

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Intro. to Software Engineering

GoFo - “Go Football”

Software Requirements Specifications

Version 1.0

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May & 2021



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Project: < **GoFo** - “Go Football”>

Software Requirements Specifications

Contents

Team	3
Document Purpose and Audience	3
Introduction	3
Software Purpose	3
Software Scope	4
Definitions, acronyms, and abbreviations	4
Requirements	4
Functional Requirements	4
Non Functional Requirements	6
System Models	8
Use Case Model	8
Enriched User Stories	10
System Navigation Map	34
Tools	34
Ownership Report	35



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Software Requirements Specifications

Team

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Document Purpose and Audience

- this document is an initial representation of the GOFO system and it describes the detailed requirements of the system and also shows the different scenarios that can be followed, in this document we will speak about each component, each component will be described in detail that satisfies the client needs and makes it easier for the users to use and Dealing with it.
- our system target peoples who play football and also playground owners and anyone interested with football. we target men and youth especially because people who usually play football their age between 14:34 and also most of them are men, you will probably find from 1000 people only 1 woman who play football, therefore woman who play football can also use the application.

Introduction

Software Purpose

- This document is about illustration of how our system GOFO ("Go Football") is working. the system is application for booking football playgrounds. you can from it book a football playground at certain time and at specific region and choose the playground you will play on it without any effort from you, just open the application and book a playground. at the next sections there are more details and illustration about our system and how you can deal with it.



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Software Scope

- Every user will have his own dashboard, as a player there will be four tabs, one of them he can request to book a playground, the second one will show his requests and the third will show his bookings and the fourth will create a team.
as a playground owner will have three tabs, the first one describes his playground and the second shows the request he received from the players the third help him to know the status of specific playground.
and at the next sections there will be more details about the system.

Definitions, acronyms, and abbreviations

- cancellation period: the time that player can cancel his book and get his money without any losses.
- Suspend playground: Hide this playground from appearing to players to booking in it.
- eWallet: is an electronic payment system Resembles bank system, anyone has eWallet can send/receive money to/from another eWallet owner, in this system it used to allow players to pay for the bookings they make and allow ground owners collect their money.
- Bug: mistake or problem in computer program.
- IOS: refers to Iphone operating system.
- WI-FI: refers to wireless networking technology.
- E-mail: Electronic mail.

Requirements

Functional Requirements

- when anyone enters the application he can register and system takes this inputs from him (his name, ID and password, email, phone ,and default location), then create his profile.
- There are three types of users (administrator/player/playground owner)
 - When a user has an administrator role he can oversee the overall operations of the system and ensures that no fraud takes place, and he has 3 options:



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1. Active playground: he checks if the information given about the playground and its owner is true and if it true he active the playground.
 2. Suspend playground: if the owner of a playground does some fraudulent activities like double booking or if the playground gets a lot of complaints from the players.
 3. Delete playground: if he suspends a playground and sees that owner of the playground has many violations and exceeds its limits of complaints.
- When the user registers as a player and signed in he has 5 options:
 1. Book playground: He can display the playgrounds near to him or in a specific location on specific dates. He can filter them by the hours and date he selects, when he choose a playground he able to see the number of playgrounds, type of ground, number of players on the ground, and available times in playground, then he can choose the playground and the time that he needs and send a request to playground`s owner to book, but he should have enough balance in his eWallet to pay for this hours or his request will not send to playground owner.
 2. My requests: in this option he can see all his requests and the status of the request (accepted, denied, binding), if the request is denied or accepted he can remove it from this tab. If the request is binding he can cancel it so the request will not appear to the playground`s owner.
 3. Join team: in this option, he has many choices, he can send invitations to his team members via email. Or 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, or he can add that he is looking for players for his team so anyone can join him, or he can see the incomplete teams and join any team that he needs. When his team becomes complete his team status changed to complete and also changed in playground`s owner that the team becomes complete.
 4. My books: in this field, he can see all his books (their time, place, and teams), and he can cancel any of them if he within the cancellation period.



