Group: Tennis Club 2

Project 3

Software Requirements Specification

Version 3.0

Revision History

Date	Version	Changelog
11.09.2022	1.0	Introduction
18.09.2022	1.1	General Structure
26.09.2022	2.0	Chapter 2
02.10.2022	3.0	Chapter 3 Beginning

Table of Contents

Software Requirements Specification

1. Introduction

The introduction of the Software Requirements Specification (SRS) gives an outline of the product with the following points: purpose, scope, definitions, acronyms, abbreviations and overview. The objective of the SRS is to analyse and illustrate by giving an insight of the software of Group 2 by defining the problem given by the tennis club. The SRS also focuses on the capabilities required by stakeholders. The detailed requirements of Group 2 are provided in this document.

1.1 Purpose

The purpose of this document is to give an insight into the worked-out requirements of Group 2 to the problem given by a tennis club. The SRS will also analyse how the application will perform.

The purpose of the product resulting from this document is to solve the problem given by the tennis club regarding tracking and archiving matches. The product will be an online service replacing the archive which is currently used by the club. This way the archive will be held online and reduce resources and time when searching a specific game. The application will be used by referees during a tennis match.

1.2 Scope

This application will be a Web service for the tennis club. It will be primarily used by the referees during a tennis match. The application will be designed to help referees and maximise the efficiency regarding archiving the information of matches.

More specifically, the application is designed to gather information regarding player, points and timestamps of a tennis match and save this information in a database which will be replacing the existing archive. The application will simplify the process of gathering information for the referee to maximise the workflow of the referee. When stored in the database, the information can be seen and print a report of a match on paper when needed. The system will also give specific information to the media when a match is televised.

1.3 Definitions, Acronyms and Abbreviations

Word / Abbreviation	Definition
SRS (Software Requirements Specification)	A document of the software system to be developed that discusses the functional and non-functional requirements. It also includes Use-Cases that describe how users (client analysts) would interact with the software.
Love	In tennis the word “love” is used to describe a score of zero.
Advantage (adv.)	Given as a score when the team wins the next point after a game goes to a deuce

Deuce	A deuce is when both teams have a score of 40. This means that they are now two points away from winning the game.
Database	A database is an organized collection of structured information that, in our case, will be used to store the past games information.

1.4 References

Reference 1:

- Title: How does tennis score work? | Tennis score explained
- Report Number: -
- Date: April 30, 2022
- Publishing Organization: Super Tennis Racquet – Robert Dexter
- Link: https://supertennisracquet.com/how-does-tennis-score-work/

Reference 2:

- Title: Tennis ranking system: how does it work? WTA & ATP explanations
- Report Number: -
- Date: January 1, 2022
- Publishing Organization: Super Tennis Racquet – Robert Dexter
- Link: https://supertennisracquet.com/tennis-ranking-system/

1.5 Overview

Following this introductory section, the rest of the Software Requirements Specification document will further explain the specifics of the software system being produced. Chapter 2 focuses on the context for the proposed system, how it should function, and the related constraints. Chapter 3 provides a detailed listing of the requirements specific to the system following a hierarchical numbering scheme.

2. General Description

This section is going to cover general information about the project. Such as functions, the projects perspective, and various requirements such as relevant constraints.

2.1 Product Perspective

This product is used to track information for tennis games and then store that information in a database where it can later be accessed and efficiently sorted through. It will also lead to the information being safer than it is now as you can alter the information easily in the systems current state. It will be an application that can be used offline and then when it has internet connection again it will upload the information to the database to be safely stored.

2.2 Product Functions

The end product will start off by having an initialization for a match option where the user can then enter all the information about the players and their clubs that is needed and then they start the match where they can update information like the scores as well as the names if needed. They then end the match, and the data is stored locally if there is no internet connection available and is then uploaded later when there is a connection. There will also be a search function for users that are not on the admin where they can access information about matches by searching key phrases that are applicable to the matches they want to find.

2.3 Use Characteristics

There are two types of users that will have this program available to them. First, there is the umpire who will have access to starting, ending and updating scores and names during the course and before a match. Second, are the other users who use the application but only have access to the search function so they are able to find matches from the past and access those match's information.

2.4 General Constraints

The system requires that in order to upload the information of a match once it is finalized it will need an internet connection. The system does not allow for updates to any information about the match after a match has been finalized.

2.5 Assumptions & Dependencies

It is assumed that the end user will have access to an internet connection at some point during or after the match, they must also have access to a phone or tablet or device capable of connecting to the internet and running our application. They should also know the rules of tennis if they are to be adding scores in one of the admin accounts.

