

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Intro. to Software Engineering

GOFO

Software Requirements Specifications

Version 1.0

GOLEADOR Team

ID	Name	Email	Mobile
20190507	MOdaser Abdelhamid Raafat	modasergomis@gmail.com	01117386101
20190175	Hossam Mohamed hamdy	hossameljendy@gmail.com	01146922018
20190189	Khaled Mohamed Abdelhamid	khaledalmaawry13@gmail.com	01155525866



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Software Requirements Specifications

Contents

Document Purpose and Audience	3
Introduction	3
Software Purpose	3
Software Scope	3
Definitions, acronyms, and abbreviations	4
Requirements	4
Functional Requirements	4
Non Functional Requirements	6
System Models	6
Use Case Model	6
Enriched User Stories	8
System Navigation Map	49
Tools	49
Ownership Report	49



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Software Requirements Specifications

Document Purpose and Audience

Purpose:

The document describes the main properties of the project and show the function and overview of the project .

Audience:

- 2- Administrator .
- 1- Software developer .

Introduction

Software Purpose

- 1- Make the manager be able to manage the booking list and the appointments of the playground easily .
- 2- Make the owner be able to check how the playground works easily .
- 3- Make the player able to choose the best time and location of the playground for him , to book it easily .

Software Scope

- Our system is a booking system for football playgrounds. It serves the players and playground owners as well.
- Owner can register his playground. He first registers himself on the system and creates a profile 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.
- The manager has the right to delete a playground or suspend it.



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- Anyone (user) can register himself on the system and create a profile.
- Player (user) can display the playgrounds near to him or in a specific location on specific dates.

Definitions, acronyms, and abbreviations

Definitions

eWallet: a new payment system that is fully electronic. It allows users to pay for their bookings with their smart phones or PCs. The money gets transferred to the owner's account so he can collect his money.

Fawry: a payment service that provides many facilities for its users. It allows players to add money to their eWallet account and allows playground owners to withdraw money from their accounts.

Requirements

Functional Requirements

- **For Playground owner**

-Inputs:

Owner Name, password, ID, Phone, Default location, E-mail, Playground name, Playground size, Playground location, Available Hours, Price per hour and cancellation period

-Stored data:

Owner Name, password, ID, Phone, E-mail, Location, Playground name, Playground size, Playground location, Available Hours, Price per hour and eWallet balance and cancellation period

-Processes “what the Playground owner can do on the system and this is the services that the system provides to the Playground owner”:



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“He first registers himself on the system and creates a profile like any user “He sets and changes the hours available for booking for his playground”. “He can view his bookings”. And “he can check the money in his eWallet.”

For Player

-Inputs:

Name, password, ID, Phone, E-mail

-Stored data:

Name, password, ID, Phone, E-mail and eWallet balance

-Processes “what the Player can do on the system and this is the services that the system provides to the Player ”:

“He registers with the system and creates a profile”, “he display the playgrounds near to him or in a specific location on specific date”, “he can filter them by the hours and date he selects”, “he can book a time slot”, “Paying the amount from his eWallet to the eWallet of the owner”, “He can send invitation to his team members via email” and “he can create his favorite team and store their names and emails Then he can select the entire team. Or he can enter individual names and emails or select the team and then modify some players. He can also cancel a booking” and” he can submit complaints.”

-Computations:

The System Calculating the total price and updates the status of the booked slot(s) so no one else can book it

For Administrator

- Processes “what the Administrator can do on the system and this is the services that the system provides to the Administrator ”:



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“He oversees the overall operations of the system and ensures that no fraud takes place”, “he checks if Owner information is true and has the right to delete a playground or suspend it if the owner does some fraudulent activities like double booking or if the playground gets a lot of complaints from the players.”

Non Functional Requirements

	Details
our Documentation	It should be clear, organized, and properly describe the system
Maintainability	System should have the ability to allow any modifications Easily in any time
Response Time	Response time for each process must be between 1s and 2s
Security	Banking information and transactions through eWallet must be well secured
Scalability	System should be accept at least 100 player while booking
Usability	System should be easy for customers to use