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Project: < GoFo - “Go Football”>

Software Requirements Specifications

5. My eWallet: from it, he can see his balance and can send the price of his books from his eWallet to the playground owner's eWallet or send some money to another eWallet.
- When the user registers as playground's owner he requests registering a playground system takes some inputs from him (its name, its location, its size, the available hours, the price per hour, and the cancellation period), then he waits for the administrator to accept his request and active his playground, when administrator accept his request his playground added to the system automatically, and when he signed in he has 4 option:
 1. My playground: in this option, he can see and update the details of his playground such number of playgrounds he has, workdays, times of work, photos of the playground.
 2. My requests: in this option, he can see all book requests of his playground and its details such as this request is for any playground, the hours they need to reserve, information about the request owner, and his team status. After that, he can accept when the teams are complete or deny any request.
 3. Books: in this option he can choose any of his playgrounds to see booked hours, their times and for whom, and available hours that can be booked.
 4. My eWallet: he can see his balance, send some money to another eWallet and collect the money of books from it.

Non-Functional Requirements

- **Application Platform:**
 - Application will work on smart phones only (IOS – Android).
- **Application Conditions to work:**
 - Application will work only if there is available network (WI-FI or Mobile Data).
 - Anyone can register and make account.
 - System will not allow user to have more than one account.
- **Application Security:**
 - Personal information of user will be secured and will not be shared to others except (name – email – address).



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- **Application performance:**

- All operation will be done at the same instance (at perfect internet connection).
- At bad connection requests will take time to be done.

- **Application Maintainability:**

- The application will accept any bug or anything bad at the application, and will be versions of updates of the application.

- **Application Scalability:**

- We hope that the application will able to serve all the football players in Egypt.

- **How the application run:**

- **First : me as an administrator:**

- I will have control for all operations that happen in the application.
- I can (active or suspend or delete) playground and all these operations will be done instantly, and the playground status will be changed to the new status.

- **Second : me as a player user:**

- I can make 5 operations (as mentioned at the previous section).
- When I request to book a playground, my request will be sent to the playground owner instantly.
- I can also pay the charge of the booking through my eWallet in the application.

- **Third : me as a playground owner :**

- I can make 4 operations (as mentioned at the previous section).
- I can (Accept or Deny) the request of any booking, then the status of the request will be changed from pinned to the new status instantly, otherwise it still pinned.
- I can also receive my charge through my eWallet.



