

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Intro. to Software Engineering

GoFo Project

Software Requirements Specifications

Version 1.0

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Team

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Document Purpose and Audience

This document is a description of a GoFo “Go Football” software system to be developed. The document captures a complete description about how the system is expected to perform. The purpose of this document is to provide a detailed description about the requirements needed to successfully complete the GoFo system for the project manager, the client, and development team.

This document is about :

- A general description of the project.
- Functional and Non-Functional requirements.
- Use case diagrams, user stories, and navigation maps.

The target audience who expected to read this document :

- The CEO.
- The Project Manager.
- The Customer.
- The Client.
- The Development Team.



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Introduction

Software Purpose

Our system is simply a booking system for football playgrounds. It serves the players as well as playground owners. The purpose of our project is to enable playground owners to be able to host a playground from the application and at the same time it allows the players to book matches at a specific time in a specific place that is near to them, since our project has the great feature of showing the nearest playground in a specific area. The idea of the project came from two people who failed to find a booking at the needed hours they requested. So they decided that they are going to build a system for booking playing hours in football playgrounds themselves.

Software Scope

The scope of any project is the objectives and requirements needed to complete the project. By defining the scope of the project we are allowing managers to estimate costs and time required to finish the project. That's what makes scope management such an important part of a business, it saves both time and money. With that said, let's address the things every scope should include.

In any project, there must be certain things included in the scope section such as understanding why the project was initiated and key objectives..etc. let's address them one by one.



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Understanding why the project was initiated:

projects are initiated to meet certain goals for people. As is the case with our cool project, it was built to help players get the best football experience in the nearest area with less time (transportation time) therefore money as well.

Define the keys objectives of the project:

project objectives are what you plan to achieve by the end of the project. In our case our objective is to be able to serve as many playground owners as well as players as possible.

Identify major constraints:

- **COST** : cost is a very important project constraint. At the beginning the sponsor of the project will be stating the expectation from the project for example, “you need to complete this project with a one million dollar budget “ From this point , one million dollar budget is the project constraint.
- **Quality**: quality comes with cost. if there will be strict quality requirements in a project, this will affect the cost constraint directly.
- **Customer satisfaction**: it is the key factor for a sustainable and long running

business in the market. in the end we all do our projects for the customer as they are the source of money and if we cannot satisfy the customer, we will



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not be able to stand against competition during time. Therefore, customer satisfaction is a crucial project constraint.

- Time: it is money! when starting a project, there will be deadlines that will be proposed by the project sponsor.

Definitions, acronyms, and abbreviations

Keyword	Description
GOFO	Go Football
CEO	Chief Executive Officer
SRS	Software Requirements Specifications
UML	Unified Modeling Language
Unregistered User	Guest User refers to those users who are not registered into the system.
Registered User	Normal User who was already registered into the system.
The Administrator	Special User who controls the entire system.
Playground Owner	A kind of user who registers his playground as well as himself into the system.
Player	A user who is interested in booking a playground.
eWallet	An electronic payment system used to allow players to pay for the bookings they make and allow ground owners to collect their money.



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Requirements

Functional Requirements

Functional requirements describe what the system should do. In our Project, it allows :

The player to →

- **log in / sign up** it depends on whether he was a registered user or unregistered user.
 - **Register** with the system and create a profile for himself. Then he had multiple choices in his own dashboard to choose from.
 - He can click on the **BOOK PLAYGROUND** button to see which playground is most suitable for him whether it is a five-point playground or seven-point playground and at the same time he can choose the location that he wants to play in, also he can choose the playground with the least cost.
- Booking includes (1) Checking available grounds and time slots (2) Selecting the free time slot(s) he wants (3) Calculating the total price (4) Paying the amount from his eWallet to the eWallet of the owner (5) The system updates the status of the booked slot(s) so no one else can book it, and optionally (6) The player can **send invitation to his team members via email**.
- To make this last step easy, he can **create his favorite team** and store their names and emails. Then he can select the entire team at once to send emails to. A player can also **cancel a booking** if within the cancellation period.
- Another button in the player dashboard is the **MY REQUESTS** button which allows him to see the requests that he has made. The request can be in three states; accepted, denied and pending. If it is accepted or denied he can **remove** it from the



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dashboard altogether. On the other hand, if it was pending he can **cancel** it if he wants.