System Models

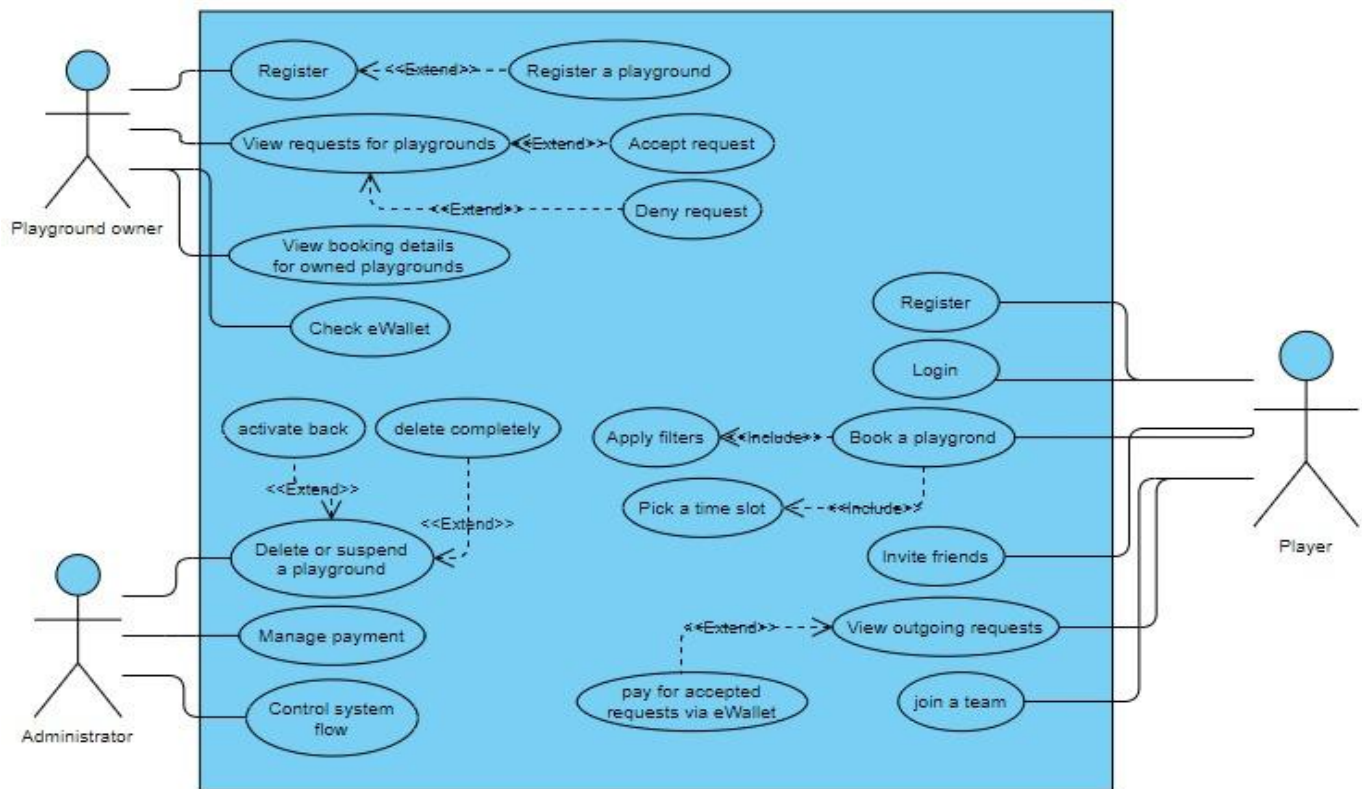
Use Case Model



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The player: the person who wants to book a playground. He registers in the application to see all the playgrounds in his area or another area that he chooses, then he can book the one he wants if it has free time slots.

The playground owner: the person who wants to register his playground in the application to look for bookings. He adds all the important information about his playground. He can then manage booking requests through the application.

The administrator: the person who controls and manages the application system. He reads the players reviews about playgrounds to see if each playground is acceptable in the application. If a certain playground gets bad reviews he can suspend or even delete it completely.



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Enriched User Stories

- User Story #1

User Story ID	US #1
User Story Name	Registration to make profile
Actors	User (player and playground owner) and Administrator
Description	As a player or playground owner I like to be able to register an account So that I can login and use the application
Pre condition	User shouldn't be registered before
Post condition	User account is registered successfully



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Acceptance Criteria	<p>Given I'm a new system user and I'm on the registration page</p> <p>When I fill in the required information with acceptable data and I click "create an account" button</p> <p>Then the system creates an account for me</p>
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Scenarios

Normal Scenario

Actor Action	System Response
1-User Enters his required information: Name, password, ID, Phone, E-mail.	
	2- System Verify the user data
	3-System Registers his data and logs him in.
4- User Enters his payment method.	