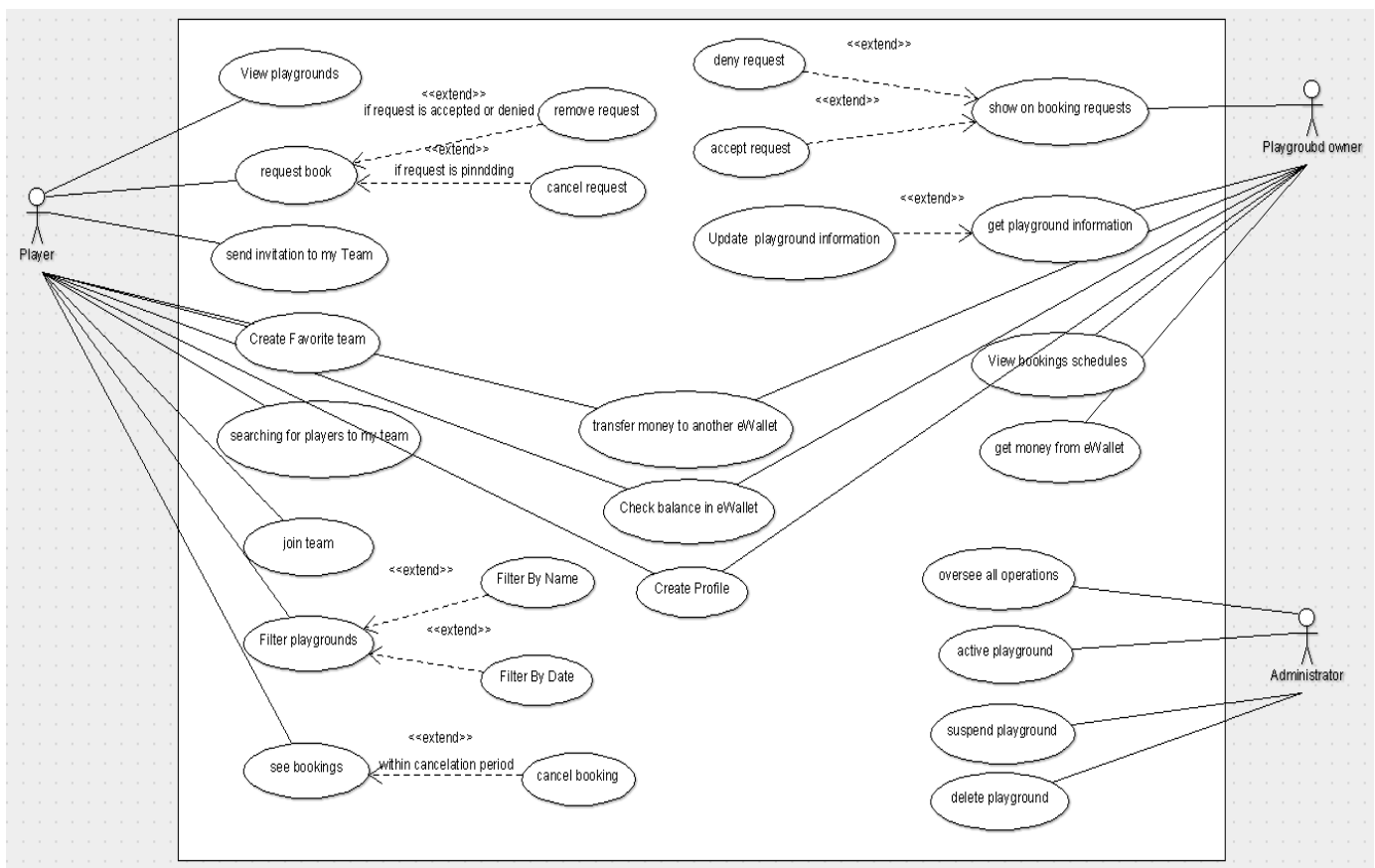
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System Models

Use Case Model



Player: This is a person who interested in booking a playground. His role is to make his team and send booking request to playground owner to book a specific time in play ground to play with his team.



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Playground owner: This is the person who needs to make his playground available for players to play in. his role to register his playground and its information then follow the booking request and accept them according to his bookings schedule.

Administrator: this is a person who has a permission to follow all operations that is done. His role to suspend or delete playground if he sees any Illegal behavior.



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Enriched User Stories

- User Story #1

User Story ID	US #1
User Story Name	Creating Profile
Actors	Player and playground owner
Description	<p>As a player or playground owner</p> <p>I like to be able to create my profile</p> <p>So that I can book a play ground as user or add my playground as playground owner</p>
Pre condition	
Post condition	
Acceptance Criteria	<p>Given I’m a new system user and I’m on the Sign-up page</p> <p>When I fill in the “Username”, “Password”, “phone”, “default location” fields with my information and I click the Sign-up button</p> <p>Then the system signs me up</p>

- Scenarios

Normal Scenario

Actor Action	System Response
1- User click register.	
	2-system displays sign-up form.
3- user fill the form.	
4-user click sign-up	
	5-system check user data.
	6-system make profile for the user.



