

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Intro. to Software Engineering

GOFO

Software Requirements Specifications

Version 1.0

**Team Names and Emails and Phone
of Team Leader**

Month & Year



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

Contents

Team	3
Document Purpose and Audience	3
Introduction	3
Software Purpose	3
Software Scope	3
Definitions, acronyms, and abbreviations	4
Requirements	5
Functional Requirements	5
Non Functional Requirements	6
System Models	7
Use Case Model	7
Enriched User Stories	8
System Navigation Map	15
Tools	34
Ownership Report	38



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

Team

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Document Purpose and Audience

- Any document anywhere should tell us 2 things:
 - what this document is : football playgrounds
 - who is expected to read it: administrator and software's engineers that intersected to learn how develop software engineering documents
- Write in simple notes: booking system for football playgrounds
- List the target audience to read this document (e.g. administrator? software's engineers?)

Introduction

Software Purpose

GOFO Software purpose is to make football playground booking process easy for both players and playground owners by saving transportation cost for booking, time wasted in transport and effort. And it software services the administrator, playground's owner and the player to help in making the registration of the playgrounds easy and organized.

Software Scope

- The system allows the player and the playground owner to create a profile by registering into the system and it allow to owner to add the playground information's in the system.
- Player can book the nearly or specific playground, check the available hours, calculate cost for the hour.
- The system allows the player to book the playground for the wanted amount of time.



CS251: Phase 1 – Team Name

Project: <Project Name>

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Definitions, acronyms, and abbreviations

Word	Definition
Profile	All data needed about playground owner or player
Available hours	Free time that the player can book the playground on it.
Cancellation period	Maximum time that the player could cancel the playground registration.
Active playground	The playground state that is approved by the administrator and player can book this playground when it work or active.
Suspended playground	Playground which its owner does some fraudulent activities like double booking or if the playground gets a lot of complaints from the players.
Booked playground	Playground which is already registered by player.
eWallet	An electronic payment system used to allow players to pay money for his bookings and it allow to the ground owners to collect the money and this system externally connected with a service like fawry.



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Project: <Project Name>

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Requirements

Functional Requirements

1. Registration for the users: add his name, id, password, e-mail, phone number and default location.
2. Registration for the playground: its name, location, size, available hours, price per hour, cancellation period.
3. Administrator checking the entered data for the approval to the playground so players start booking it.
4. Suspending the playground, if the owner does some fraudulent activities like double booking or if the playground gets a lot of complaints from the players.
5. Administrator can Re-activating the playground again or delete it completely.
6. Reporting the playground if the players faced any problem in it.
7. eWallet: allow players to pay for the bookings, allow ground owners collect their money, allows players to add money to their eWallet and ground owners to take the money from it, Any user can check the money in his eWallet or transfer some of it to another eWallet.
8. Playground owner setting and changing the hours available for booking for the playground.
9. Player setting up the booking process: Checking available grounds and time slots, Selecting the free time slot(s)
10. Calculating the total price, Paying the amount from his eWallet to the eWallet of the owner
11. Player Can Search for the playgrounds using specific location on specific dates and filter filter them by the hours and date he selects.
12. Administrator Updating the status of the booked slot(s) so no one else can book
13. Player send invitation to his team members via email



CS251: Phase 1 – Team Name
Project: <Project Name>

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14. Player create a team: enter individual names (other players) and emails
15. Player cancel a booking (within the cancellation period).

Non Functional Requirements

	Details
Performance	registration process will take from 3 to 4 ms creating team process and choosing team will take from 2.5ms to 3.2ms
Security	We will use Aman as an external service to connect the eWallets of the players and the playground owners.
Accessibility	Anyone could access the application and register as a player or an playground owner if he reached the specified data of the registration
Usability	The system doesn't scope on a specific level of community or specific degree of education but anyone can use it
Scalability	System should be able to support up to 500 simultaneous players and playgrounds owner.
Reliability	System will send verification mail In order to verify the validity of the information.
Portability	The Design will be responsive so the portability will be easy from any device.