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	4- System registers his payment method.
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Exceptional Scenario

Actor Action	System Response
1-User Enters his required information: Name, password, ID, Phone, E-mail.	
	2-This data is not valid. 3-Registers refuse to register him.



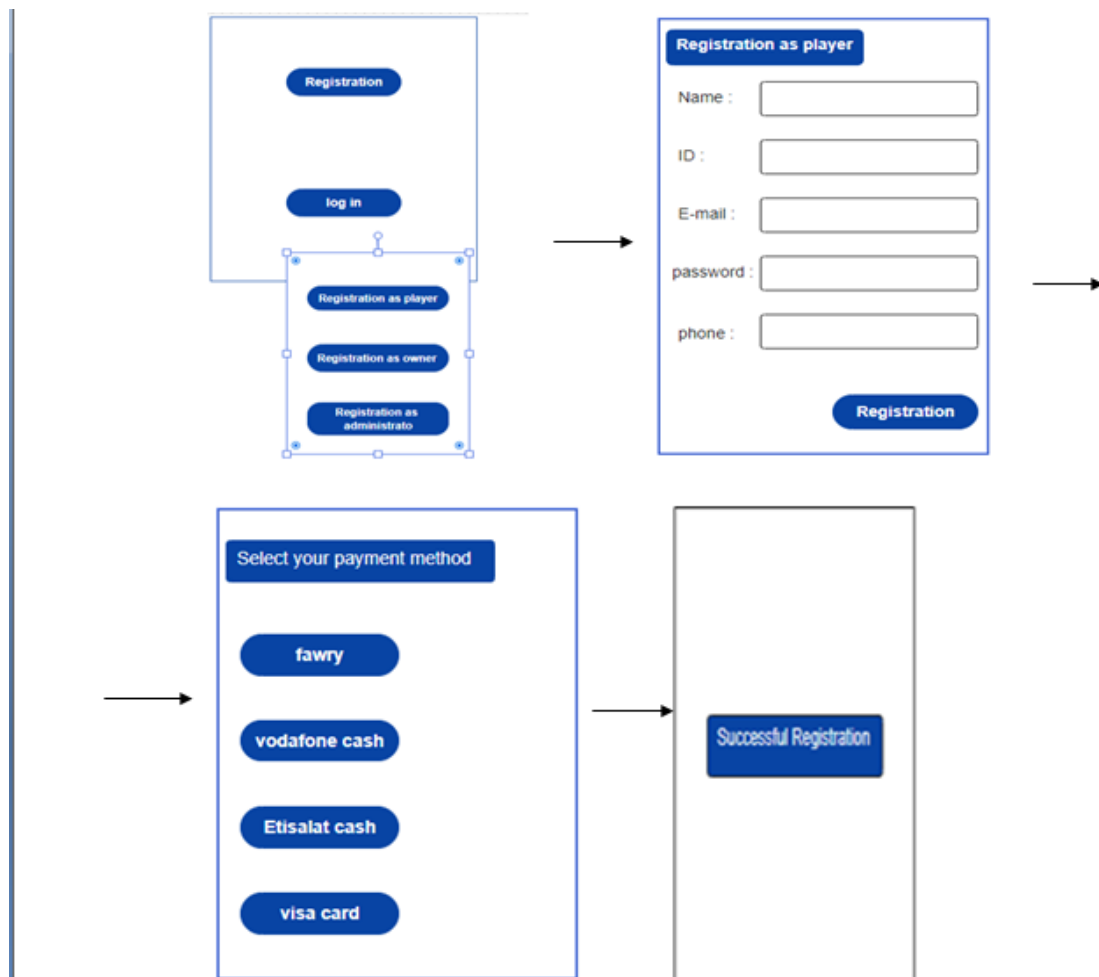
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Screen Design