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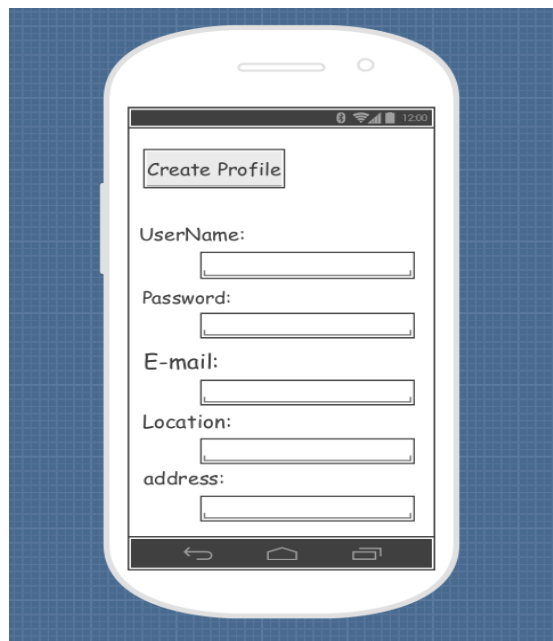
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Software Requirements Specifications

Exceptional Scenario

Actor Action	System Response
1- User click register.	2-system displays sign-up form.
3- user fill the form.	
4-user click sign-up.	5-system check user data. 6-system find out some input wrong. 7-system display “invalid information”

- Screen Design



1-create profile screen



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
UserName	Text/50	Mandatory: Y Updateable: Y
E-mail	Text/50	The value must be in e-mail format Mandatory: Y
Password	Text/50	Updateable: Y
Address	Text/150	Mandatory: N
Location	Text/150	Updateable: Y

- User Story #2**

User Story ID	US #2
User Story Name	View, filter playgrounds and request a book
Actors	Player
Description	<p>As a player user</p> <p>I like to be able to view all playground on the system and filter them by name or price and request a book.</p> <p>So that I can choose any playground to book on it.</p>
Per condition	Have a profile
Post condition	Your request is send to playground owner
Acceptance Criteria	<p>Given I'm a logged-in system player user and I'm on the Services page</p> <p>When I click on book playground tab</p> <p>Then I can see all playground on the system and filter them by name or price and request a book.</p>



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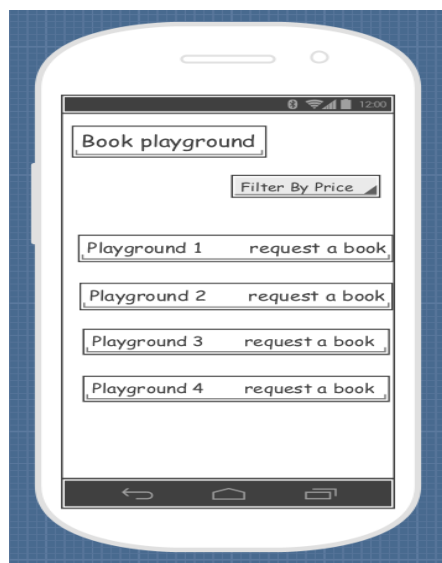
Software Requirements Specifications

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User click book playground tab. Or (option) User click book playground tab then click on filter by name/price	
	2-system displays playgrounds.
3-User click on request a book for playground	
	4-system send his request to playground owner

- **Screen Design**



2-book playground tab screen



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- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Filter By location	Text/50	Mandatory: N Updateable: Y
Filter option	Radio Button/2 options	Mandatory: N Updateable: Y
Playgrounds names	list	

- User Story #3**

User Story ID	US #3
User Story Name	Remove or cancel request
Actors	Player
Description	<p>As a player user</p> <p>I like to be able to remove requests that accepted or denied and cancel requests if it is pinning</p> <p>So that the request is removed from my requests tab</p>
Per condition	Send request to book a playground
Post condition	Request removed from my requests tab
Acceptance Criteria	<p>Given I'm on my requests tab and need to cancel/remove request</p> <p>When I click on cancel/remove request</p> <p>Then the system cancel/remove my request and delete it form my requests tab</p>