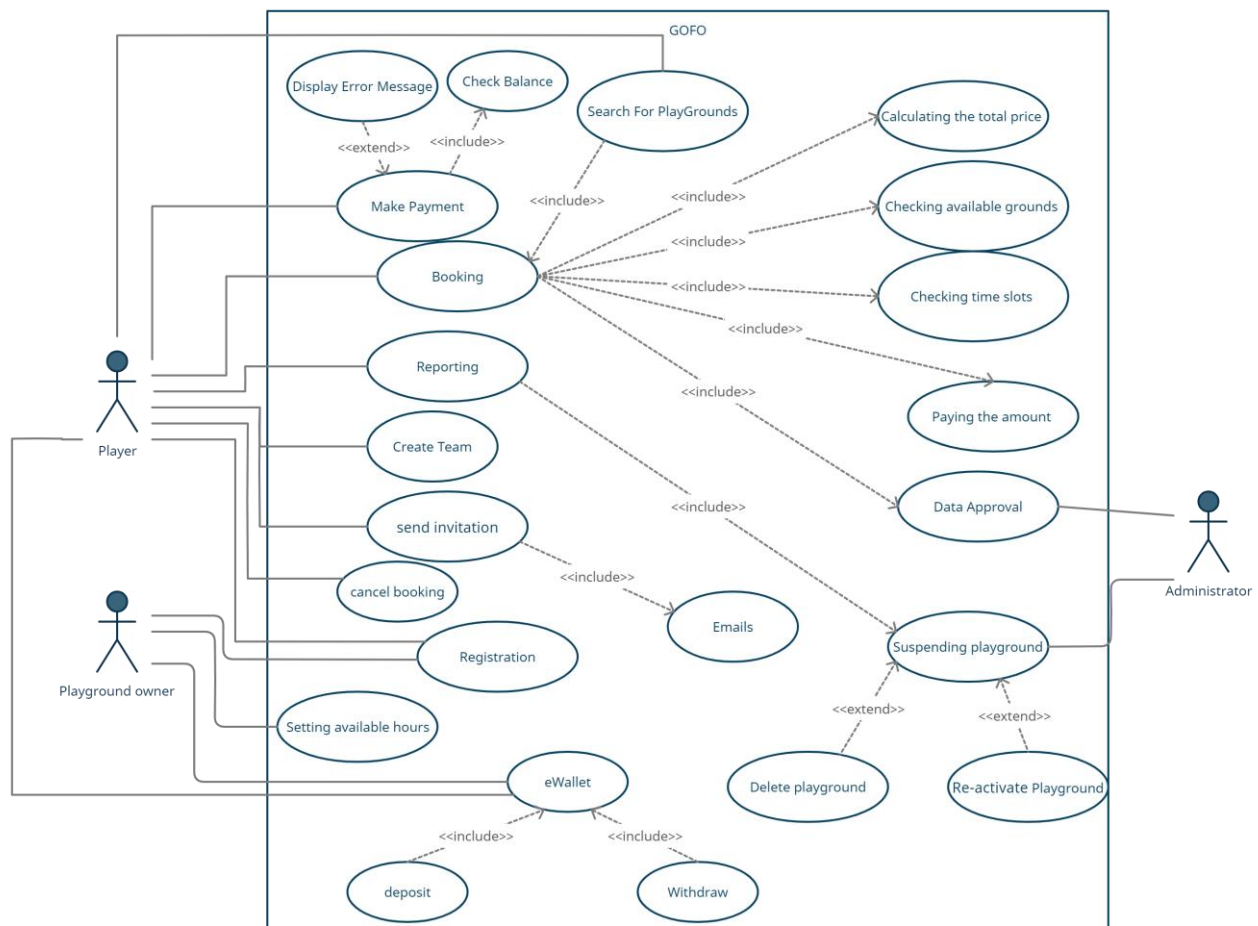


CS251: Phase 1 – Team Name
Project: <Project Name>

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System Models

Use Case Model



Enriched User Stories



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Project: <Project Name>

Software Requirements Specifications

- User Story #1

User Story ID	US #1
User Story Name	Registration for the users
Actors	Player, playground owner
Description	<p>As a Player, playground owner</p> <p>I like to be able to enter my information's to create my profile</p> <p>So I will add my name, id, password, e-mail, phone number and default location as my information's to have profile.</p>
Per condition	Users information's to register in system
Post condition	User Profile page
Acceptance Criteria	<p>Given I'm on the Sign-up page</p> <p>When I fill in the "Username" and "Password" and "e-mail" and another fields with my authentication credentials and I click the Sign-up button</p> <p>Then the system will create profile for me</p>

- Scenarios

Normal Scenario

Actor Action	System Response
1- user Enter the name	2- system save the data until the verification
3- user Enter the e-mail	4- system save the data until the verification
5- user Enter the password	6- system save the data until the verification
7- user Enter the number	8- system save the data until the verification
9- user Enter the default location	10- system save the data until the verification
11- user will click submit	11- system save the data



CS251: Phase 1 – Team Name

Project: <Project Name>

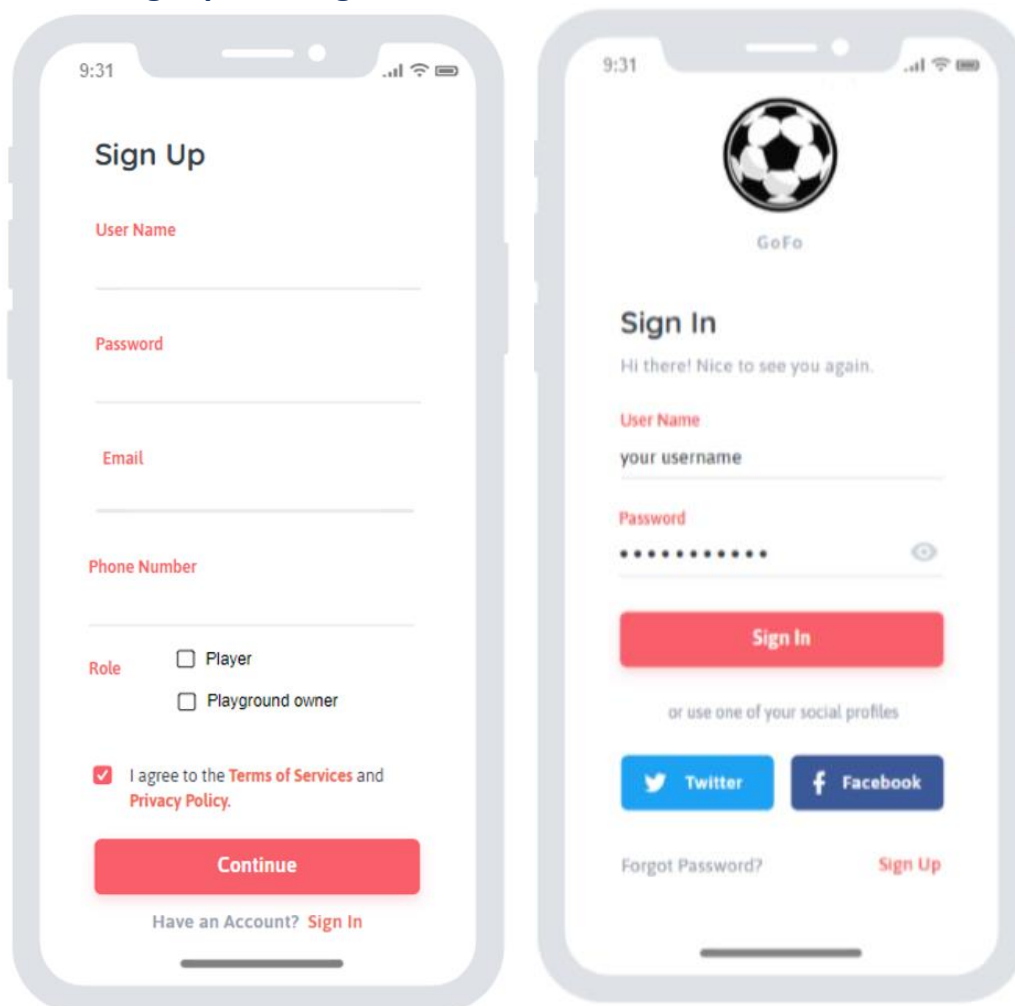
Software Requirements Specifications

Exceptional Scenario

Actor Action	System Response
1- user enter numbers in the name or wrong email domain	2- The system refuse to take the wrong data

