**Final Project Report: Sport Events Mobile Application**

**Concept**

The problem this application addresses is the complexity involved in managing and organizing sports events, especially when dealing with large numbers of users, data, and changing event details. This app automates and streamlines the process, making it easier for event organizers, athletes, and spectators to interact with sports events.

The target audience for this application includes sports clubs, event organizers, athletes, and spectators who wish to stay informed about sports events and participate in them easily.

Изображение выглядит как текст, снимок экрана, дизайн

Автоматически созданное описание

**Functionality**

The mobile application will have the following core features. Users will be able to create an account, update their personal information, and view their history of participation in events. Additionally, users can browse upcoming sports events, sign up for participation, and get detailed event information such as location, time, and description.

Another key feature will be the inclusion of an interactive map that displays sports events with filters based on sport type, date, and user location. This feature allows users to easily find events near them.

The application will provide real-time updates such as schedule changes, results, and news using WebSockets, ensuring users receive timely and accurate information. Furthermore, the app will offer AI-driven event recommendations based on the user’s preferences, including sport type, location, and past event participation. This personalization will be powered by AI algorithms.

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

**Design**

The design of the app will be clean, modern, and user-friendly, focusing on easy navigation and intuitive interactions. The app will prioritize accessibility with features like large buttons and high-contrast colors to accommodate users with various abilities.

The user interface will have intuitive navigation elements, such as cards for events, a filter to help search for events, and an interactive map to locate events. Before development begins, wireframes will be provided to illustrate the layout of the app.

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

**Challenges and Solutions**

One of the challenges faced during development is integrating MongoDB for mobile use. To address this, the app will utilize Firebase or Realm, both of which are mobile-friendly databases that allow for data synchronization across devices and platforms.

Maintaining a continuous WebSocket connection for real-time event updates is another challenge. However, we plan to use libraries like Socket.IO for Flutter to manage WebSocket communication effectively.

AI-based event recommendations also present a challenge, as it requires the development and training of a recommendation model. This will be achieved by utilizing machine learning techniques and integrating them into the backend of the application, ensuring smooth communication with the front end.

Изображение выглядит как снимок экрана, мультимедиа, Мультимедийное программное обеспечение, Операционная система

Автоматически созданное описание

**Evaluation of the Project**

The concept of the app is both original and practical, as it addresses real-world challenges faced by sports event organizers and participants. The features work together cohesively to provide a seamless user experience, from event browsing to real-time updates and personalized recommendations.

The application will be intuitive and visually appealing, ensuring that users can easily navigate the app and interact with its features. The design will prioritize user experience and accessibility.

**Conclusion**

The Sport Events mobile application offers a practical solution for managing sports events. By integrating modern technologies like real-time updates via WebSockets, geolocation-based event discovery, and AI-driven recommendations, the app significantly enhances the user experience. It will help both event organizers and participants stay informed and connected to the sports community.