TECHWIZ 4
A GLOBAL I.T. COMPETITION

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Software Requirements Specification

Version 1.0

SoccerClub Web Application

Theme: Soccer League
Category: Web Application Development

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Contents

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1.1 Background and Necessity for a Web Application

Soccer is one of the world's most popular sports. It can be played almost anywhere, from official football playing fields (pitches) to gymnasiums, streets, school playgrounds, parks, or beaches. Soccer enthusiasts seek a dedicated platform that offers real-time access to game information, an immersive player gallery, top scorer rankings, and a user-friendly interface.

A soccer-based Web Application fulfils these requirements and provide a seamless and immersive soccer experience for soccer fans. This Web application can also allow fans to select their favorite teams, players, and leagues. It can provide tailored content, match notifications, and recommendations based on the user's preferences.

1.2 Proposed Solution

The proposed solution is a Web Application called **'SoccerClub'** that allows users to access soccer related information, schedules of matches, player galleries, top scores, and so on.

In addition, users can also shop for jerseys, posters of their favorite players, and other related merchandise.

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1.3 Purpose of the Document

The purpose of this document is to present a detailed description of the Web application titled **SoccerClub**.

The document explains the various features and overall purpose of this Web Application, what it will do, and what is beyond the scope. This document is intended for both stakeholders and developers of the application.

1.4 Scope of the Project

This Web application will be a responsive and visually appealing one to be used by individuals. Users can browse through soccer game information, players' gallery, top 10 scores, and so on. Users can register and perform search and filter operations on data. They can browse merchandise such as jerseys and purchase them.

However, the application will not have any feature/functionality for implementing or authenticating payment and delivery. These actions are beyond the scope of this application.

1.5 Constraints

Keeping the soccer information up to date can be a significant constraint. The application may rely on external data sources, such as live scores, player statistics, team information, and match schedules. Ensuring timely and accurate data acquisition, handling data format changes, and managing data updates can be challenging.

The usage of soccer-related data, images, and videos may be subject to licensing agreements and copyright restrictions. It is important to understand and comply with these constraints to avoid legal issues.

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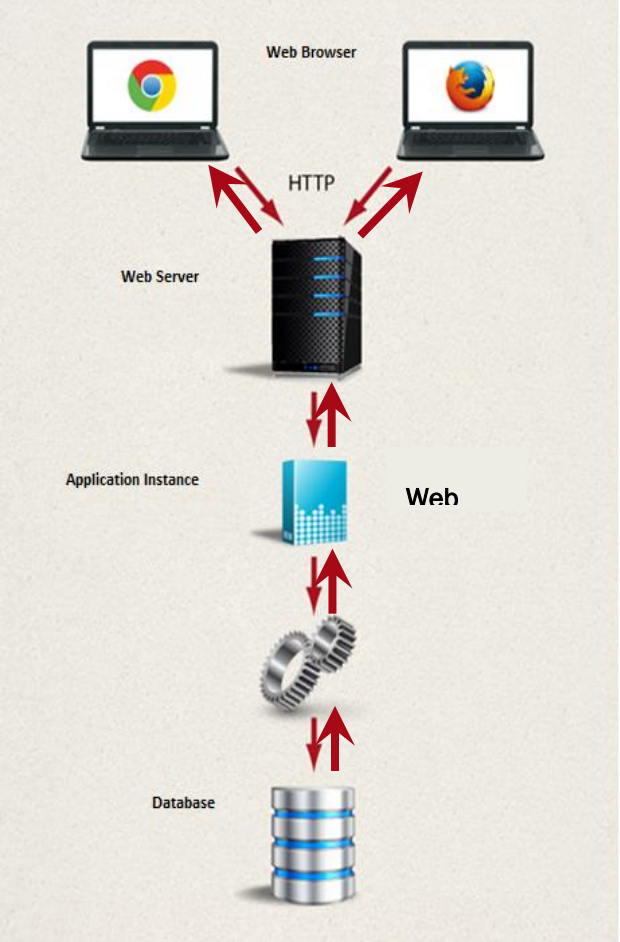
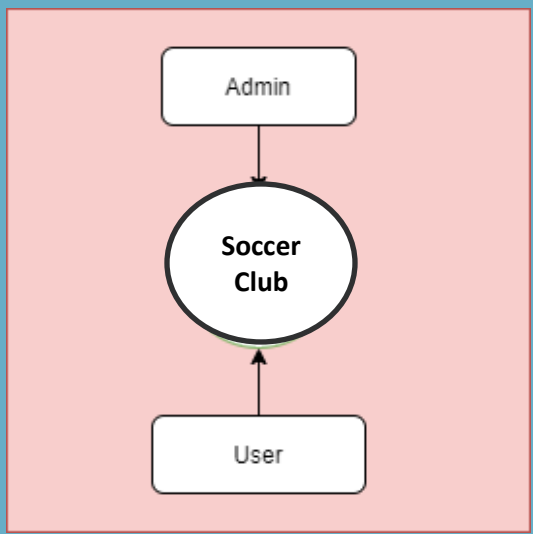
Architecture Diagram