• Screen Design

1. Signup and Login Screen #1

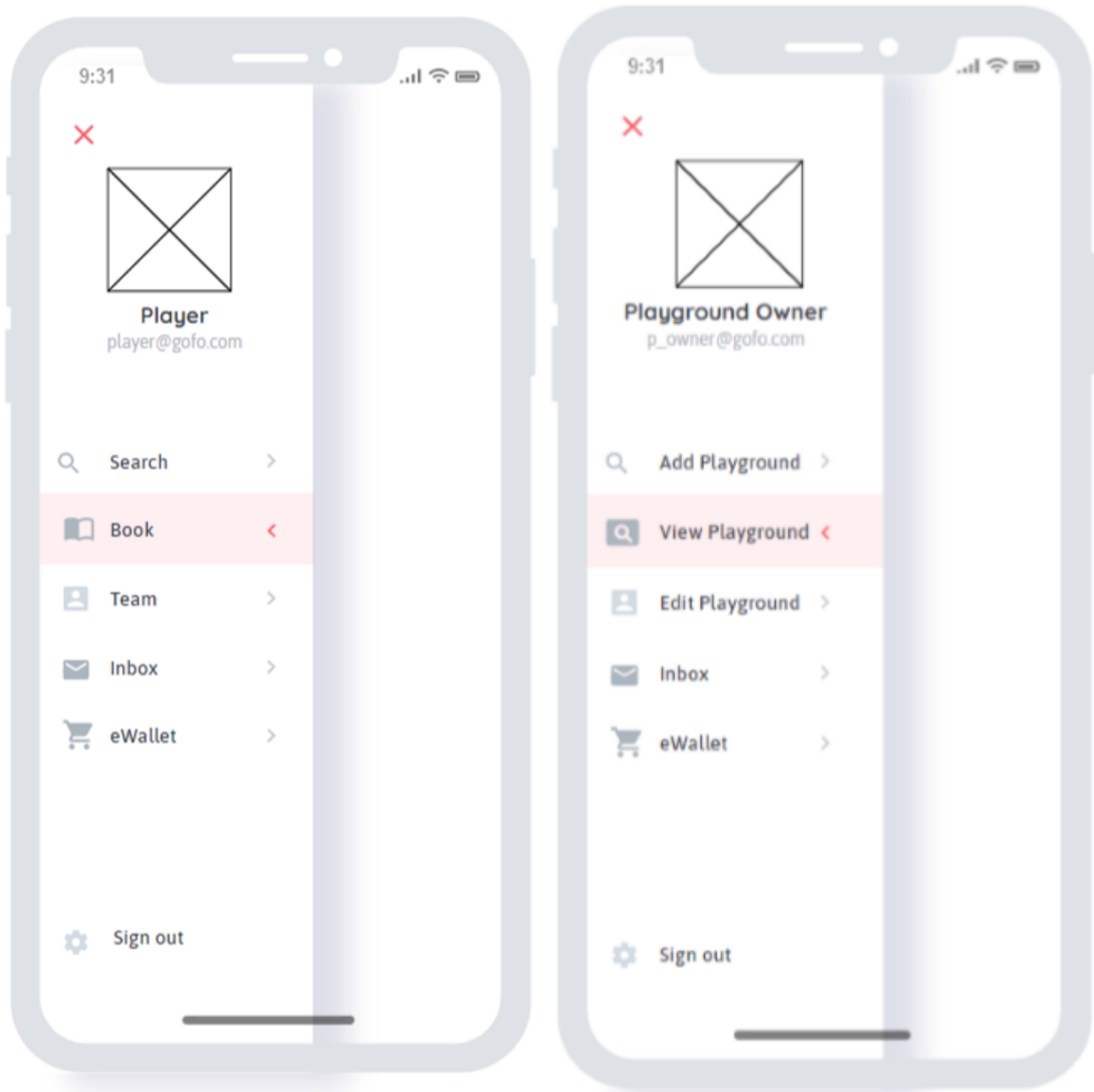




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Project: <Project Name>

Software Requirements Specifications

2- Player and owner playground profile Screen #2





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Project: <Project Name>

Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Username	String/15	Check Username type
Password	String/20	Check Password Rules (Should have @, #)
Email	String/20	Check Email Should have (@example.com)
Phone	Integer/12	Check filed have numbers or not

- User Story #2**

User Story ID	US #2
User Story Name	Registration for the playground
Actors	playground owner
Description	<p>As a playground owner</p> <p>I like to be able to enter my playground information's to add my playground in application</p> <p>So I will add my playground information's like name, its location, its size, the available hours, the price per hour and the cancellation period.</p>
Per condition	Playground information's
Post condition	Playground information page
Acceptance Criteria	<p>Given playground owner on the create playground page</p> <p>When he fill in the "location" and "available hours" and "price per hour" and another fields and he click the Send request to admin button</p> <p>Then the system will send request to admin and create playground</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- Enter the location	2- system save the data until the verification
3- Enter the size	4- system save the data until the verification
5- Enter the available hours	6- system save the data until the verification
7- Enter the price per hour	8- system save the data until the verification
9- Enter the cancellation period	10- system save the data until the verification
11- click send request to admin	11- system save the data and create playground

Exceptional Scenario

Actor Action	System Response
1- user don't enter one filed from inputs fields	2- The system send message please enter this field.



