

Software Requirements Specification

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Game Matchup Mobile App

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## **1 Introduction**

### **1.1 Purpose**

This Software Requirements Specification (SRS) is intended to delineate software requirements for the Matchups app. This SRS is intended to provide guidance to the developers of the system to implement required functionality, as well as the test team to develop appropriate Verification and Validation (V&V) plans and procedures required to demonstrate to the customer that the system was built to this specification.

Matchups is a mobile local-focused game match-making app. People who play in-person games need a way to meet other players of similar skill and competitiveness levels and coordinate. Our mobile application will allow people living near one another who share interests in games like chess, soccer, board games, etc., to arrange games.

### **1.2 Scope**

This document specifies the requirements for the following capabilities.

Arrange games for people of similar skill levels

Track wins/losses

### **1.3 Definitions**

Table 1 Acronyms and Definitions

BDD: Block Definition Diagram.

IA: Information Assurance.

IP: Internet Protocol.

SRS: Software Requirements Specification.

STIGS: Security Technical Implementation Guides.

TCP: Transmit Control Protocol.

UDP: User Datagram Protocol.

UML: Unified Modeling Language.

V&V: Verification and Validation

## **1.5 Overview**

This document follows the recommended format specified in IEEE Std 830-1998 IEEE

Recommended Practice for Software Specifications. For Section 3, the specific template A.5

for organizing information by feature is followed.

## **2 Overall Description**

### **2.1 Product Perspective**

Matchups is intended to facilitate the organization of games. This document specifies capabilities for the mobile application that will allow users to connect with each other and agree to a time and place to play whatever variety of game they like.

Figure 1 System Block Diagram shows the system overview, using a Unified Modeling Language (UML) Block Definition Diagram (BDD).

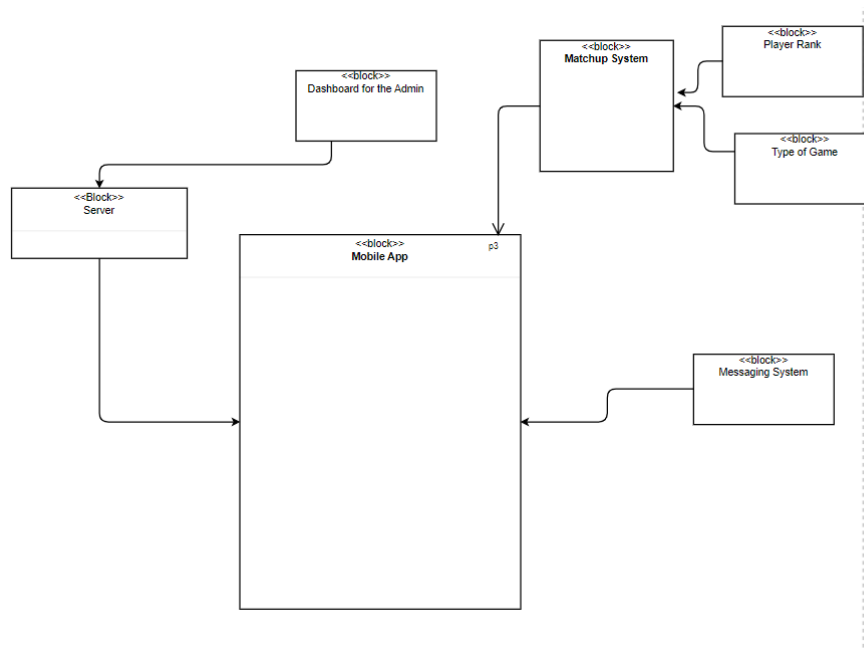


Figure 1 System Block Diagram

## 2.2 Product Functions

The following use case diagram depicts the users of the system, and the intended way in which they will interact with the system.