- There is also the **JOIN TEAM** button which allows the player to see if there is any team that is not completed and he can join it.
- The last button is **MY BOOKS** button where he can see his reservations , their location , the cost and time.
- One last thing the player can perform on our application is **evaluating the playground** and if he really liked it he can **add it to his favorite**.

The playground Owner to →

- **log in / sign up** it depends on whether he was a registered user or unregistered user.
- **Register** with the system and create a profile for himself like any user. with his name, ID and password, email, phone and default location. Then he requests registering a playground and adds its name, its location, its size, the available hours, the price per hour and the cancellation period. A playground is not active until approved by the administrator who may check if information given is true.
- There is a **MY PLAYGROUND** button in the owner dashboard that enables him to set and edit his data from the time his playground is available to the days that the playground is open in. Also he can set and change the hours available for booking for his playground. He can view his bookings. And he can check the money in his eWallet.



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- Another button in his dashboard is the **MY REQUESTS** button that is where he can see the requests that have been sent by the player to him and it's up to him to accept or reject the request.
- One last button is the **BOOKS** button where he can see which playground is booked and which is not and in which time.

The administrator to →

- **log in / sign up** it depends on whether he was a registered user or unregistered user.
- He has the right to **delete** a playground or **suspend** it. This is usually the case if the owner does some fraudulent activities like double booking or if the playground gets a lot of complaints from the players.
- The function **check** : if the information that the playground owner entered it is true or false. Based on it the administrator decides to activate the playground or not.
- The **activate** : The administrator activates the playground if the playground owner enters true information when he registers his playground. If the administrator suspends the playground he can activate it again.



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Non Functional Requirements

	Details
Performance	Book Playground operation arranges the grounds that appear to the player in terms of the closest ground to him through his GPS. This operation will be done within 10 seconds.
Scalability	System able to support up to 1000 simultaneous game players per minute.
Usability	The system is easy for customers to use. All operations are well named and the system is understandable to all kinds of customers.
Security	The system is secured and uses protocols against attackers. So the customers do not need to worry about their personal information.
Localization	The system does much local specifics.



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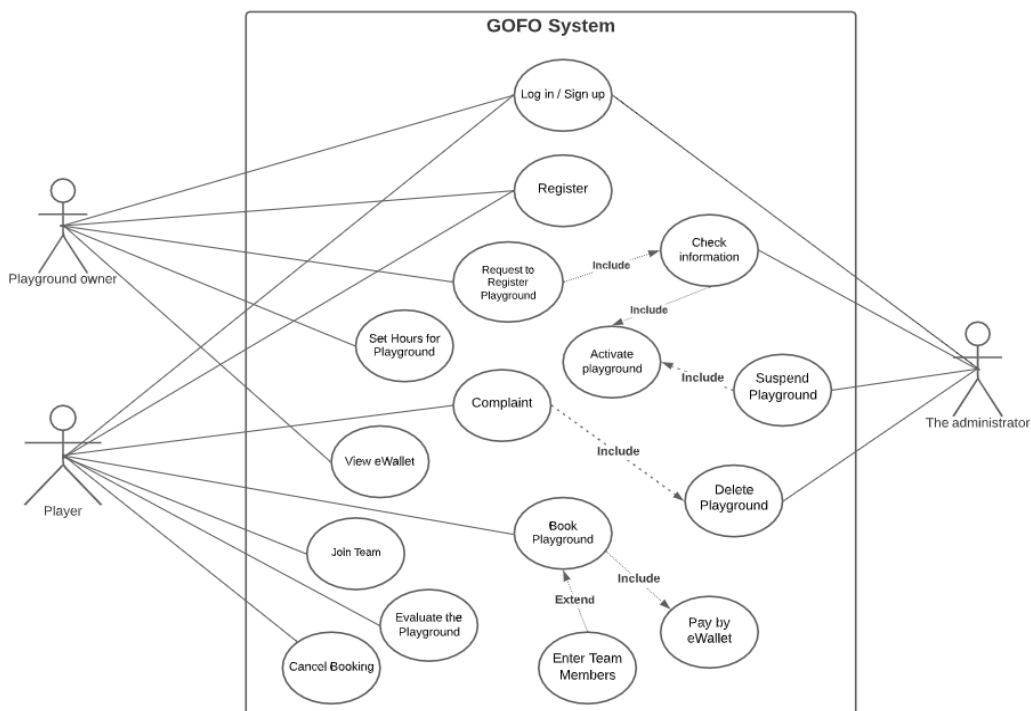
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System Models