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Screen Design

3- Add playground Screen #3

9:31

Add Playground [Back](#)

Name

Phone Number

Price per hour

Size

Place

Available Slots

Date	From - to
dd/mm/yyyy	hh:mm - hh:mm
dd/mm/yyyy	hh:mm - hh:mm
dd/mm/yyyy	hh:mm - hh:mm
dd/mm/yyyy	hh:mm - hh:mm

[Add more Slots](#)

[Send request to admin](#)



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Playground Name	String/50	Check filed have String or not
phone	Integer /50	Check filed have numbers or another type
location	String /100	Check filed have value or not
size	Integer /10	Check size type
available hours	Integer /200	Check available hours should be (dd/mm/yy) format
price per hour	Integer/12	Check filed have numbers or not

- User Story #3**

User Story ID	US #3
User Story Name	Cancel booking
Actors	Player
Description	<p>As a player</p> <p>I like to be able to cancelling the playground booking</p> <p>So I will ask to cancel the playground booking, but must be within the cancellation period</p>
Per condition	The player booking playground in system
Post condition	The application should be cancel the booking and update this slot to be free in system
Acceptance Criteria	<p>Given Player can do cancel booking page and destroy it or cancel his team favorite</p> <p>When he press of cancel the booking button</p> <p>Then the system will remove the booking and make this slot is available again</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- The player asks cancel his booking	2-system allow the player or owner of playground to edit his profile
3- -the player or owner of playground, edit his info	4-the system change them profile with new data
4 –after the player have changed in his profile and system approval	4-the system change the status of playground to available

Exceptional Scenario

Actor Action	System Response
1-player asks cancel his booking	2- -the system search if the period is finished the system cannot cancel or update

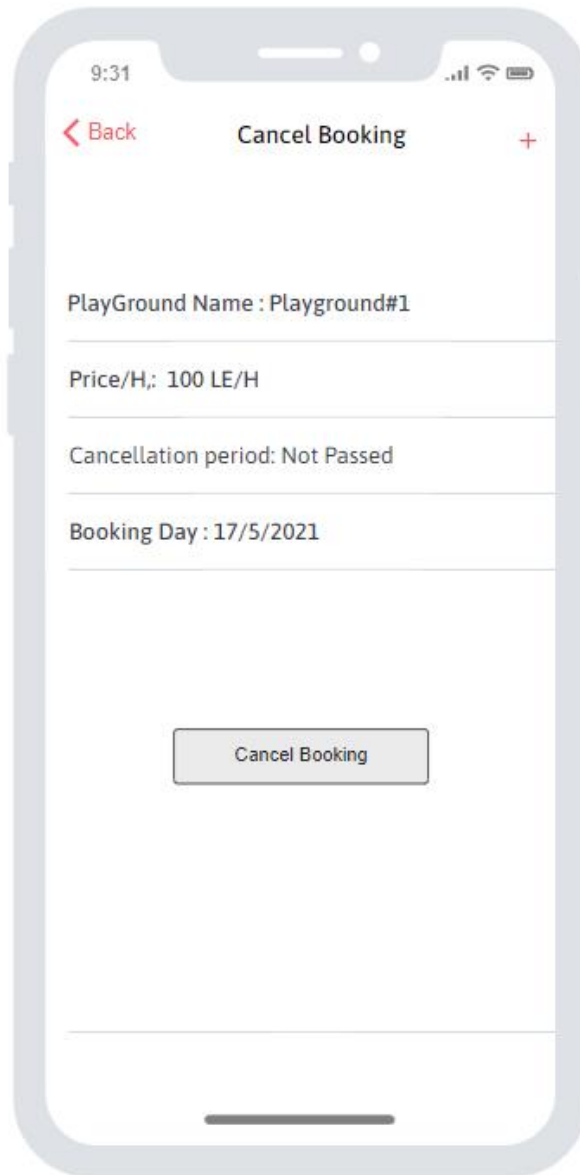


CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Screen Design

4- Cancel Booking Screen #4





CS251: Phase 1 – Team Name

Project: <Project Name>

Software Requirements Specifications

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Playground Name	String/50	Check filed have String or not
Price	Integer /50	Check filed have numbers or another type
Cancellation period	Boolean /1	Check filed have value or not
Booking Day	Integer /10	Check size type

- **User Story #4**

User Story ID	US #4
User Story Name	booking
Actors	Player
Description	<p>As a player</p> <p>I like to be able to the playground booking</p> <p>So I will choose the available playground and the free time slot that is free on the system and status is available, and will invite my team by email</p>
Per condition	After the Player has registered
Post condition	The system confirms the booking and the player will give to playground owner the money by ewallet
Acceptance Criteria	<p>Given Player do the playground booking</p> <p>When player choose the available playground that found it on the system and the free time slots and choose how many hours he wants, also sent invitation to his team who will play with him.</p> <p>Then the application will book the playground</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- The player choose the available playground	2-the system check the playground if it is available
3- -the player choose the free time slot	4-the system check the playground if it is available at this time slot.
4 –the player invite his team by emails	4-the system will send email to them and details about the playground and the time slot

Exceptional Scenario

Actor Action	System Response
1-the player choose unavailable playground	2- The system refuse to book the playground and offer another one
3- the player invite his team by wrong email	4-the system refuse to invite because the wrong email



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Screen Design

5- Player Booking and Confirm Booking page Screen #5

View Playground **Back**

Name Playground 1
Phone Number +02011111000
Price per hour 100 LE/h
Size 5 Players each team
Place

Available Slots

Date	From - to
10/10/2020	12:00 - 15:00
11/10/2020	15:00 - 16:00
12/10/2020	16:00 - 18:00
13/10/2020	18:00 - 20:00

Book

Book **View Playground** **Back**

You choose GoFo Playground in

Hour Price in this Playground = 100 LE

Do you want to continue booking?