Normal Scenario



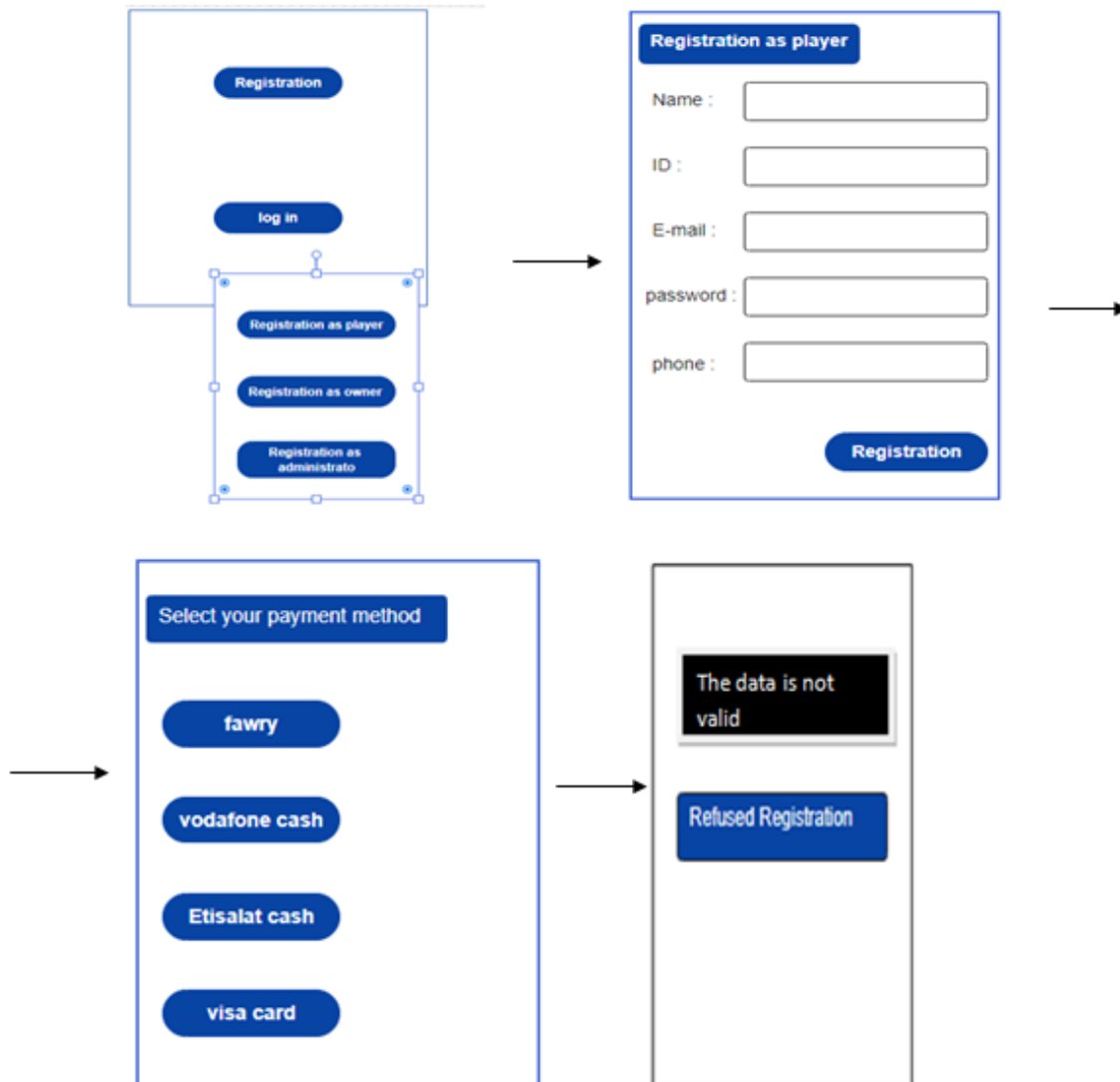


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Software Requirements Specifications

Exceptional Scenario



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
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Software Requirements Specifications

Name	string/30	Mandatory :Y Updatable :Y
ID	int/12	Mandatory :Y Updatable :Y
e-mail	string/30	Mandatory :Y Updatable :Y
password	int/10	Mandatory :Y Updatable :Y
phone	int/12	Mandatory :Y Updatable :Y

User Story #2

User Story ID	US #2
User Story Name	Playground Registration
Actors	Playground owner



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Description	<p>As a playground owner</p> <p>I like to be able to register my playgrounds</p> <p>So that I can start receiving booking requests from players</p>
Per condition	The playground owner must be logged in
Post condition	Playground information is sent to an administrator to approve
Acceptance Criteria	<p>Given I'm a logged-in playground owner and I'm on the playground registration page</p> <p>When I enter valid information about my playground and I click the "register a playground" button</p> <p>Then my playground gets added to the system</p>

