

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Intro. to Software Engineering

Go Football

Software Requirements Specifications

Version 1.0

No.	Students' names	IDs	Email (@gmail.com)	Mobile
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May & 2021

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Software Requirements Specifications

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Software Requirements Specifications

Team

No.	Students' names	IDs	Email (@gmail.com)	Mobile
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Document Purpose and Audience

The purpose of this document is to build a system that facilitates the process of booking playground for players and enables anyone to search for playground nearby.

This document is intended to facilitate the process of booking, searching and displaying playgrounds for playground owners and aims at a strong and user-friendly system that knows little about technology. This document also will include the requirements that must be implemented to build a complete and integrated system that will serve the purpose of the customer and facilitate user use.

Audience:

- Customer.
- Designer.
- Implementer.
- Project Manager.
- System Supervisor.
- Tester in principle.
- Sample of football lovers to add some features.
- experts (if needed).



Software Requirements Specifications

Introduction

Software Purpose

The purpose of the application is to solve the problem of booking football matches to make it easier by searching for the nearest place and choosing the right place in terms of hourly rate or type of playgrounds. This application is used for young people who are interested in playing football in playgrounds for fun hours with their friends.

This system also facilitates owners by adding their playgrounds to the application, and anyone can send a request to book it. One of the most important features of the system is a search feature where a person is located.

Software Scope

This System for project name as **Go Football** Created to Increasing sports cultures, decreasing all spent a lot of time, transportation cost and effort to go to many playgrounds or call the owners.

The application allows users to:

- searching teams: Searching Nearest Playgrounds and Check appropriate Time, available and affordable.
- sorting teams: sort result's Teams and Check If Teams played Before or Not.
- If team is already played, the system can show details for this team.
- provide e-wallet: it is an electronic payment system used to allow players to pay for the bookings.
- replacing Booking Time: if team want to change Booking Time, they can replace old time by new Time if new time is available.
- cancelled Booking: if this team is in range Deadline system can cancelled The Booking without they lose money but if they out range Deadline they lose 100% from Booking Money and available this time to book from different team.

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Benefits and Goals:

- This application is very useful for Playground owners and players who love playing football.
- The objective of the application is to facilitate the search for the closest and most suitable playground according to the user's needs.
- Enabling user to handle the system easily without binding skills on users.
- Easy and simple user interface for all categories.
- Online playground booking and payment facilitation.
- Seeing players with a lot of playgrounds they might not even know if it's close without this system.
- The player's knowledge of the details, dates and evaluation of the playground in the house.
- Helps players who do not have a team join one of the teams that is missing.

This system will be online and have a special database.

This system will be via an application on a server with a large expansion.

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Definitions, Acronyms, and Abbreviations

No.	Abbreviation	Sentence	Definition
1	W	Won	<ul style="list-style-type: none"> Represents how many times the team wins.
2	L	Loss	<ul style="list-style-type: none"> Represents how many times the team loss.
3	GS	Goals Scored	<ul style="list-style-type: none"> Goals scored by the team.
4	Pts	Points	<ul style="list-style-type: none"> Points achieved by the team.
5	A	Goals Against	<ul style="list-style-type: none"> Number of goals scored in the team.
6	F	Goals For	<ul style="list-style-type: none"> Number of goals scored by the team.
7	GD	Goal Difference	<ul style="list-style-type: none"> The difference between the number of goals scored and the number of goals Against.
8	FC	Football Club	—
9	FA	Football Association	—
10	Vs	Versus	—
11	FC	Football Club	—
12	SC	Soccer Club	—
13	CB	Center-back	<ul style="list-style-type: none"> The person who stops the other team from getting caught in his goalie.
14	GK	Goal Keeper	<ul style="list-style-type: none"> The person who handles the balls from the other team and protects his goalie.
15	LB	Left Full-Back	<ul style="list-style-type: none"> A person who defends from the left and steps forward to support the attack on the same front.

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16	RB	Right Full-Back	<ul style="list-style-type: none">• A person who defends from the right and steps forward to support the attack on the same front.
17	LW	Left Wing-Back	<ul style="list-style-type: none">• The person attacking from the left side and supporting the attackers.
18	RW	Right Wing-Back	<ul style="list-style-type: none">• The person attacking from the right side and supporting the attackers.
19	CF	Center Forward	<ul style="list-style-type: none">• The attacker whose job it is to score goals and attack the other team.