Continue to Payment



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

6- Admin Booking Request Screen #6

9:31

Requests [Back](#)

Name Playground 1

Phone Number +02011111000

Price per hour 100 L.E/h

Size 5 Players each team

Place

Available Slots

Date	From - to
10/10/2020	12:00 - 15:00
11/10/2020	15:00 - 16:00
12/10/2020	16:00 - 18:00
13/10/2020	18:00 - 20:00

[Approve](#)



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Name	String/50	Check filed have String or not
Owner phone	Integer /50	Check filed have numbers or another type
Price per hour	Integer /100	Check filed have value or not
Available Slots	Integer /100	Check type

- User Story #5**

User Story ID	US #5
User Story Name	ewallet
Actors	Player, playground owner
Description	<p>As a player, playground owner</p> <p>I like to be able to give the playground owner the money of booking</p> <p>So I will pay the money by ewallet</p>
Per condition	The Player has registered in the application and has reservation the playground
Post condition	Pay the money to the playground owner
Acceptance Criteria	<p>Given Player gives the money to the playground owner by ewallet</p> <p>When player write his id or number account and write the password.</p> <p>Then player pay the money to the playground owner</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- The player write the id and the password	2-the system check the id and the password
3- -the player send the money of the booking	4-the system check the amount of money and sent it the playground owner account

Exceptional Scenario

Actor Action	System Response
1-the player write wrong password or id	2- The system asks enter your id and your password again
3- the player send the money but not enough	4-the system refuse the booking and asks you that you should have enough money to the booking the playground

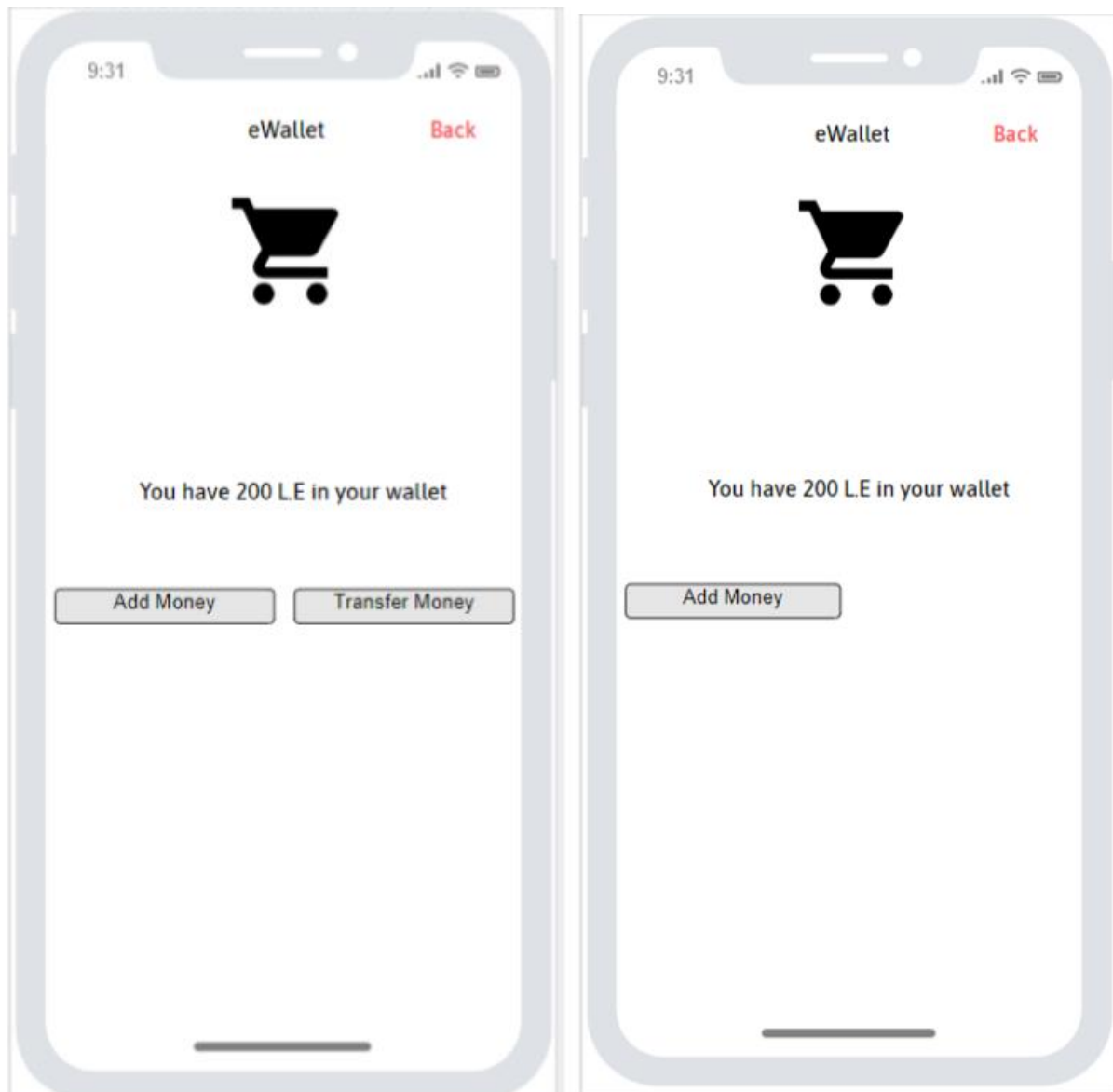


CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- **Screen Design**

7- Player ewallet and Playground Owner ewallet Screen #7





CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Balance	Integer /50	Check filed have numbers or another type

- User Story #6

User Story ID	US #6
User Story Name	Search For Playground
Actors	Player
Description	<p>As a player</p> <p>I like to be able to search for playground to booking it or know information's about it.</p> <p>So I use the search Icon to make search</p>
Per condition	The player must be register in system to search for playground
Post condition	Application must allow player to view available playgrounds and its time slots near him or in specific area or all.
Acceptance Criteria	<p>Given Player can search for nearest playgrounds to book it</p> <p>When player click on search icon.</p> <p>Then he can find the playgrounds and filter it by the hours and date he selects.</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1-The player asks the system to search for playground	2-Application must allow player to view available playgrounds and its time slots near him or in specific area or all..

Exceptional Scenario

Actor Action	System Response
1-The player asks the system to search for playground	2- The system replay no playgrounds nearest you.
	3-System Show all playgrounds that in database.



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Screen Design

8- Player Search for any Playground and Player Search for nearest Playgrounds and filter it using Date Screen #8

The image displays two mobile app screens. The left screen, titled 'Search', shows a search bar with the text 'Search Players' and a result for 'Carlos, Ward' with an 'Add to team' button. The right screen, titled 'View Playground', shows a 'Filter Result' section with a table of playground availability. Below the table, there is a section for booking a slot, including a 'From' and 'to' slot selector, a question 'Do you want to book any other slot?' with 'Yes' and 'No' buttons, and a 'Continue to payment' button at the bottom.