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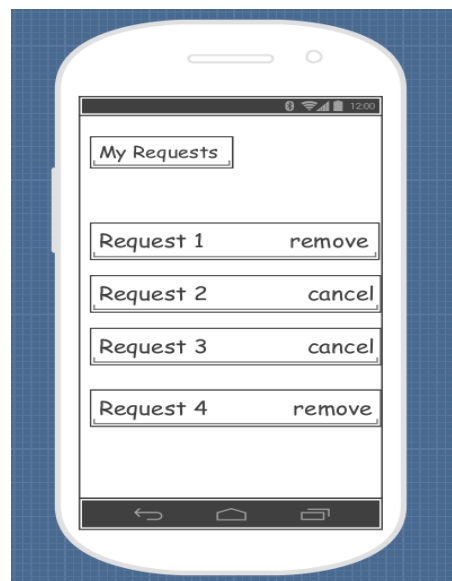
Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- User click my requests.	
	2-system displays all his requests.
3- user click on cancel/remove request.	
	5-system check request status. 6-system cancel/remove the request and delete it from my requests tab.

- Screen Design



3-My requests tab screen



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
requests	list	
Cancel/remove	button	

- User Story #4**

User Story ID	US #4
User Story Name	See and cancel the bookings
Actors	player
Description	<p>As a player user</p> <p>I like to be able to see my bookings</p> <p>So that I can see the places and times of bookings and cancel any of them</p>
Per condition	Book request accepted from playground owner
Post condition	Booking is canceled and deleted from my bookings
Acceptance Criteria	<p>Given I'm a logged-in system player user and I'm on the Services page</p> <p>When I click on my bookings tab</p> <p>Then the system displays all of my bookings</p>



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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- User click my bookings tab.	
	2-system displays all my bookings.
3-User click on Cancel booking	
	4-System check the cancelation period 5-System cancel the book

Exceptional Scenario

Actor Action	System Response
1- User click my bookings tab.	
	2-system displays all my bookings.
3-User click on Cancel booking	
	4-System check the cancelation period 5-system found that cancelation period expired 6-System display “cancelation period expired”



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Software Requirements Specifications

- Screen Design



4-My bookings tab screen

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
bookings	list	
cancel	button	



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Software Requirements Specifications

- User Story #5

User Story ID	US #5
User Story Name	Send invitations and create favorite team
Actors	Player
Description	<p>As a player user</p> <p>I like to be able to send invitation to players and create my favorite team</p> <p>So that they can join my team easily</p>
Per condition	Have a booking
Post condition	
Acceptance Criteria	<p>Given that I'm on join team tab and need to invite friend to my team or create my favorite team</p> <p>When I type the e-mail and click on invite</p> <p>Then the system sends this invite to the player with the e-mail that I typed or add him to my favorite team.</p>

- Scenarios

Normal Scenario

Actor Action	System Response
1- User click join team tab.	
	2-system displays all requests.
3- User Click on invite or add to my favorite team.	
	4-system send invitation message to the player or add the players to user favorite team



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Software Requirements Specifications

Exceptional Scenario

Actor Action	System Response
1- User click join team tab.	2-system displays all requests.
3- User Enter the e-mail and click on invite	4-system found that the player team is full then display “team is full”.

- Screen Design



5-join team tab screen



6-invite players screen



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Invite players	button	
Join/search for players	button	
Player ID	Text/50	The value must be in e-mail format Mandatory: Y Updateable: Y
Invite to team/favorite team	button	

- User Story #6**

User Story ID	US #6
User Story Name	Search for players or join team
Actors	Player
Description	<p>As a player user</p> <p>I like to search for players and send request that I need players for my team or join another players team</p> <p>So that the players can join my team or I can join their teams</p>
Per condition	Have a booking
Post condition	
Acceptance Criteria	<p>Given I'm on join team tab</p> <p>When I click on join team or request players</p> <p>Then the system add me to the team or send my request to players</p>



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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- User click on join team tab.	
	2-system displays all requests.
3- user click on request players for team or join team	
	4- system add his request to join team tab/add the player to this team.

Exceptional Scenario

Actor Action	System Response
1- User click on join team tab.	
	2-system displays all requests.
3- user click on request players for team.	
	4-system found that the player team is full then display “team is full”.