2.6 Apportioning of Requirements

-- to be filled out –

3. Specific Requirements

This section is going to cover all specified requirements of the application. Software, Hardware and User requirements are taken into account.

3.1 External Interface Requirements

3.1.1 User Interfaces

3.1.1.1 Actor is logged in as a referee or club management.

3.1.2 Hardware Interfaces

-- to be filled out –

3.1.3 Software Interfaces

3.1.3.1 Actor must provide valid information.

3.1.3.2 Match must have been initiated.

3.1.3.3 Match must have been updated.

3.1.3.4 Match cannot be finalized.

3.1.3.5 Match must be finalized.

3.1.4 Communication Interfaces

3.1.4.1 Actor is connected to the internet.

3.2 Functional Requirements

3.2.1 System Feature 1: Search Match

3.2.1.1 Introduction / Purpose of Feature

This feature allows a user to look up a specific match that has taken place. With this feature, everyone can search for a match that is already finished.

3.2.1.2 Stimulus / Response Sequence

1. System asks actor to select a date
2. Actor selects date
3. System shows all matches of that day

3.2.1.3 Associated Functional Requirements

Requirement 3.1.4.1, Requirement 3.1.3.5

3.2.2 System Feature 2: View Match

3.2.2.1 Introduction / Purpose of Feature

It enables a user to look at the data for a match that has taken place.

- The score
- The rounds
- Player name and club

3.2.2.2 Stimulus / Response Sequence

1. The user selects a match that has taken place
2. The system displays the match's page and the match's data.

3.2.2.3 Associated Functional Requirements

Requirement 3.1.4.1 Requirement 3.1.3.5

3.2.3 System Feature 3 (Initiate Match)

3.2.3.1 Introduction/Purpose of Feature

This feature is a key feature of this software. With this feature, a new match instance shall be created and made available for now or later use. The match shall contain the following information:

- Club Names
- Match Date
- Sets required to win

Optionally the match can contain:

- Team (e.g., U17-1 for age under 17 team 1, U17-2 for age under 17 team 2)
- Player Name (As GDPR)

3.2.3.2 Stimulus/Response Sequence

1. Actor selects option to initiate new match
2. System requests Actor to provide match data (Club names, match date, sets to win)
3. Actor provides match data (Club Names, match date, sets to win)
4. Actor selects to create match
5. System adds new match

3.2.3.3 Associated Functional Requirements

Requirement 3.1.1.1, Requirement 3.1.3.1, Requirement 3.1.4.1

3.2.4 System Feature 4 (Finalize Match)

3.2.4.1 Introduction/Purpose of Feature

This feature is a key feature of this software. With this feature, the match data given by the referee throughout the match shall be collected and directly uploaded to the database. In the database the data shall be stored and be available for everyone. This way it is ensured that the data shall be stored correctly in the database and shall not be changed during the process of archiving.

3.2.4.2 Stimulus/Response Sequence

1. Actor selects option to close the game.
2. System checks given data and asks actor for confirmation.
3. Actor confirms.
4. System collects given data and uploads data to the database.

3.2.4.3 Associated Functional Requirements

Requirement 3.1.1.1, Requirement 3.1.3.2, Requirement 3.1.3.3, Requirement 3.1.3.4, Requirement 3.1.4.1

3.2.5 System Feature 5 (Update Match)

3.2.5.1 Introduction/Purpose of Feature

Allows the User (Admin) the ability to update scores, player and team information during the course of the match.

3.2.5.2 Stimulus/Response Sequence

1. Actor selects ongoing game to update.
2. System displays current game information.
3. Actor changes team names and/or scores.
4. Actor indicates that they want to finalize the match.
5. System asks for confirmation.
6. Actor confirms.
7. System finalizes match information and returns the actor to the match list.

3.2.5.3 Associated Functional Requirements

Requirement 3.1.3.1, Requirement 3.1.3.2, Requirement 3.1.3.4

3.3 Performance Requirements

-- to be filled out –

3.4 Design constraints

- Our budget for this job is maximum 10000 euro for the entire project.
- This application should be finished by ...
- The application's analysis and design phase should take ... weeks
- The application's implementation should take ... weeks

- The applications security must be a high-level priority as that is the main reason for the development of this application.
- The application must be simple and intuitive for an umpire to perform their duty.
- The applications functionality will be separated based on who is using the it.
- Information initially saved to match should not be able to be changed in order to uphold the integrity of the information and prevent cheating.

3.5 Software System Attributes

-- to be filled out –

3.6 Other Requirements

-- to be filled out –

Appendix

-- to be filled out –

Index

-- to be filled out –