Software Requirements Specification

for

Golf-Matcher

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1.   Introduction

1.1   Purpose

This document covers the requirements for the Golf Matcher web application. The document will cover the software and user interfaces for the application as well as all requirements, broken down by product feature.

1.2   Product Scope

Golf Matcher, herein referred to as "the app", will be a web-based application responsible for various aspects of managing a golf league. The app will provide mechanisms to manage players, and to create teams and add players to these teams. The app will also provide a schedule so that teams and players can see their upcoming matches and review the results of past matches. Finally, the app will provide scorekeeping so that players can log their scores for individual matches. To aid in scorekeeping, the app will also calculate each player's handicap on every match score entry. Player scores will be combined for the Team scores, and a leaderboard will also be available.

2.   Overall Description

2.1   Product Perspective

Prior to Golf Matcher, golf leagues used very complex spreadsheets and required regular print outs of standings, handicaps, and schedules. It also required Admins to spend hours of time each week entering scores, and maintainability of the source code was extremely difficult. Golf Matcher aims to make the management of golf leagues more streamlined and easier to maintain.

2.2   Product Functions

The app will provide the following features:
- **Player Management** - The app will allow for creation and management of player profiles, and store some useful information about each player.
- **Team Management** - The app will allow for the creation and deletion of teams, and assigning players to the teams. It will utilize the scores for the players to track a team score for each match and a win/loss record for the team.
- **Score and Handicap Tracking** - The app will provide score tracking for each player. Each time a player adds a score, the app will recalculate that players handicap based on a specified formula. Player scores will also be utilized to calculate scores for that player's team.

- **Scheduling** - The app will also provide schedule management so players and teams can see their upcoming matches and also review their past matches.

3.   External Interface Requirements

3.1   User Interfaces

All user interaction will be done through a web interface.
Upon initial navigation to the app's web address, the user will be greeted with a Login/Registration screen.

Golf Matcher

Sign in   **Register**

Registration

Name *   👤

                                                     0 / 50

E-mail *   ✉

Password *   👁‍🗨 🔒

                                                     0 / 60

Register

Once logged in to the app, the user will arrive at the dashboard. At the dashboard the user can navigate anywhere else in the app, and the navigation bar at the top is also always available from any page to navigate back to the dashboard or to another page.

Golf Matcher

Dashboard
Players
Teams
Handicaps
Schedule
Scores
Leaderboard

Sidebar

Players

Test Player5 (TP5)	Craig Roland (Craiger)	Test Player1 (TP1)	Peter Jester (Pete)
Daniel Castellucci (Dan)	William Ganley (Bill)		

Teams

Team One	Team Two	Team Three	Team Four

3.2 Software Interfaces

3.2.1 Database: For data storage Firebase's Cloud Firestore will be used. This is a flexible and scalable NoSQL cloud-hosted storage solution. It utilizes Document and Collection style storage, which allows for flexible data models. The app will have constant, realtime access to the datastore.
3.2.2 Hosting: Firebase's Cloud Hosting platform will be used for hosting the app on the web providing reliable and easy access for users.

4. System Features

4.1 Player Management

4.1.1 The app shall allow administrators to manage players.

    4.1.1.1 The app shall allow administrators to create a new player profile.

    4.1.1.2 The app shall allow administrators to delete a player.

    4.1.1.3 The app shall allow administrators to edit a player profile.

4.1.2 The app shall store a profile for each player.

    4.1.2.1 The app shall store each player's name.

    4.1.2.2 The app shall store a phone number for each player.

    4.1.2.3 The app shall store an email for each player.

    4.1.2.4 The app shall store the age of each player.

4.2 Team Management

4.2.1 The app shall allow administrators to manage teams.

    4.2.1.1 The app shall allow administrators to create a new team.

    4.2.1.2 The app shall allow administrators to delete a team.

    4.2.1.3 The app shall allow administrators to edit a team.

4.2.2 The app shall store which players belong to a particular team.

    4.2.2.1 The app shall allow users to add players to a team.

    4.2.2.2 The app shall allow users to remove players from a team.

4.2.3 The app shall track and store a team's win/loss record.

4.3 Score & Handicap Tracking

4.3.1 The app shall allow users to see scores for all players in the league.

4.3.2 The app shall allow administrators to manage player scores.

    4.3.2.1 The app shall allow administrators to enter scores for each player.

    4.3.2.2 The app shall allow administrators to edit scores for each player.

    4.3.2.3 The app shall allow administrators to delete scores for each player.

4.3.3 The app shall calculate a handicap for each player.

    4.3.3.1 The app shall use the average of a player's five lowest scores to calculate a handicap according to the following formula: *((Average * .96) - 32.9) * 113/114*.

    4.3.3.2 The app shall recalculate a player's handicap each time a new score is entered.

4.3.4 The app shall calculate points for each team using a combination of scores for each player on that team.

    4.3.4.1 The app shall allow users to record a match between two teams, and use the calculated scores to determine the winning team.

4.4   Scheduling

4.4.1 The app shall allow all users to view the schedule of matches for the league.

4.4.2 The app shall allow administrators to manage the league schedule.

    4.4.2.1 The app shall allow administrators to edit the schedule.

    4.4.2.2 The app shall allow administrators to delete the schedule.