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Requirements

Functional Requirements

- **Register ()**: It's a function that enables people to register in the system, whether it's a player or a Playground Owner.
- **Login ()**: It's a function that enables a Playground Owner or player to access his or her own account, which is already registered.
- **ListPlaygrounds ()**: To display all the lands in the system with their own details.
- **Search ()**: To search for all Playgrounds close to the player.
- **Payment ()**: To determine the player's payment method and activate the electronic wallet
- **CheckRange()**: Check Range To Cancel Request
- **Book ()**: It's a function that enables a player after registration to book a specific playground.
- **myBooks ()**: It's a function that shows the user, whether a player or a Playground owner, all the bookings he's made.
- **myRequests ()**: It's a function that shows the player all the requests he's made and offers the landowner all the requests the players have sent.
- **calcPrice ()**: It's a function that calculates the number of hours booked per hour and the total cost a player has to pay.
- **updateState ()**: After requesting a player or Playground Owner for a specific playground, he can make his request by cancelling or deleting it under certain conditions.
- **Invite ()**: It's a job that, after booking, the player can invite his team-mates through a specific link.
- **joinTeam ()**: If an unfinished team is found, any player can join this team.
- **addPlayground ()**: It's a function for a Playground Owner to add playground to their own playgrounds in detail.
- **myPlaygrounds ()**: It's a function for a Playground Owner to show all his own playgrounds.
- **removePlayground ()**: It's a function that enables an administrator to delete a specific land if any complaints or problems occur.
- **playgroundDtails ()**: To provide details of playground and show it for its owner.
- **CancelReguest()**: Check By Administrator if playground owner will accept his playground or not and Check By playground owner if player will remove Reguest or not

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Non Functional Requirements

Non-functional requirements describe how the system works (**performance, quality, platform, Process, Availability, Recovery, maintainability, reusability, Usability, Reliability, Security, Scalability, Portability**).

- **Platform requirements** → May be Software, Hardware or operating System (Server, Windows, Mac, or Linux) it runs different web Application (Chrome, Microsoft Edge) Mobile Application.
- **Software Quality requirements** → constrains on the Design which maintenance User desires and guide him Step By Step to learn How Can He Booking in This System easily, guide him to Recovery.
- **Process requirements** → Actor control his Tasks only, each method have constraints to valid this method. Constraints about nearest location, join Team, searching etc.

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No.	Examples	Details
1	performance	<ul style="list-style-type: none"> Payment → electronic ewallet operation will be done within (20) second Display → display All playground operation will be done within (25) second
2	Scalability	<ul style="list-style-type: none"> 10 playgrounds System should be able to support up to 100 simultaneous game players.
3	quality	<ul style="list-style-type: none"> Check Payment → if card is valid or not Check join → number of team not be completed
4	platform	<ul style="list-style-type: none"> New Platform has new feature
5	Process	<ul style="list-style-type: none"> methods have constraints to overcome any mistake
6	Availability	<ul style="list-style-type: none"> it provides sportive people
7	Recovery	<ul style="list-style-type: none"> Backup Database after editing it with new information and restore it any time To overcome missing data
8	maintainability	<ul style="list-style-type: none"> Editable
9	performance	<ul style="list-style-type: none"> Payment → electronic ewallet operation will be done within (20) second Display → display All playground operation will be done within (25) second
10	Scalability	<ul style="list-style-type: none"> 10 playgrounds System should be able to support up to 100 simultaneous game players.
11	quality	<ul style="list-style-type: none"> Check Payment → if card is valid or not Check join → number of team not be completed
12	platform	<ul style="list-style-type: none"> New Platform has new feature
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Software Requirements Specifications