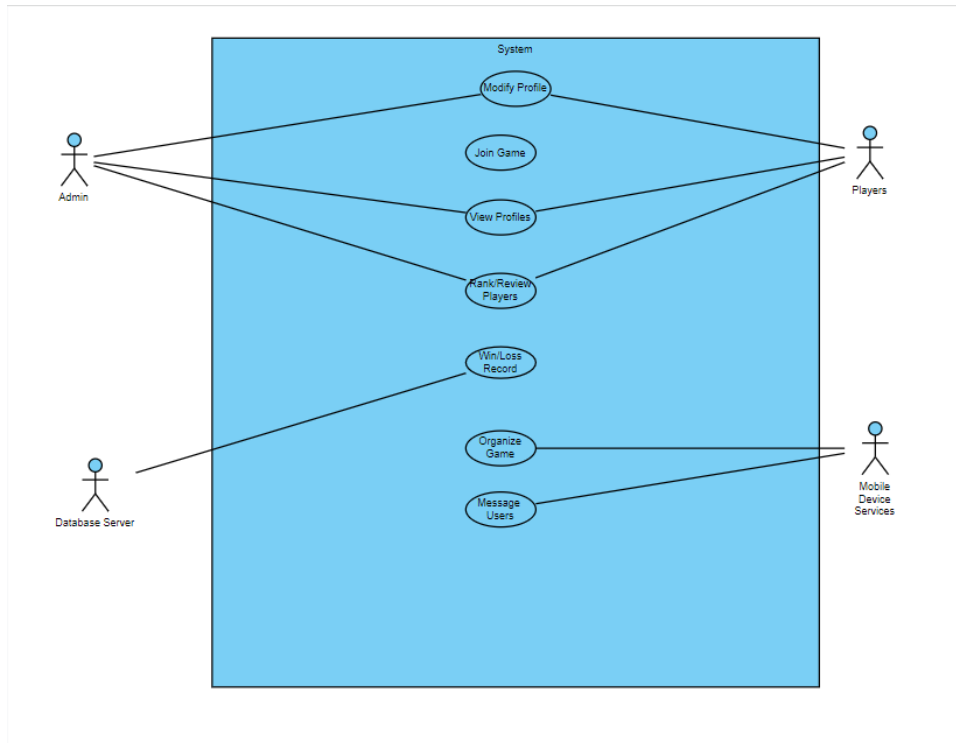


Figure 2 Matchups Use Cases

## 2.3 Use Case Descriptions

### 2.3.1 Modify Profile

Intent	Allow user to create, update, delete their own profile
Scope	Matchups App, Database Server
Primary Actor	User
Secondary Actor	Admin
Preconditions	User has downloaded app, database server running, user device has internet connection
Trigger	User selects their own profile and taps "Update"
Success Post Condition	User profile updated as specified by user
Failed Post Condition	User unable to updated profile on database server

### 2.3.2 Organize Game

Intent	Allow users to collaborate in arranging a game
Scope	Matchups App, Database Server
Primary Actor	User who organizes the game

Secondary Actor	Users who join or view the game
Preconditions	Primary Actor has created a game request page, other users have expressed interest in playing that game.
Trigger	Primary Actor creates game page
Success Post Condition	Users arrange a time and place to play specified game
Failed Post Condition	Users are unable to coordinate a game

### 2.3.3 Update Win/Loss Record

Intent	Allow users to update their own win/loss record and vouch for the record of other players
Scope	Matchups App
Primary Actor	User who updates their own record
Secondary Actor	Users who attest to the record of other players
Preconditions	Users have arranged and played a game
Trigger	User taps Update Win/Loss Record
Success Post Condition	Record for User has been updated to reflect new stats
Failed Post Condition	Record is left in outdated state

### 2.3.4 View Profiles

Intent	Allows users to access and view other players profiles
Scope	Database server, Matchups App
Primary Actor	User
Secondary Actor	Admin
Preconditions	User has app installed, user has created their own profile, database server running
Trigger	User clicks on another user's name and selects "View Profile"
Success Post Condition	App displays the selected user's profile
Failed Post Condition	Error if profile does not exist, or unable to pull from database server

### 2.3.5 Message Users

Intent	Allow users to message each other within the app to help create games
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Scope	Mobile Device Services, Matchups App,
Primary Actor	User
Secondary Actor	Admin
Preconditions	Users are interested in same game, connected to internet
Trigger	Primary user selects “message player”
Success Post Condition	Message is delivered
Failed Post Condition	Message failed to send if not connected to internet

### 2.3.6 Rank/Review Players

Intent	Allows users to rank and review other players after they compete in a game to give a better sense of their skill level
Scope	Matchups App, Database Server
Primary Actor	User
Secondary Actor	Admin
Preconditions	Users have arranged and played a game together
Trigger	After a game, user selects the rank/review player option that is presented to them
Success Post Condition	Rank and review are posted on their profile
Failed Post Condition	User declines to rank or review