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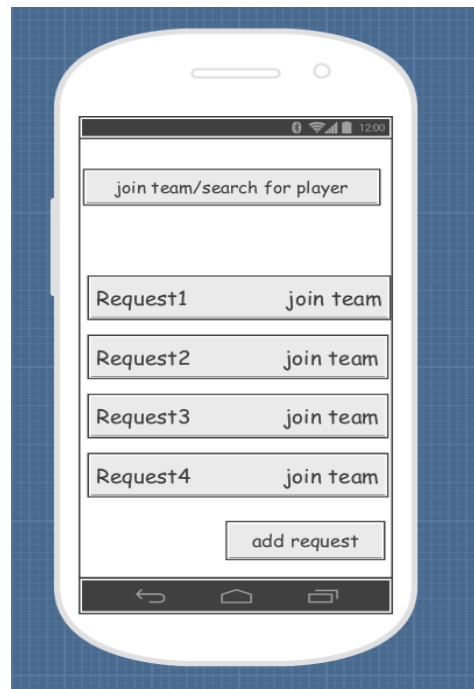
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Software Requirements Specifications

- Screen Design



6-join team tab screen



7-join team/search for players screen

Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Invite players	button	
Join/search for players	button	
Requests	List	Updateable: Y
Join team	button	
Add request	button	



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Software Requirements Specifications

- **User Story #7**

User Story ID	US #7
User Story Name	Check and transfer money to another eWallet
Actors	Player and playground owner.
Description	As a player or playground owner user. I like to send/receive money to/from another eWallet. So that the money transferred or received.
Per condition	User activate his eWallet.
Post condition	User eWallet balance will changed
Acceptance Criteria	Given I'm on my eWallet tab and need to send/receive money. When I click on send/receive money. Then the system takes the amount of money from my eWallet and send to another specific eWallet / display all received operations.

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User click my eWallet.	
	2-system displays send or receive options.
3- user click on send/receive.	
	4- when send, system ask to enter the ID of the eWallet.
	5-system transfer money to it.
	6- when receive, system display all received operations.



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Software Requirements Specifications

Exceptional Scenario

Actor Action	System Response
1- User click my eWallet.	
	2-system displays send or receive options.
3- user click on send/receive.	
	4- when send, if no enough money in eWallet.
	5- system send message to user to enter valid amount of money.
	6- when receive, system display all received operations.

• Screen Design



8- eWallet tab

9- balance tab

10- send money tab

11- received money tab



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
See balance, send money, receive money	button	
Balance	Text/150	
Ewallet ID	Int/20	Mandatory: Y Updateable: Y
Send Received money	button list	

- User Story #8**

User Story ID	US #8
User Story Name	Show on booking requests
Actors	Playground owner
Description	As playground owner user. I like to accept/deny booking requests. So that the player request accepted/denied .
Per condition	The user player send request.
Post condition	Request status changed.
Acceptance Criteria	Given I'm on my requests tab and need to accept/deny request. When I click on accept/deny request. Then the player request will be accepted/denied.



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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1-User click my requests.	
	2-system displays all requests.
3- user click on accept/deny.	
	4- if accept, system transfer it to bookings.
	5- if deny, system delete the request.

- Screen Design



12- booking request tab



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
requests	list	
Accept/deny	button	Mandatory: Y

- User Story #9**

User Story ID	US #9
User Story Name	Get playground information.
Actors	Playground owner
Description	<p>As playground owner user.</p> <p>I like to know my playgrounds information.</p> <p>So that I can update the information of any playground.</p>
Per condition	I add playgrounds when I register.
Post condition	Maybe playground information changed.
Acceptance Criteria	<p>Given I'm on get playground information tab and need to see/update information of playgrounds.</p> <p>When I click on display/update playgrounds.</p> <p>Then the playground information displayed.</p>