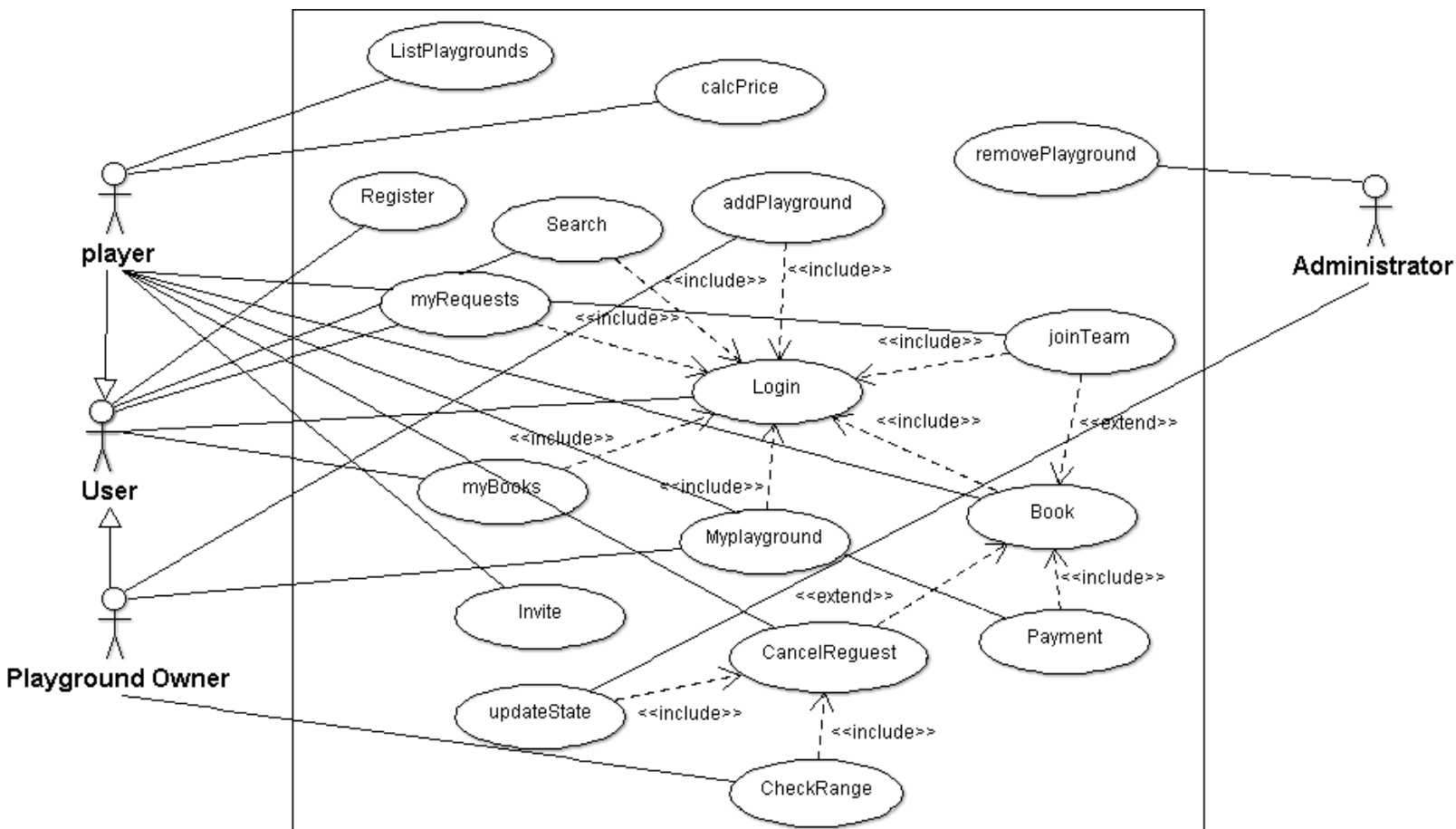
System Models

Use Case Model

Administrator : responsible check playground and decide will remove or not from playground owner.

Player : Booking Available and Suitable playground.

Playgroundowner : Adding his playground and book from different players



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Software Requirements Specifications

Enriched User Stories

- User Story #1

Use case : Register		Description
User Story ID	US #1	
User Story Name	Register	
Actors	Player , playground owner , Administrator	
Description	As a player or playgroundowner I like to be able to sign up to book playground. So I will register.	
Per condition	Having net , app or browser and email.	
Post condition	having account	
Acceptance Criteria	Given I'm on the Sign-up page When I fill in the “fname” and “lname” “email” and “Password” fields with my information Then the system store data.	