Scenarios

Normal Scenario

Actor Action	System Response
1-Owner Enters his required information: Owner name, password, ID, Phone, E-mail, location, Available hours, price per hour and cancellation period	



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	<p>2- System Verify the data</p> <p>3-System Registers this playground</p>
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Exceptional Scenario

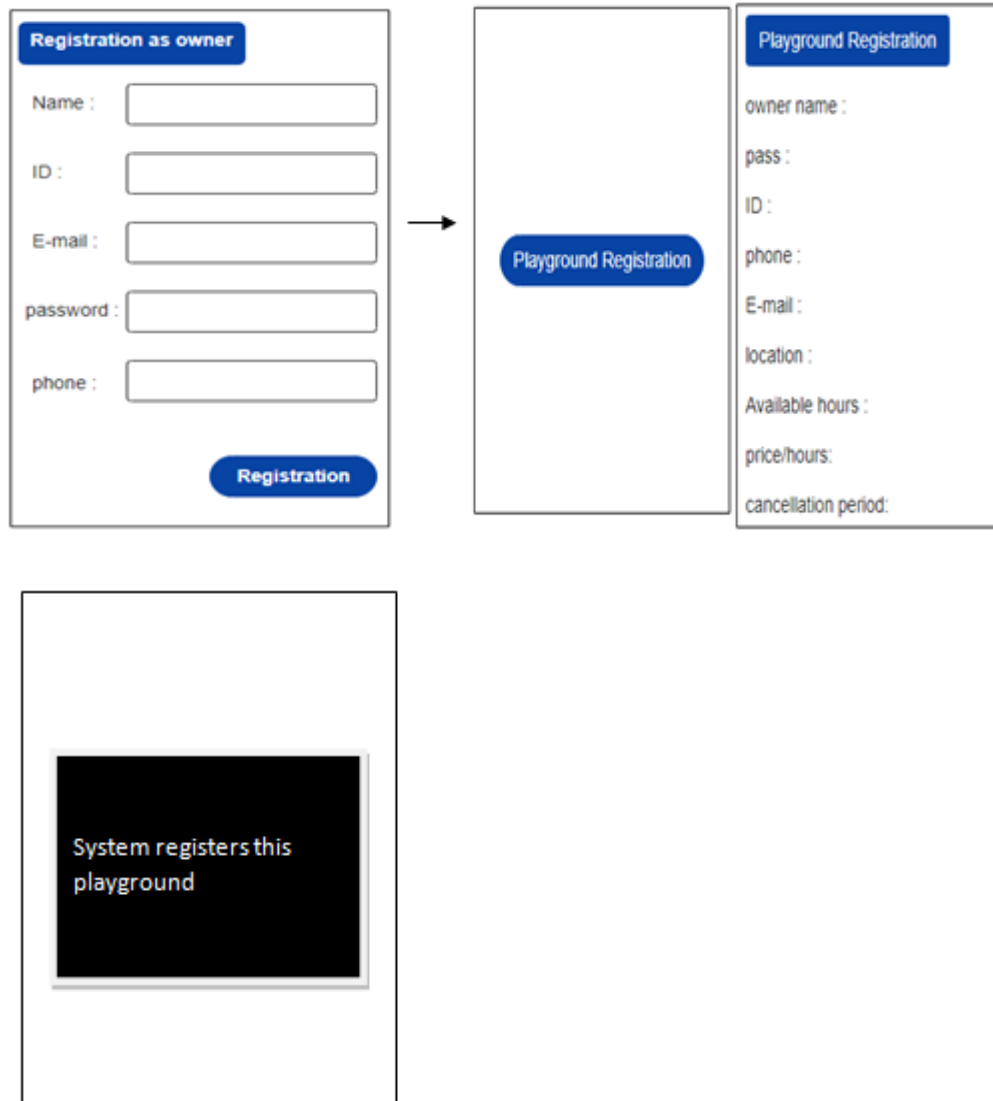
Actor Action	System Response
<p>1-Owner Enters his required information: Owner name, password, ID, Phone, E-mail, location, Available hours, price per hour and cancellation period.</p>	
	<p>2-This data is not valid.</p> <p>3-System refuses to register it.</p>



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Software Requirements Specifications