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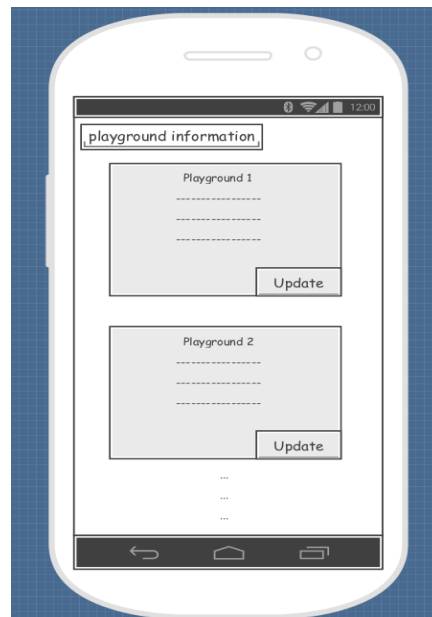
Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1-User click get information of playgrounds.	
	2-system displays all playgrounds information with additional option update.
3- user click update	
	4- system ask user to enter the new information.
5- user enter new information.	
	6- system will update the information.

- Screen Design



13- playground info tab



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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Playgrounds	List	Updatable: Y
Update	button	

- User Story #10**

User Story ID	US #10
User Story Name	View bookings schedule.
Actors	Playground owner
Description	<p>As playground owner user.</p> <p>I like to see my bookings schedule.</p> <p>So that I can know the rush hours in my playgrounds.</p>
Per condition	Players booked playgrounds
Post condition	
Acceptance Criteria	<p>Given I'm on view bookings schedule tab.</p> <p>When I click on booking schedule.</p> <p>Then I know the rush hours of my playgrounds.</p>

- Scenarios**

Normal Scenario

Actor Action	System Response
1- User click view bookings schedule.	
	2-system displays all bookings of all playgrounds with time and date.

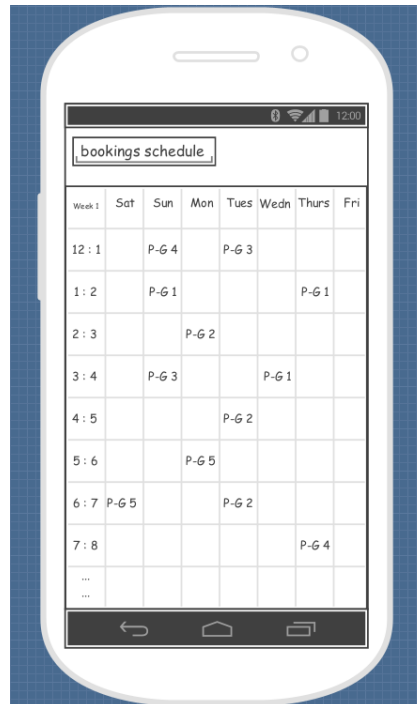


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- Screen Design



14- Booking schedule tab

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Schedule	table	Updateable: Y



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Software Requirements Specifications

- **User Story #11**

User Story ID	US #11
User Story Name	Suspend/Remove/active playground
Actors	Administrator
Description	<p>As administrator user.</p> <p>I like to Suspend/Remove/active playground</p> <p>So that the players can book in this playground or stop them from booking on it.</p>
Per condition	
Post condition	
Acceptance Criteria	<p>Given I’m on view play grounds tab</p> <p>When I click on Suspend/Remove/active playground.</p> <p>Then the system Suspend/Remove/active this playground</p>

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- administrator click Suspend/Remove/active playground.	
	2-system Suspend/Remove/active this playground.



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Software Requirements Specifications

- Screen Design



15- playgrounds list

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
playgrounds	list	Updateable: Y