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1-open home page 2-Click on sign-up	
	3-show register form
3-Enter name, email, and password	
	5- System Verify user data
6-Click on Register	
	7- store data in the system

Exceptional Scenario

Actor Action	System Response
1- User Enter personal info and Password. 2- Click Register	
	3- message for “you forget fill specified filed” 4- Systems reject operation

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Name	String / 30	Name <=30 letters
Email	String / 30	Extension “@gmail.com”
Password	String /30	From “A-Z” and “0 - 10”. not allowed charcter (+,-./,@.....)

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Software Requirements Specifications

- User Story #2

Use case : UserLogin		Description
User Story ID	US #2	
User Story Name	UserLogin	
Actors	User (Player or Playground Owner)	
Description	<p>As a Player.</p> <p>I like to be able to book playground.</p> <p>So, I want to playing football with my friends.</p> <p>-----</p> <p>As a Playground Owner.</p> <p>I like to be able to add playgrounds.</p> <p>So, I want to earn money and help people to play.</p>	
Per condition	<p>Check if username available or not (registered before).</p> <p>Check password for this username correct or not correct (not ignore Letter case).</p>	
Post condition	<p>Enable features of system for this user weather owner or player and show the home page of the system to choose the wanted operation.</p>	
Acceptance Criteria	<p>Given I log in the system to show the homepage.</p> <p>When I enter the username and password, then I will press the sign-in button.</p> <p>Then The system will enable me to log in and show the home page.</p>	

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Software Requirements Specifications

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User Username and Password. 2- Click sign-in button	
	3- System check this data 4- System show home page of the system
5- User Select playground	
	6- System return details for this playground
7- User book this playground	
	8- system check this playground available or not and return ways of payments if available.
9- user will identify the optimal method for pay this booking	
	10- system print “done, you book this playground and appointment for this.”

Exceptional Scenario

Actor Action	System Response
1- User username and Password. 2- Click sign-in button	
	3- username not available. 4- system will show “error for user and print try again.”

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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Username	String/45 bits	Check Username available or not
Password	String/100 bits	Check password matching for username or not

- User Story #3**

Use case : Search	Description
User Story ID	US #3
User Story Name	Search
Actors	Player
Description	As a player I like to be able to find about Suitable playground and the nearest So I will Search about playground
Per condition	Check Location is found or not
Post condition	Display list of playground for this location
Acceptance Criteria	Given I'm Searching about playground When you Enter location Then the system give me list of the nearest playgrounds

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- User Enter personal info and Password. 2- Click Search	
	3- System Verify nearest list of playgrounds
4- User Select suitable one of him from the list	
	5-return playground

Exceptional Scenario

Actor Action	System Response
1- User Enter personal info and Password. 2- Click Search	
	3- System Verify nearest list of playgrounds

- Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Location	String/25	

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Software Requirements Specifications

- User Story #4

Use case : Booking		Description
User Story ID	US #4	
User Story Name	Booking	
Actors	Player	
Description	As a player I like to be able to book in Suitable playground So I will play football with friends	
Per condition	Select playground	
Post condition	Display payment operation	
Acceptance Criteria	Given I'm Booking in playground When I select a playground not booked and I click the Select button Then the system book this playground by my name or my team And send request to playground owner	

- Scenarios

Normal Scenario

Actor Action	System Response
1- User Enter personal info and Playground from list. 2- Click book button	
	3- System will book a playground that I select 4- system send request to playground owner

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Software Requirements Specifications

Exceptional Scenario

Actor Action	System Response
1- User Enter team`s info and Playground from list 2- click button Book	
	3- Systems rejects to book it and displays an error message " unfortunately, booked playground, try again."

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Name	String /30	Name <=30 letters
Playground name	String /30	It is necessary is from app list of playgrounds
Payment	String	Must from valid payments of application

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Software Requirements Specifications

- Screen Design

The first screen, 'Sign up', displays a form with fields for First Name (Shimaa), Last Name (Reda), Email (Shimaa.Reda@gmail.com), and Password. It includes a 'Continue' button and a link to 'Sign In' if the user has an account. The second screen, 'Sign in', shows fields for Username (Shimaa) and Password, a 'Sign in' button, and options to log in via Facebook or Twitter. It also includes links for 'Forgot Password?' and 'Sign Up'. The third screen, 'Search', features a search bar with a dropdown list of locations (KSA-Hall1, KSA-Hall2, KSA-Hall3) and a table of available football matches.