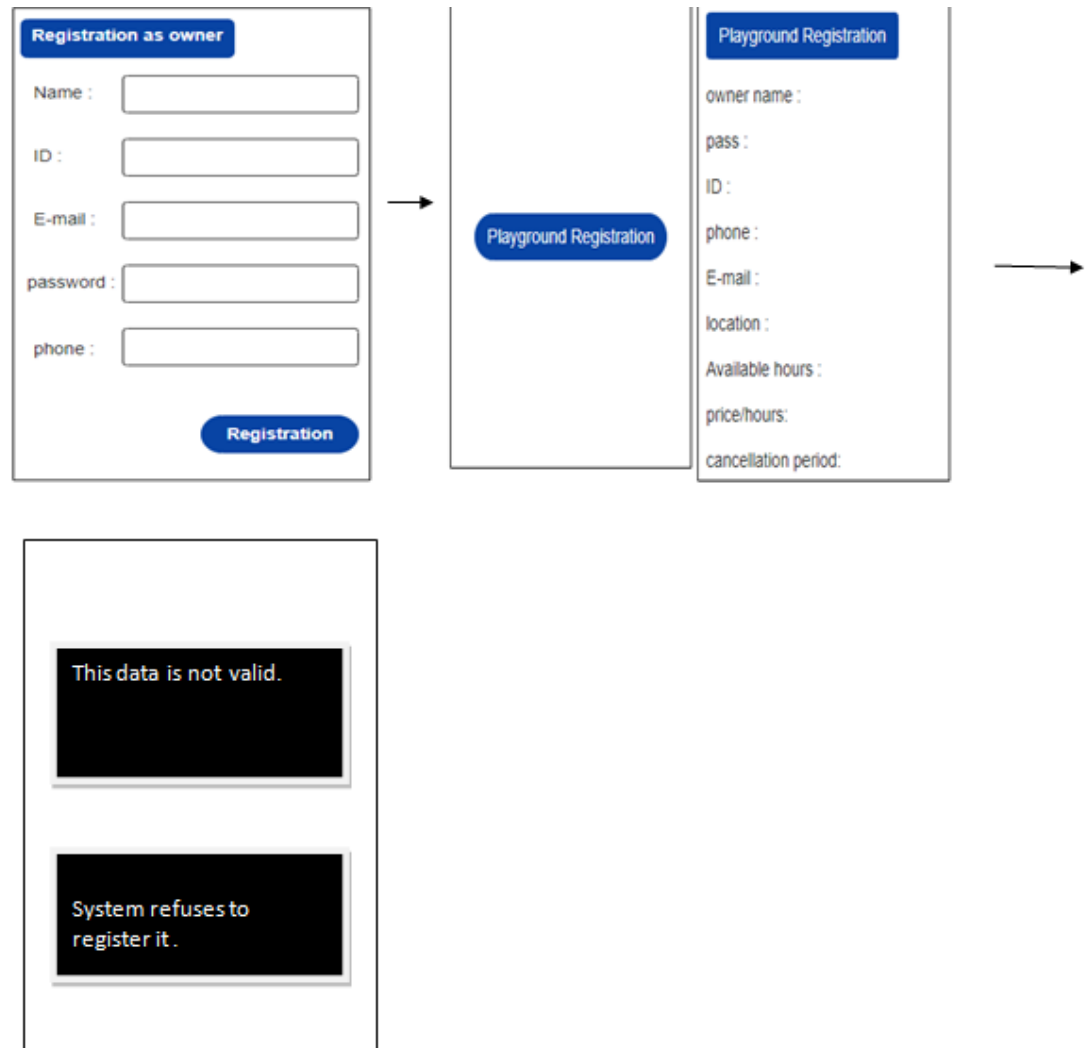
- Normal scenario



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Software Requirements Specifications



exceptional scenario

Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
Name	string/30	Mandatory :Y



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		Updatable :Y
Id	int/12	Mandatory :Y Updatable :Y
email	string/50	Mandatory :Y Updatable :Y
password	int/10	Mandatory :Y Updatable :Y
phone	int/12	Mandatory :Y Updatable :Y

User Story #3

User Story ID	US #3
User Story Name	Display Playgrounds
Actors	Player
Description	<p>As a player</p> <p>I like to be able to display all playgrounds with some filters</p> <p>So that I can choose a suitable one to book</p>
Per condition	The player must be logged in.
Post condition	The player finds the nearest playgrounds to him



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in player and I'm on the playgrounds page</p> <p>When I choose the filters that I want to apply and I click the search button</p> <p>Then the system displays all relative playgrounds</p>
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Scenarios

Normal Scenario

Actor Action	System Response
1-Player enters his username/Password to log in	
	2- System verifies his data 3-System Logs him in
4-Player requests to find the appropriate playgrounds to him.	
	5-System displays the nearest playgrounds around him.