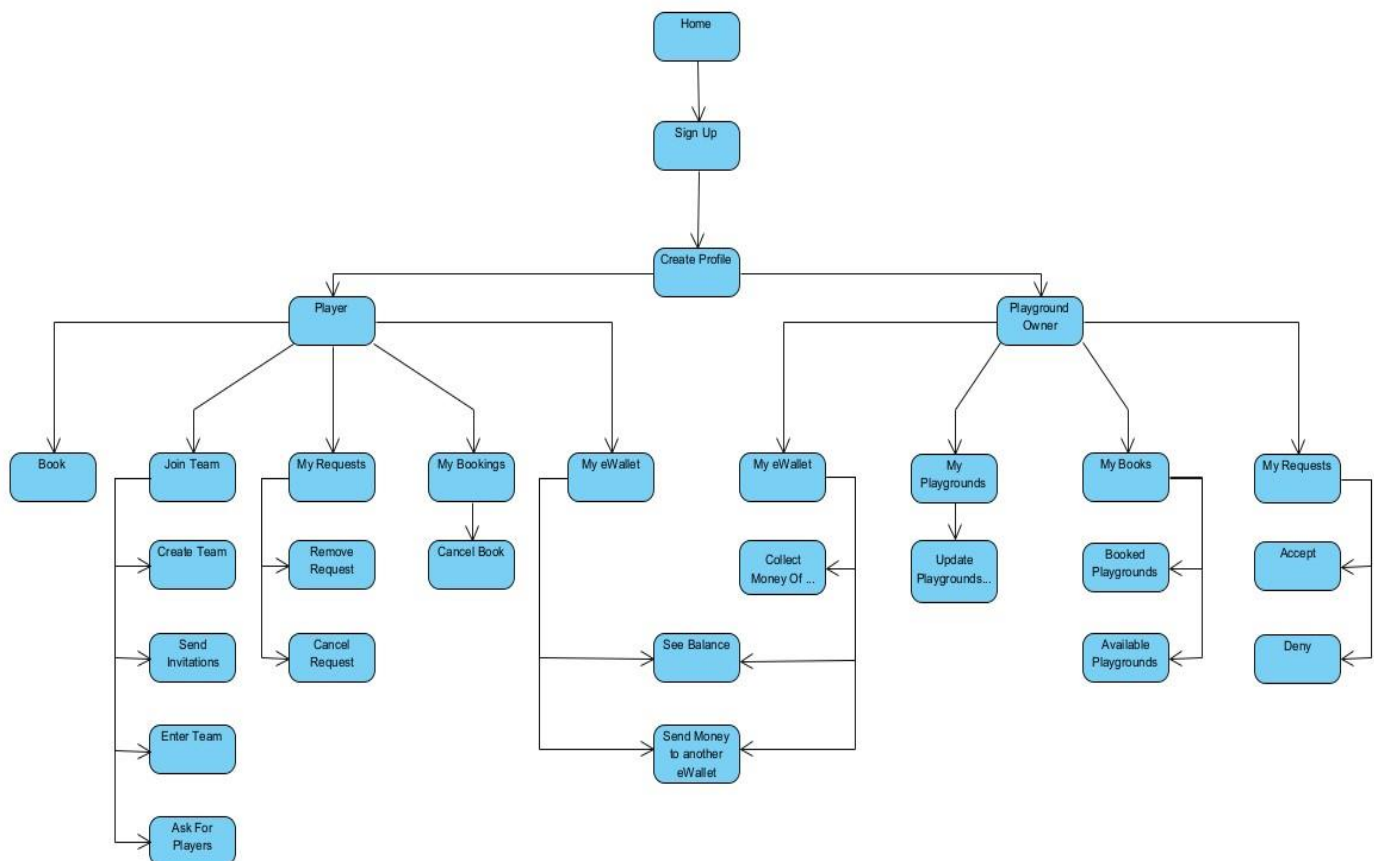


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Software Requirements Specifications

System Navigation Map



Tools

We use (ARGOUML, visual paradigm).



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Software Requirements Specifications

Ownership Report

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Student	Items he created
Mohamed Adel Mohamed Samir	Use case model and functional Requirements, definitions, acronyms and abbreviation, User story #1, #2, #3, #4, #5, #6, #11.
Sayed Shaaban Sayed Ahmed	Navigation map, non-functional requirements, Part of Document Purpose and Audience, User story #7, #8, #9, #10.
Abdelrahman AbdelMohsen Elenebsy Bahlol	Part of Document Purpose and Audience, software purpose, software scope