Status	Time Available
Free	12:00 - 14:00
Booked	13:00 - 14:00
Booked	14:00 - 16:00
Free	15:00 - 16:00



CS251: Phase 1 – Team Name

Project: <Project Name>

Software Requirements Specifications

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Search Filed	String /100	Check filed have string

- **User Story #7**

User Story ID	US #7
User Story Name	Reporting
Actors	Player
Description	<p>As a player</p> <p>I like to be able explain problems that faced me</p> <p>So I use reporting page to make report to playground</p>
Per condition	The player must be register in system to make report
Post condition	Application allow player to describe his problem when he book playground or he booked playground and faced problems with playground owner.
Acceptance Criteria	<p>Given Player can make report describe problems he faced</p> <p>When he book playground or he booked playground and faced problems with playground owner.</p> <p>Then he make report and send this report to application admin to solve this problems and admin if he don't any solution he can delete this playground or he solve problem admin can re-active this playground .</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- player enter his problem	
	3- Admin solve problem so system send message to player problem is solved and admin can re-active this playground.

Exceptional Scenario

Actor Action	System Response
1- player enter his problem	2-system send his report to admin
	3- Admin can't solve problem so system send message to player problem is not solved and admin can delete this playground.



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications


- **Screen Design**

9- Player Make Report to playground and describe problem Screen #9

9:31

←

PlayGround Reporting



Mark Hopper

Player

PlayGround Name

Playground#1

PlayGround Location

example

Booking Date

dd/mm/yy

Player Mail

example@gmail.com

Enter Your Problem Here



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Project: <Project Name>

Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Problem description	String /500	Check filed have string

- User Story #7**

User Story ID	US #8
User Story Name	Create Team
Actors	Player
Description	<p>As a player</p> <p>I like to be able create team</p> <p>So I select team members and send mails</p>
Per condition	The player must be register in system and he book playground
Post condition	Application send mails to player team and make team to play.
Acceptance Criteria	<p>Given Player can create team to play his booking time in playground</p> <p>When he send mails to his team.</p> <p>Then system create team and book the playground that player book it.</p>



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- player view player profile	
2- player add his player to his team	3- System Send mail to this member.
	4- System send the player replay to the team leader.

Exceptional Scenario

Actor Action	System Response
1- player view player profile	3- System Send mail to this member.
2- player add his player to his team	3- System don't respond replay from this player so it don't send replay to the team leader.



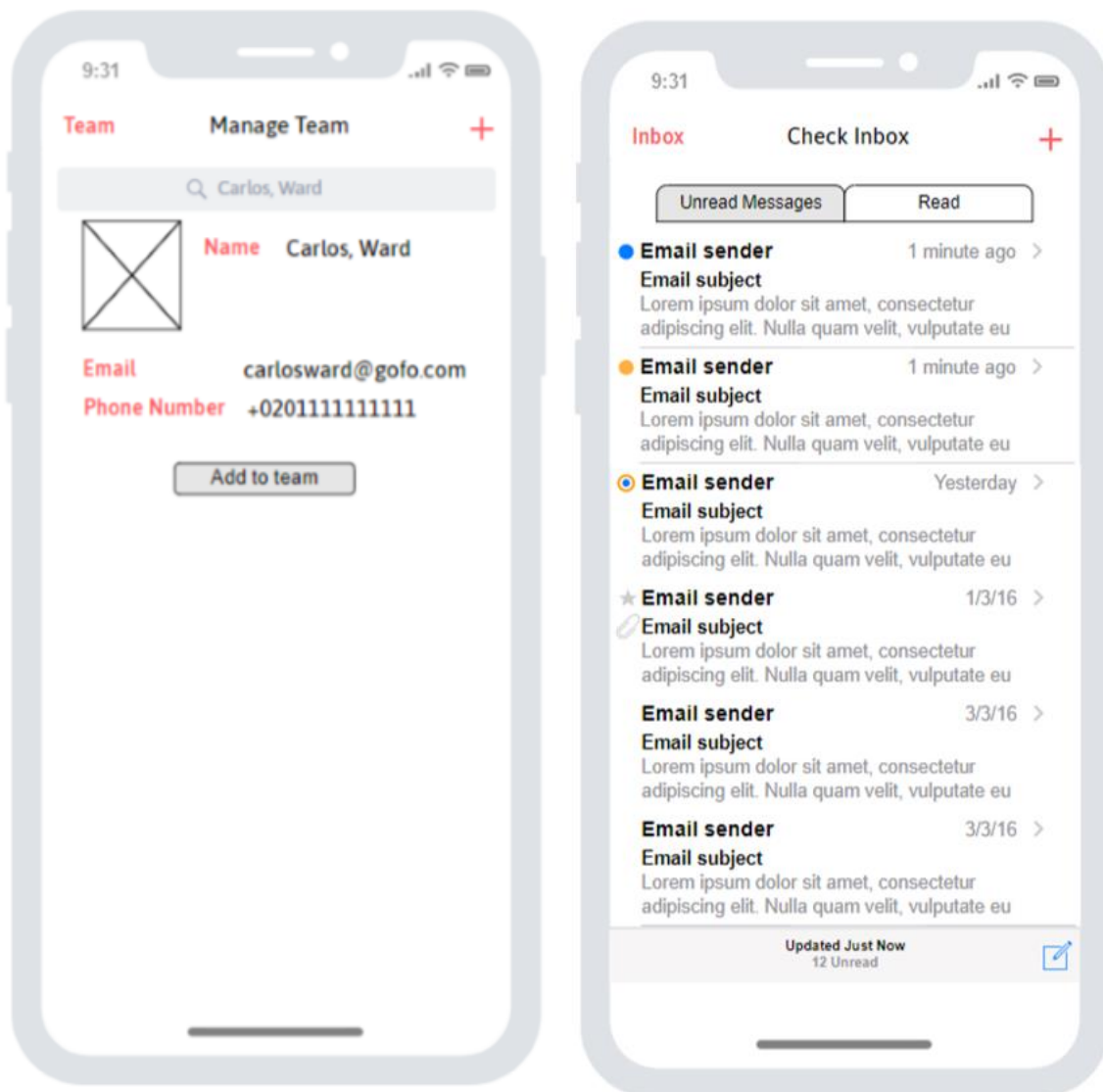
CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