Exceptional Scenario

Actor Action	System Response
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Software Requirements Specifications

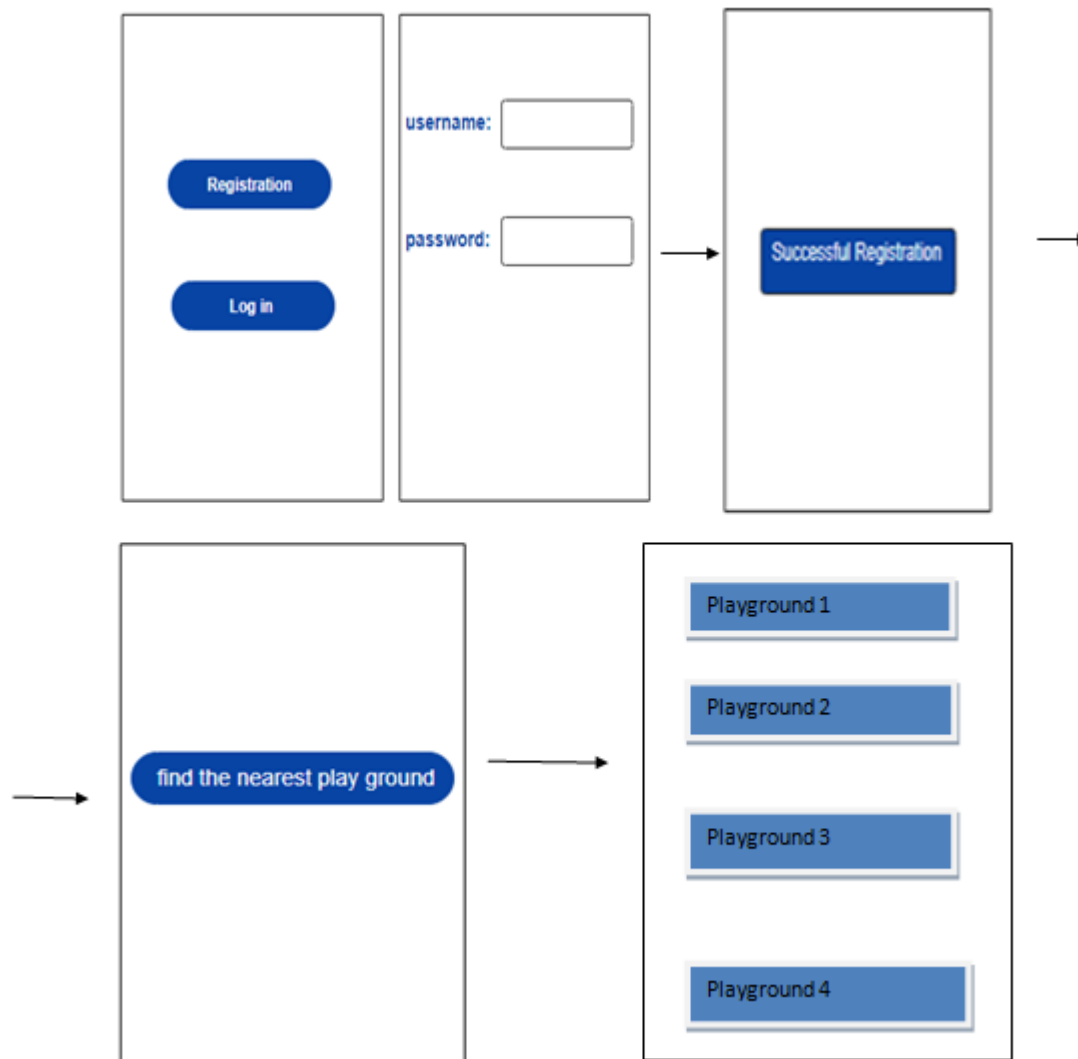
1-Player enters his username/Password	
	2-This data is not valid. the system didn't log in the player.