Use Case Model

The Actors and their Operations:

- **The administrator:** He checks the information of the playground to activate it. He has the right to delete a playground or suspend it and he can activate it again or delete it completely.
- **The Playground Owner:** He registers to the system then he requests registering a playground and sets hours for it. He also can view his eWallet.
- **The Player:** He registers to the system and books a playground or cancels the booking. He can join a team and evaluate the playground.





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Enriched User Stories

User Story #1

User Story ID	US #1
User Story Name	Allow user to book a playground
Actor	Player
Description	As a Player.. I like to be able to book a cozy playground So That i can have a good experience playing
Per condition	sign up / log in
Post condition	pay money for the owner
Acceptance Criteria	Given I'm a player and I'm on the book playground page When I fill in the needed data and I click the BOOK button Then the system book the playground I chose for me.



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Normal Scenario (player)

Action	System Response
1- Player Enter the needed data 2- Click Book	
	3- System Verify player data 4- System displays the amount of money that will be withdrawn from the player eWallet.
5- the player clicks Agree	
	6- System displays “ money has been withdrawn successfully!” message.

Exceptional Scenario

Actor Action	System Response
1- Player Enters the needed data 2- Click BOOK	
	3- data is incorrect 4- Systems rejects the booking process and displays an error message

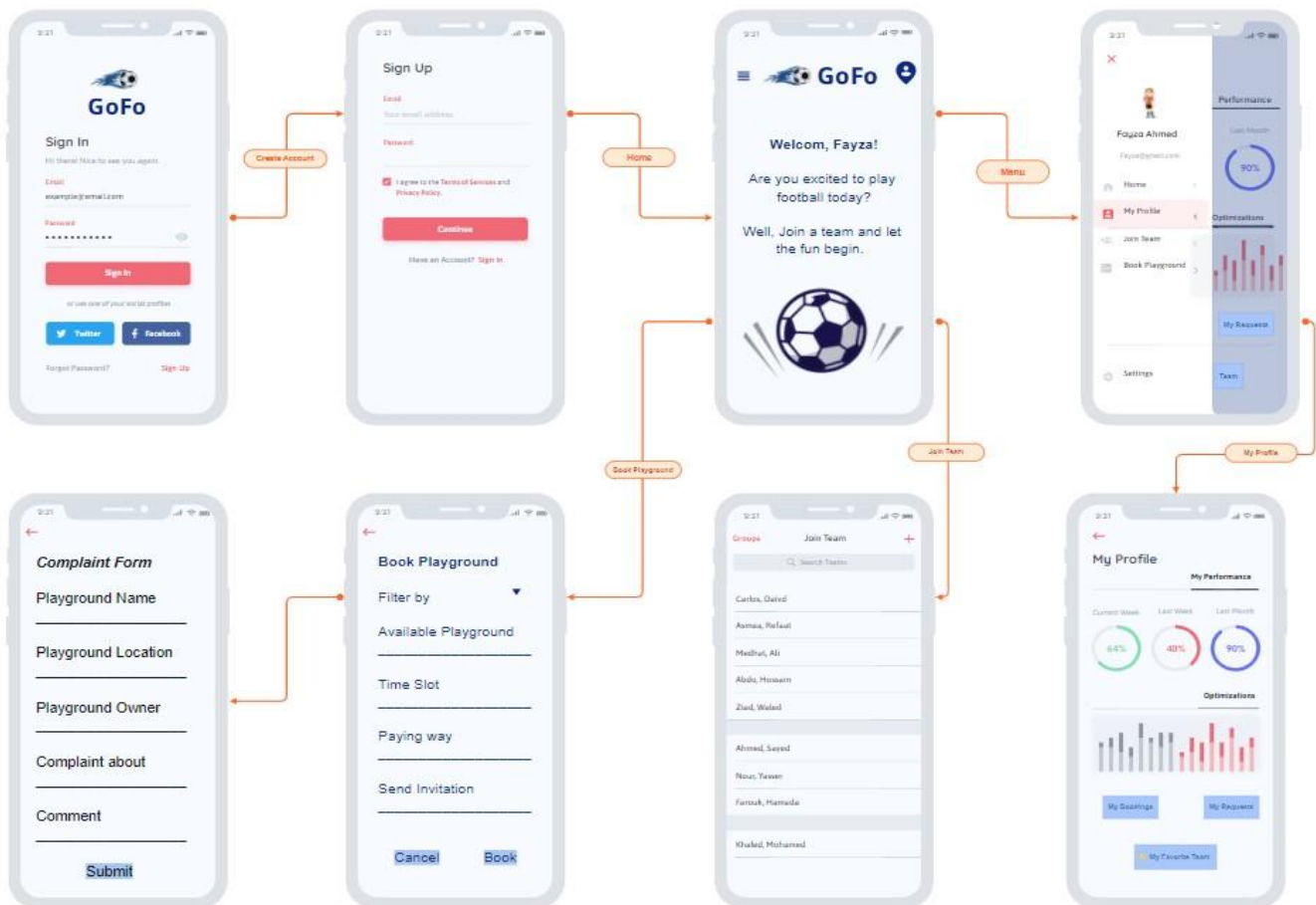


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Screen Design



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Slot	Integer	Greater than 0 and less than or equal 3
Password	String	Greater than or equal 8 letters
Paying Amount	flout	paying amount less than money in eWallet



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User Story #2

User Story ID	US #2
User Story Name	Allow the owner to register his playground
Actors	playground owner
Description	As a playground owner I like to be able to register my playground So that i can get a secure transaction process
Per condition	register the playground
Post condition	set the available hours to book
Acceptance Criteria	Given I'm a playground owner and I'm on the register playground page When I fill in the "Username" and "Password" fields with my authentication credentials and I click the REGISTER button Then the system registers the playground for me.