- Screen Design

10- Player add another player to his team and team member mail list

Screen #10





CS251: Phase 1 – Team Name

Project: <Project Name>

Software Requirements Specifications

- **Data Dictionary:**

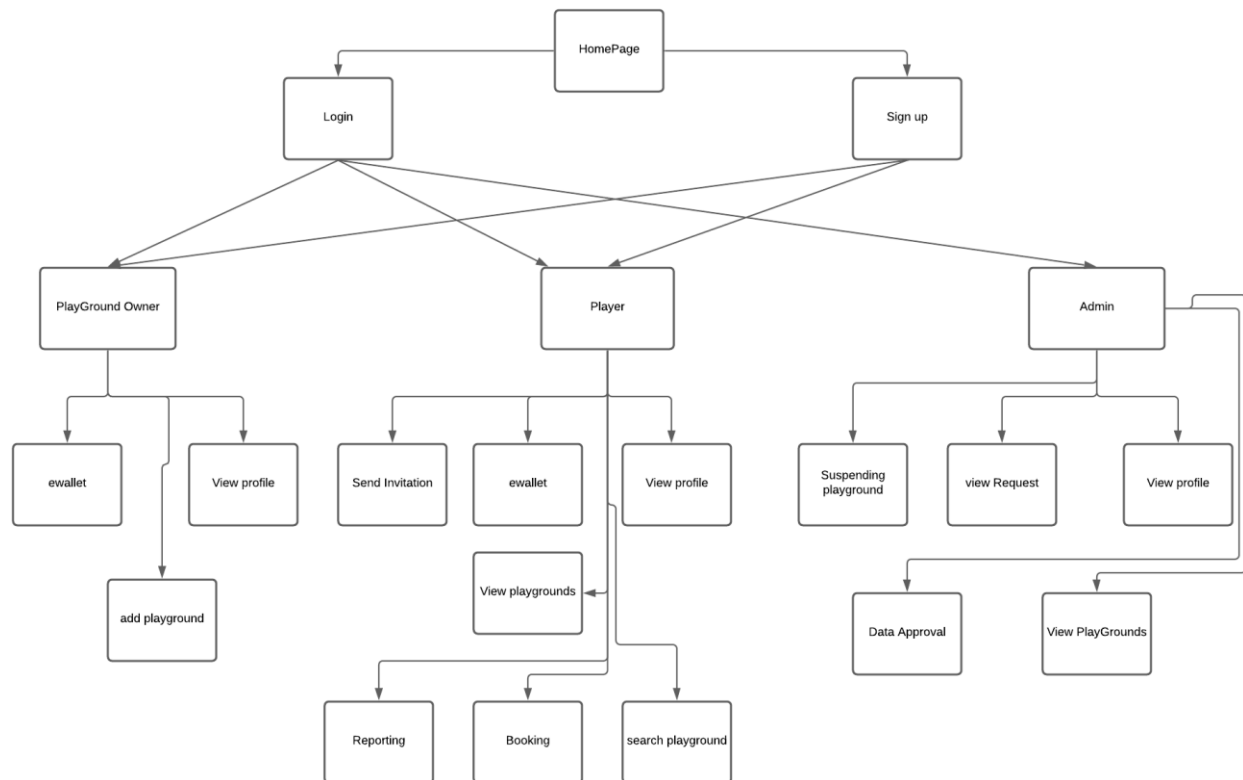
Element Label	Type/Length	Data Validation / Business Rule



CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

System Navigation Map

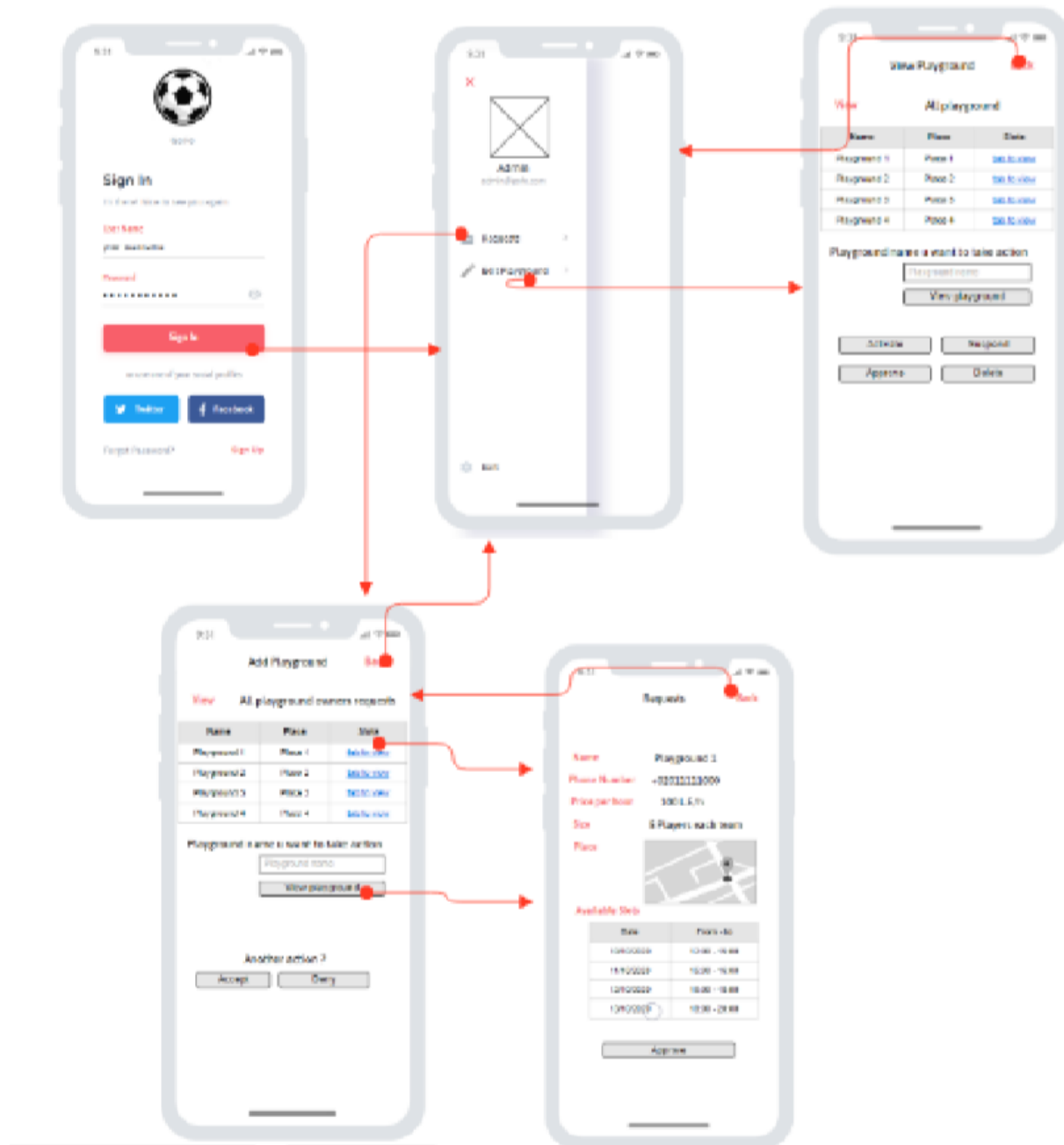


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Project: <Project Name>

Software Requirements Specifications

- Admin Map Screen #11**



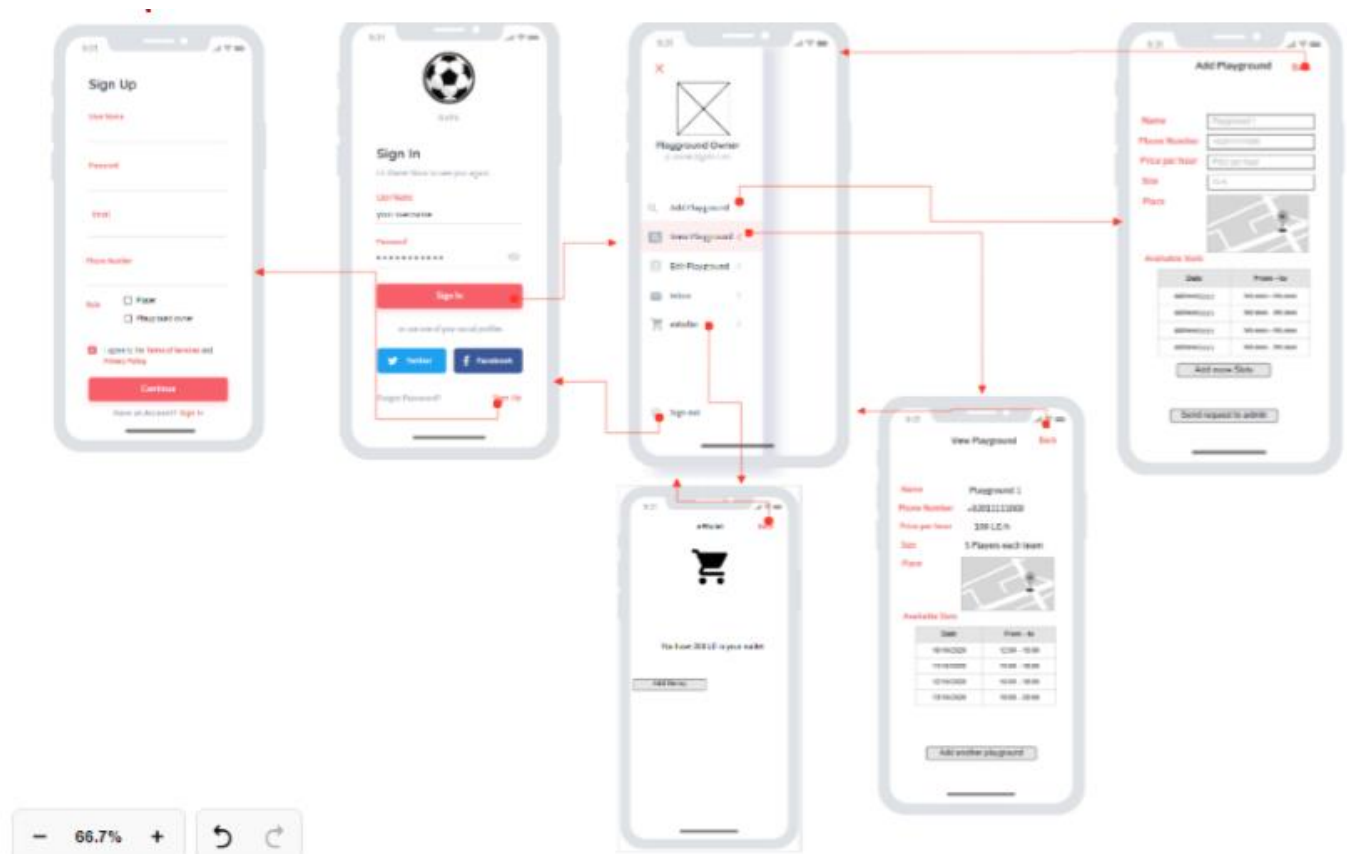


CS251: Phase 1 – Team Name

Project: <Project Name>

Software Requirements Specifications

- **Playground Owner Map Screen #13**





CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

Tools

- creately website
- mocqus website

Ownership Report

Student	Items he created
Mohamed Hamdy Mohamed	Use Case Model, Part of Functional Requirements and Non-Functional Requirements, and User Stories #1 and #2 and #6 and #7, system map image and user System navigation map
Islam Saleh Ahmad	Part of Functional Requirements and Non-Functional Requirements, and User Stories #3 and #4 and #5 and #8, owner System navigation map, admin System navigation map