as needed
- **Link**: https://sports.srmcollege.in

5. Reports





6. Challenges and Solutions

- **Data Integrity**: Ensure that data like scores and points are consistent, and implement validation mechanisms.
- **Performance**: As the data grows, optimize SQL queries and consider using caching mechanisms to improve page load speed.
- **Security**: Implement proper security practices, such as data sanitization, user authentication, and protection against SQL injection.

7. Future Enhancements

- **Real-Time Updates**: Implement WebSocket or AJAX for real-time updates when new match results come in.
- **Mobile Version**: Build a responsive mobile-friendly version of the website.
- **Multilingual Support**: Add support for multiple languages for international audiences.

8. Conclusion

- Recap of how PHP and MySQL were used to develop a championship point table and record system.
- A summary of potential real-world applications, such as for sports leagues, competitive gaming, or academic competitions.