### 2.3.7 Join Game

Intent	Verifies that both players arrived to the game and that it is being played
Scope	Matchups App
Primary Actor	User
Secondary Actor	Admin
Preconditions	Users have organized a game together
Trigger	After a game has been organized, once the designated time comes users will have the option to join game
Success Post Condition	App shows game as in progress and will deliver the Rank/Review option when complete
Failed Post Condition	User(s) did not show up and game was not played

## **Functional Requirements**

Users shall set a preferred radius for finding other players.

Users shall receive notifications for new match requests, messages, and upcoming games.

App shall allow user to create, update, and delete their own profile

App shall allow users to view other profiles

App shall allow users to input wins/losses, self-assessment of skill,

App shall allow players to rate each other's skill level after completing games and take this into account for future matchups

App shall allow users to arrange news games that satisfy users preferences for location and time

## **Non-Functional Requirements**

Performance: The app shall handle an increasing number of users as it gains popularity without a significant degradation in performance.

Compatibility: Ensure the app is compatible with various mobile devices, operating systems, etc.

Accessibility: The app shall support multiple languages and locales to make the app accessible to a global user base.

Usability: The user interface should be intuitive and user-friendly, catering to users of all skill levels.

Reliability: The app should have minimal downtime and be available for use consistently.

Feedback and Support: The app shall offer a support system for users to report issues or seek assistance.



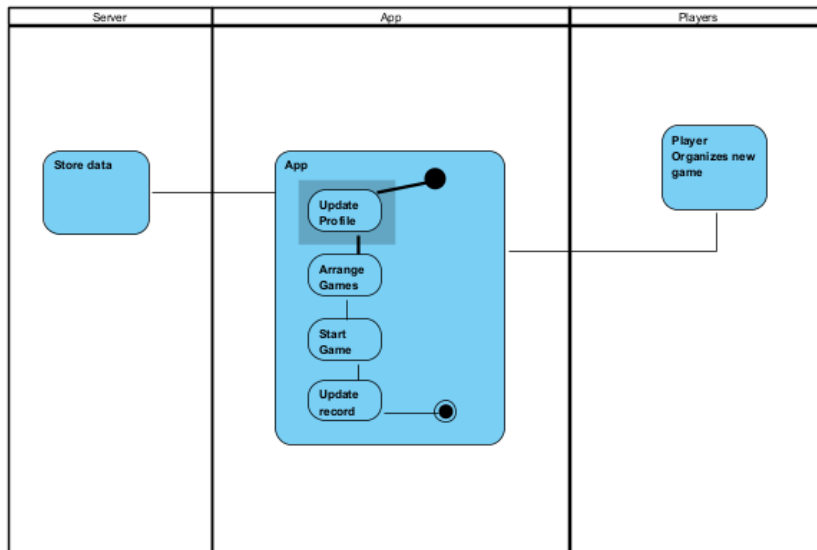
### Sunny Day Scenario

<b>Start</b>	This Scenario begins when at least 2 users have completed Join Game Use Case
<b>1</b>	The User is provided information about the prospective game by the User Interface
<b>2</b>	The User Joins the prospective game
<b>3</b>	The users play the game they organized
<b>4</b>	The users provide review/ranking and update their win/loss record
<b>5</b>	This Use Case ends when 1) the users conclude their game and record information to their profiles

### Rainy Day Scenario

Start	This Scenario begins with the application failing to connect to the database server
1	Users are unable to modify their own profiles
2	Users are unable to view other profiles
3	Users are unable to arrange games

### 3.3 System Features



3.3.1 The system software supports the Use Cases described in Figure 2 Use Cases.

3.3.2 - The system shall retrieve user profile information from a remote database server

3.3.3 - The system shall allow users to create, update, modify, and delete their own profiles

3.3.4 - The system shall allow users to define games they would like to play and their location range

3.3.5 - The system shall allow users to indicate their interest in playing specific games

3.3.6 - The system shall allow users to message each other to coordinate games

3.3.7 - The system shall allow users to review their opponents and teammates after the conclusion of games