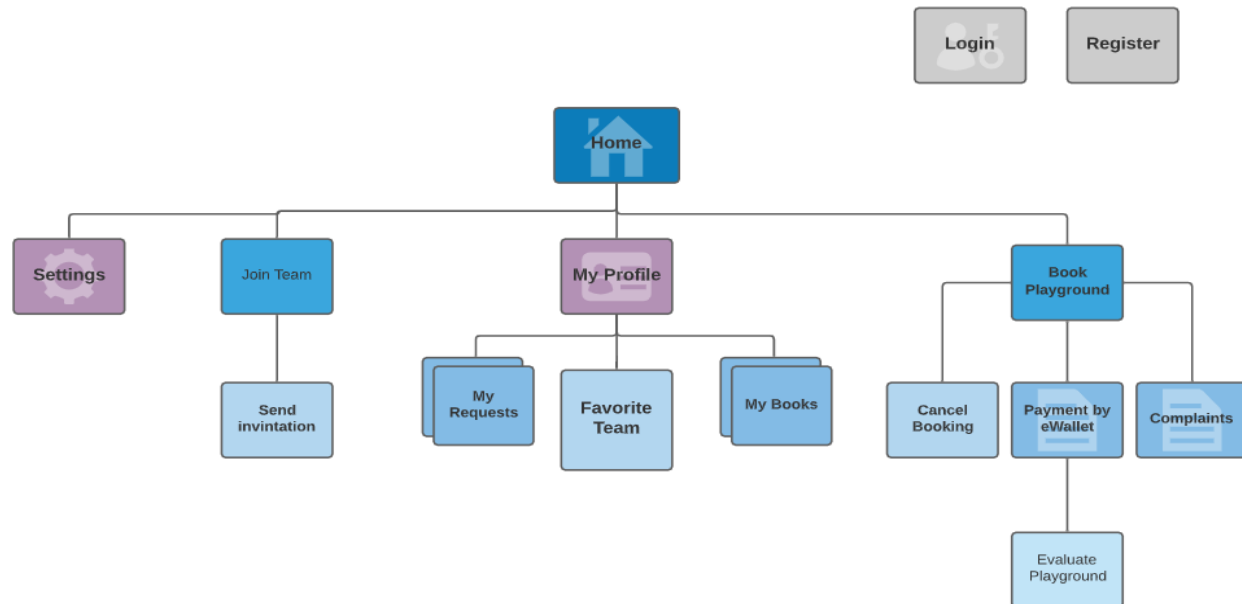
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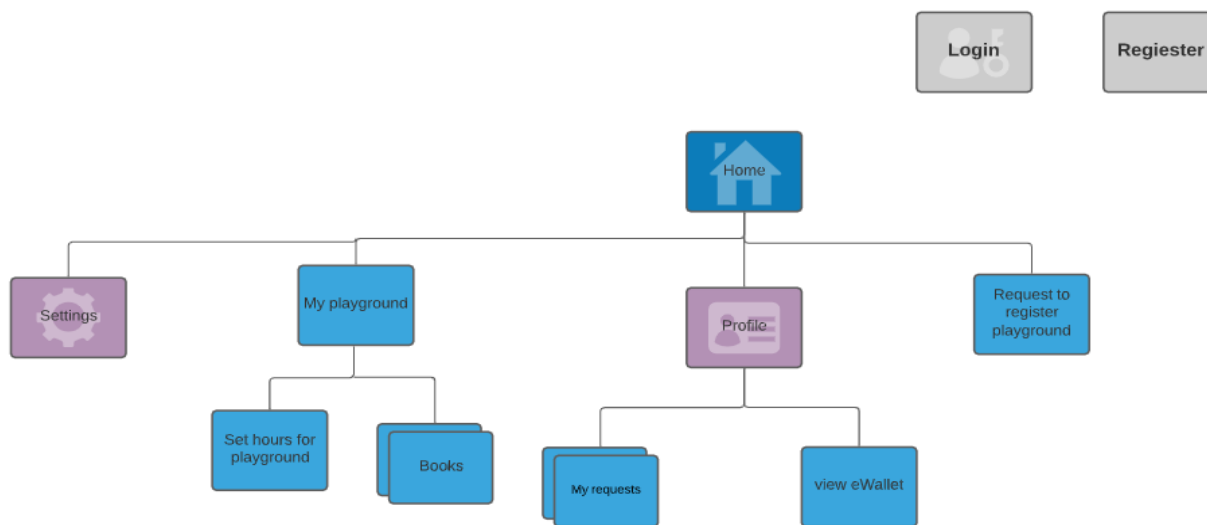
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System Navigation Map

The Player view:



The Playground Owner view:





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Tools

- lucidchart. (n.d.). <https://lucid.app/persona/lucidchart#>.
- Online Mockup, Wireframe & UI Prototyping Tool · Moqups. (n.d.) <https://app.moqups.com/>

Ownership Report

Student	Items they created
Fayza Ahmed Sayed Ahmed Abo Zaid	Use Case Model, Non-Functional Requirements, Part of Navigation Map , Document purpose and audience, definitions , Acronyms and abbreviations, Screen Design, Data Dictionary.
Asmaa Refaat Abd Elmabood Habeb	Functional Requirements, Part of Navigation Map ,Introduction(Software purpose , Software Scope), Enriched user story