Playgrc	Owner	Availability	Location	Booking
KSA-Hall1	Shimaa Reda	Available	Giza	Book
KSA-Hall1	khaled Ashraf	Not Available	Helwan	Book
KSA-Hall1	Ahmed Sayed	Available	Cairo	Book
KSA-Hall1	Amir Mounir	Not Available	Embaba	Book

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Software Requirements Specifications

- User Story #5

Use case : Payment		Description
User Story ID	US #5	
User Story Name	Payment	
Actors	Player	
Description	<p>As a Player.</p> <p>I like to be able to pay money for owner.</p> <p>So, I want to book playground</p>	
Per condition	<p>Check if card valid or not</p> <p>If not the user will identify with owner that he pay cash not online.</p>	
Post condition	<p>Transform the money that player entered from e-wallet into playground owner</p>	
Acceptance Criteria	<p>Given I'm going to pay a money to book the playground.</p> <p>When I pay money by e-wallet</p> <p>Then the system will transform this money into corresponding playground owner</p>	

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- choose payment method 2- enter the required money 3- enter playground owner 4- enter playground name 5- click submit button	
	6- System check this data 7- System send request to owner 8- system print "the playground owner will response soon, please wait"
9- player waiting for response playground owner	
	10- playground owner answered and accepted to contact with this player

- Exceptional Scenario

Actor Action	System Response
1- choose payment method 2- enter the not required money 3- enter playground owner 4- enter playground name 5- click submit button	
	6- System send request to owner 7- system will show error for user and print "try again". 8- system print the playground owner will response soon, please wait
9- player waiting for response playground owner	
	10- playground owner answered and not accepted this request

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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Money	Double/3	Check money valid or not
Payment method	String/40	Select from these methods
Payment	String	Must from valid payments of application

- User Story #6**

Use case : addPlayground		Description
User Story ID	US #6	
User Story Name	addPlayground	
Actors	Playground Owner	
Description	<p>As a Playground owner.</p> <p>I like to be able to add playground for users.</p> <p>So, I want to show playgrounds to user to enable easy booking</p>	
Per condition	Check if full details entered or not	
Post condition	The playground will add in his playground in system	
Acceptance Criteria	<p>Given I'm going to add playground.</p> <p>When I enter details of playground</p> <p>Then the system will add this playground to show it for user</p>	

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- click Add Playground button	
	2- System will response by set of inputs the user has to enter them
3- the playground owner will enter details of playground that want to add it	
	4- system will add this playground

Exceptional Scenario

Actor Action	System Response
1- click Add Playground button	
	2- System will response by set of inputs the user has to enter them
3- the playground owner will enter details of playground that want to add it	
	4- System rejected because some fields not true or not filled

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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Location	String/25	Inside government or not
Owner Name	String/50	
Playground	String/60	Check name valid or not

- User Story #7**

Use case : addPlayground	Description
User Story ID	US #7
User Story Name	PlaygroundDetails
Actors	Player
Description	As Player I like to be able to known Details of playgrounds So, I want to to know about this playground
Per condition	Administrator Allow to Play ground owner his playground and teams booking his playground
Post condition	Show All details about Playground
Acceptance Criteria	Given I'm on the Sign-In page When I registered with my password and username Then the system sign me in and allow me to display details of playground

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- click-details button	
	2- System display list of details like that Playground details
3- Player select Playground details	
	4- System retrieves Playground details
5- Play ground owner select close	
	6-the system will end this operation

- Exceptional Scenario

Actor Action	System Response
1-Click details button	
	2- System display list of details like that Playground details
3- Player select Playground details	
	4- if no details display empty message
5- Play ground owner select wrong number in lists	
	6- return this point with message "invalid number please try again"

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Software Requirements Specifications

- Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Playground	String /25	Check is valid or not

- User Story #8**

Use case : MyRequests	Description
User Story ID	US #8
User Story Name	MyRequests
Actors	Player, playground owner
Description	As a player,playground owner I like to be able to check my requests So click bottom show my requests
Per condition	Book
Post condition	Show details about my request
Acceptance Criteria	Given I'm on the Sign-In page When entered "Username" and "Password" fields with my information and select my request Then show details about my request

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Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1- Enter password and username. 2- Click MyRequest button	
	3- System Verify player data
4- user select my request	
	5- System retrieves my requests details