Basic flow:



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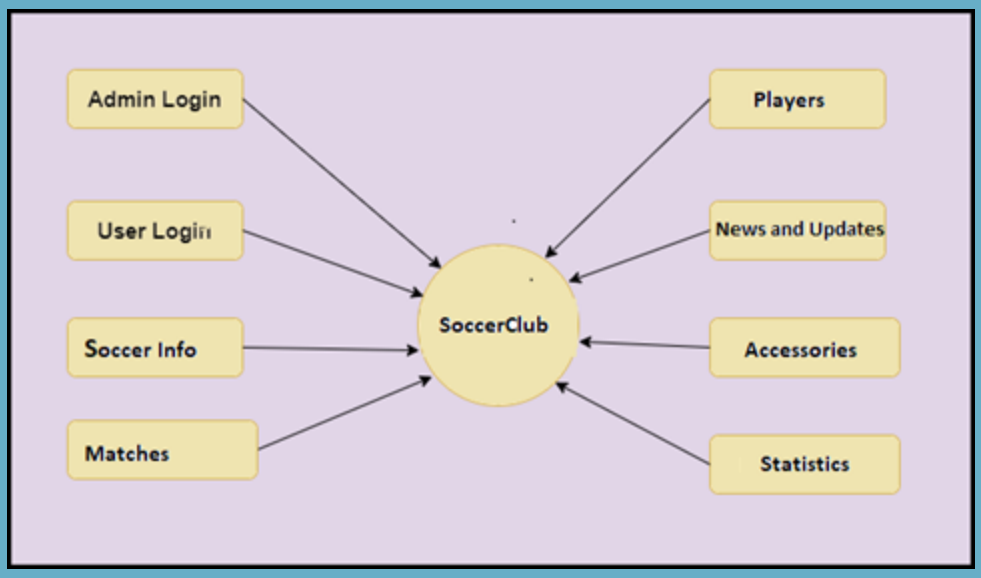

1.6 Functional Requirements

Following list are the major features expected from **SoccerClub**:

For Users:

- **Home Page:** The home page should be designed to provide an engaging and informative experience for users.

- **Account Registration:** The registration option shall allow users to create secure accounts. It will enable new users to register themselves with **SoccerClub**. At the time of registration, users must provide Name, Email ID, Contact Number, and Username, and then, configure their Password.

  Appropriate error-checking must be done on the fields of the form to ensure correct data. For example, email id can be checked to see if it is of appropriate format. (Hint: Use client-side validation).

- **Login**: It will allow successfully registered users to login to the **SoccerClub** application and access various features of the application through menus or sidebars.

- **Settings**: Users will be able to manage their accounts by using sub options such as Create, Update, and Delete Profile. Users can also add addresses using this option.

- **Soccer Info:** This will include the complete details about soccer such as history of game, rules, field details, tricks and tactics, and so on.

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- **Matches:** This will showcase a list of upcoming matches with essential details such as date, time, teams, and competition (World Cup, champions' league and so on). It should allow users to click a match to access more information or set reminders.

- **Players' Gallery:** This will include the players (categorized by teams). It should provide player profiles, career statistics, images, and remarkable achievements by the player.

- **Statistics:** This option will display comprehensive statistics for teams, players, and matches.

- **Top 10 Scores:** This will display top 10 scores of all time.

- **Latest news and updates:** This is an optional feature and can include a section dedicated to the latest news and updates related to soccer. This can display headlines or excerpts of recent articles or blog posts, and allow users to click for more information. You may use Web services, REST APIs, or similar technologies to implement this.

- **Merchandise:** This option should display various merchandise such as Jerseys/soccer shoes/Posters of the players and so on and enable user to purchase them through Add to Cart feature.

- **Checkout**: This should show the shopping cart contents and total bill based on merchandise price and quantity of merchandise purchased. You do not have to implement payment functionality, just list the cart contents, and compute the bill.

- **Cancel Order:** Users can cancel an already placed order through this option.

- **View Cart:** Users can view their cart through this option.

- **Contact Us:** This menu option should display Email id, address, and contact number of the organization who is developing the application.

- **Submit Feedback:** Users can submit their feedback regarding the application using a feedback form.