Exceptional Scenario

Actor Action	System Response
1 user Enter password and username. 2- Click Myrequest	
	3- invalid password or username
4- user select my requests details	
	5- display empty message
6- user select wrong number in lists	
	7- return this point with message "invalid number please try again"

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Software Requirements Specifications

Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Arraylist of requests	user/not specify	

- User Story #9

Use case : Listplayground	Description
User Story ID	US #9
User Story Name	Listplayground
Actors	Administrator
Description	As Administrator I like to be able to known information of my playgrounds So to manage his system
Per condition	More than one playground
Post condition	Show all playground
Acceptance Criteria	Given I want to display All playgrounds in system When choose Listplayground Then show all playground in the system and details

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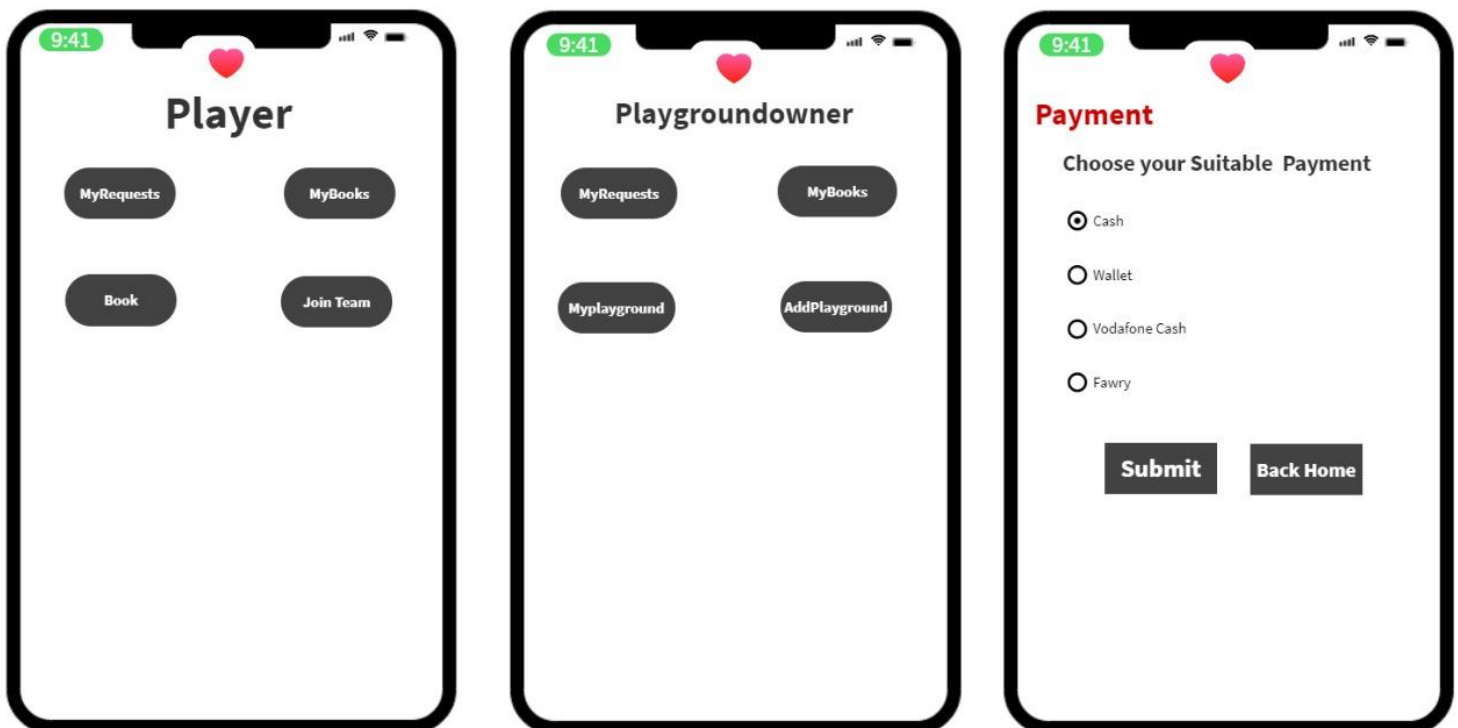
Software Requirements Specifications

- Scenarios

Normal Scenario

Actor Action	System Response
1 - Click listplayground	
	2- System displays list of details like that All Playground
3- Administrator select All Playground	
	4- System retrieves All Playground

- Screen Design



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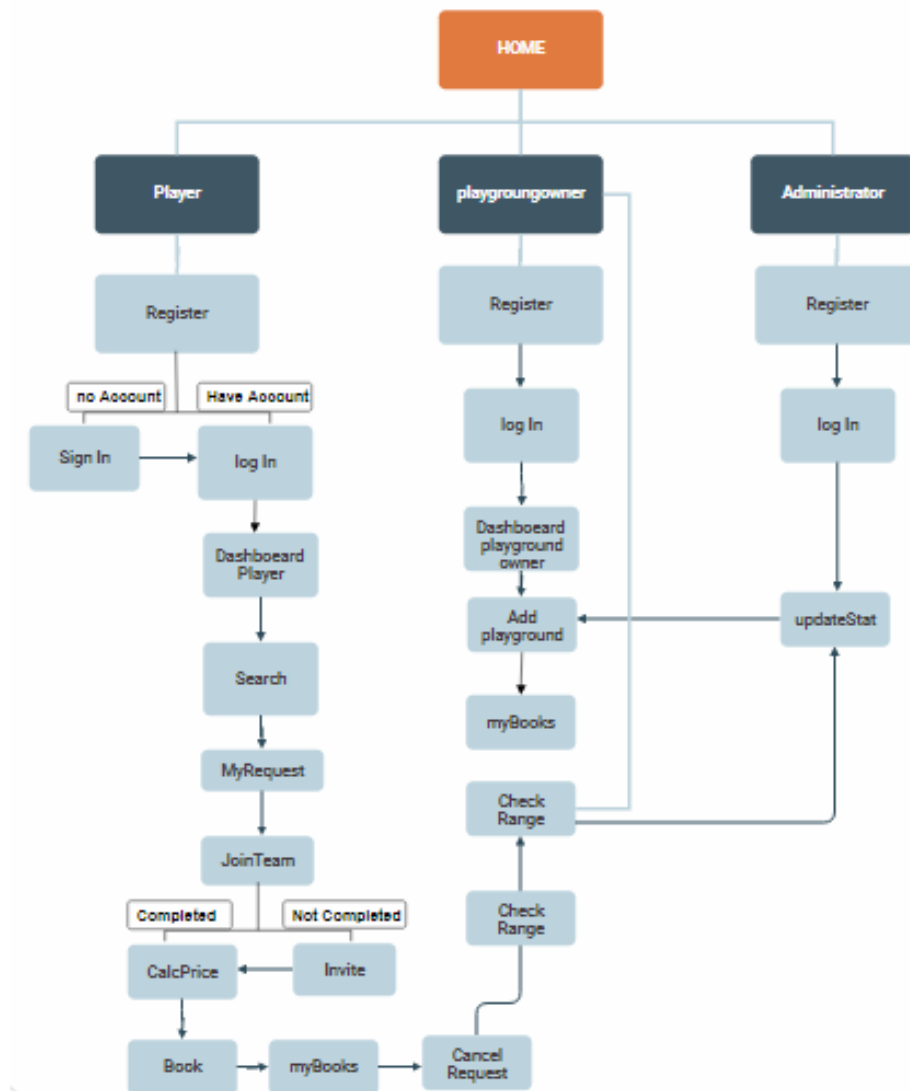


Software Requirements Specifications

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Arraylist of playground	Playground owner/not specify	

System Navigation Map



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Software Requirements Specifications

Tools

- ArgoUML – moqups - MockFlow

Ownership Report

No.	Students' names	Items he created
1	Khaled Ashraf Hanafi Mahmoud	<ul style="list-style-type: none">• Functional Requirements• Non Functional Requirements• Software Scope• Document Audience• User Story #3 , 5 , 6
2	Ahmed Sayed Hassan Youssef	<ul style="list-style-type: none">• Use Case Model• Non Functional Requirements• Definitions, Acronyms, and Abbreviations• User Story #7 , 8 , 9
3	Shimaa Reda Saeed Nady	<ul style="list-style-type: none">• System Navigation Map• Non Functional Requirements• Software Purpose• Document Purpose• User Story #1 , 2 , 4• Screen Designs