- **Sitemap**: To understand the flow of **SoccerClub** Web application, you will have to create a Sitemap and add it to the home page of your application.

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For Admin:

- **Login**: It will allow Admin to login to the Web Application.
- **Add/Modify/Delete**: It will allow Admin to perform these operations on match schedules, player details, statistical data, accessories, orders, and other related information.
- **View Feedback:** This option will allow Admin to view feedback submitted by users.

Common to both Admin and Users

- **Search/Filter:** These options enable search or filter for a particular player/match and so on based on specific criteria.
- **Sort:** This option enables sorting of data based on specific criteria.

Note: Boilerplate or readymade HTML template can be used, provided it is only for design aspect and not for implementing application functionality.

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1.7 Non-Functional Requirements

There are several non-functional requirements that should be fulfilled by the application.

The application should be:

- **Safe to use**: The application should not result in any malicious downloads or unnecessary file downloads.
- **Accessible**: The application should have clear and legible fonts, user-interface elements, and navigation elements.
- **User-friendly**: The application should be easy to navigate with clear menus and other elements and easy to understand.
- **Operability**: The application should operate in a reliably efficient manner.
- **Performance**: The application should demonstrate high value of performance through speed and throughput. In simple terms, the application should be fast to load and page redirection should be smooth.
- **Scalability**: The application architecture and infrastructure should be designed to handle increasing user traffic, data storage, and feature expansions.

- **Security**: The application should implement adequate security measures such as authentication. For example, only registered users can access certain features.
- **Capacity**: The application should support large number of users.
- **Availability**: The application should be available 24/7 with minimum downtime.
- **Compatibility**: The application should be compatible with latest browsers.

These are the bare minimum expectations from the project. <u>It is a must to implement the functional and non-functional requirements given in this SRS.</u> Once the functional and non-functional requirements are fulfilled, you can use your own creativity and imagination to add more features if required.

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1.8 Interface Requirements

1.8.1 Hardware

Intel Core i5 Processor or higher
8 GB RAM or higher
Color SVGA
500 GB Hard Disk space
Mouse
Keyboard

1.8.2 Software

Technologies to be used:

- Frontend:

  HTML5, CSS3, Bootstrap (optional), JavaScript, Figma Toolkit, jQuery, AngularJS/Angular 9/ReactJS, and XML

- Client and Server:

  Java 9 or higher, Java EE 7 or higher/Jakarta EE 9 or higher, with Apache NetBeans IDE/Eclipse latest version, Apache Tomcat 10.0 or higher, GlassFish 6.0 or higher, and related libraries

  OR C# 7.0 with Visual Studio IDE 2019 or higher, ASP.NET MVC and Core, and related libraries

  OR PHP 7.0 or higher version with Laravel Framework Homestead (optional)

  OR Python 3.0 or higher version with PyCharm IDE, Django 4.0.2 or higher/Flask framework

  For hosting (optional):
  XAMPP latest version

- Data Store:

  MySQL 5.7 or higher/SQL Server 2016 or higher

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Database Design

Data Dictionary: Users, Team, Match, Player, and so on

Based on the given specifications, you will define suitable entities, attributes for these entities, and identify relationships between the entities.

For example, some entities along with their attributes can be identified as follows:

Users
• User_Id (Primary Key)
• Name
• Email
• Password

Team
• Team_Id (Primary Key)
• Team_Name
• Country
• Logo_Url

Match
• Match_Id (Primary Key)
• Team_Id (Foreign Key Referencing Team Table)
• Match_Date
• Match_Time

Player
• Player_Id (Primary Key)
• Player_Name
• Nationality
• Team_Id (Foreign Key Referencing Team Table)
• Position
• Date_Of_Birth

Similarly, you can define other entities and also relationships between entities and methods representing activities on the entities.

Note: These are just examples, you do not have to adhere to these structures and can design your own table structure with more or less columns.

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1.9 Project Deliverables

You will design and build the project and submit it along with a complete project report that includes:

- Problem Definition
- Design specifications
- Diagrams such as flowcharts for various activities, Data Flow Diagrams, and so on
- Database Design (database scripts to be provided)
- Source Code
- Installation guide
- User Manual along with test data and user credentials

Documentation is considered as a very important part of the project. Ensure that documentation is complete and comprehensive. The consolidated project will be submitted as a zip file with a ReadMe.doc file listing assumptions (if any) made at your end and SQL scripts files (.sql) containing database and table definitions. If local servers such as XAMPP are used to test the project, include screenshots of working pages. Include port settings and other details in ReadMe file.

In addition, you must submit a video clip showing the actual working of the Web Application.

Over and above the given specifications, you can apply your creativity and logic to improve the application.

~~~ End of Document ~~~

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