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Software Requirements Specifications



Normal Scenario

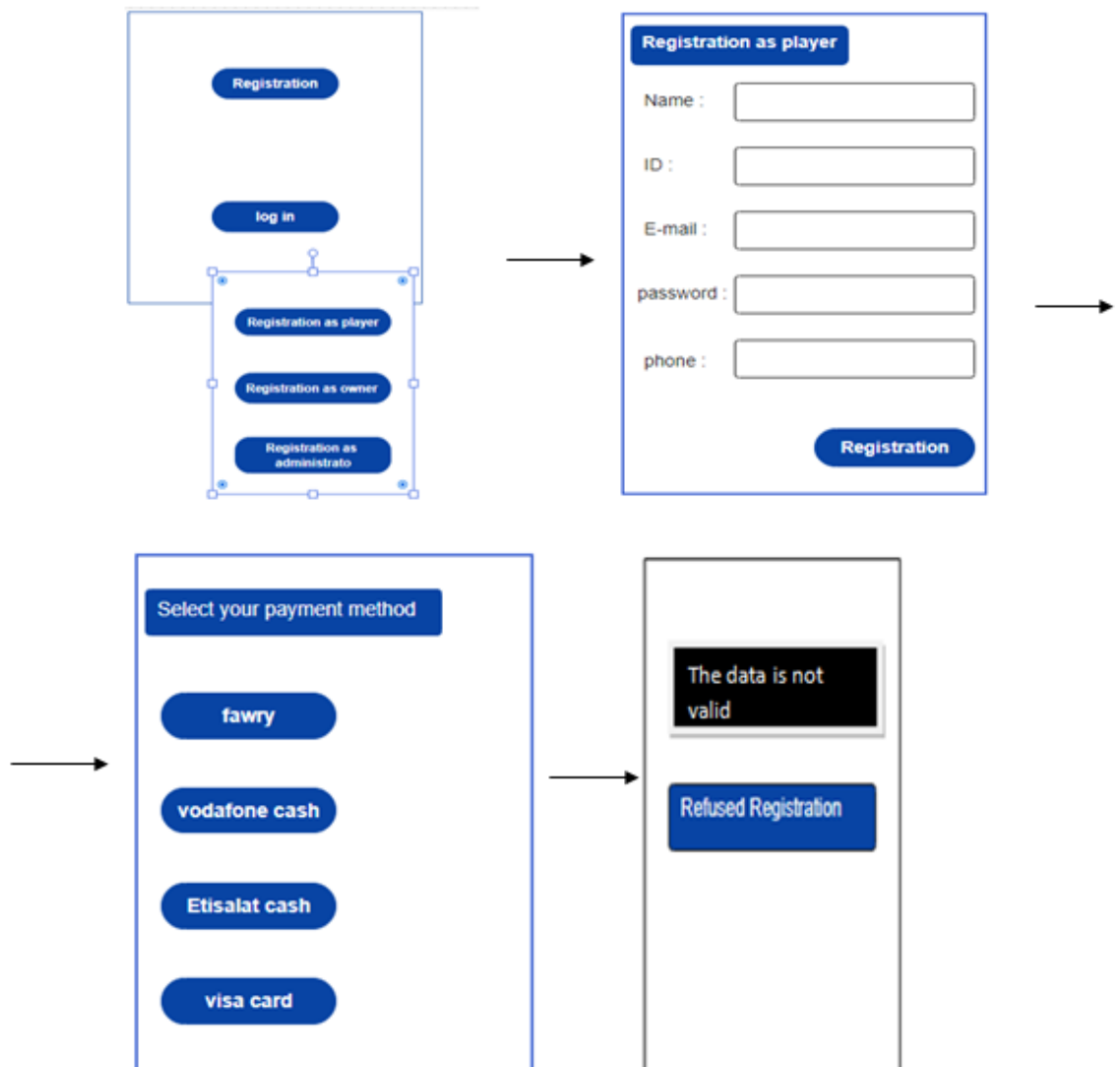


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Software Requirements Specifications

Exceptional Scenario



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
username	string/30	Mandatory :Y



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Software Requirements Specifications

		Updatable :Y
password	int/15	Mandatory :Y Updatable :Y

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 create a booking request</p> <p>So that I can reserve the chosen playground</p>
Per condition	Player must be logged in, and the playground is available on the chosen hours
Post condition	Booking request gets sent to the playground owner



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in system user and I'm on the book playground page</p> <p>When I choose a playground and I click the “book playground” button</p> <p>Then the system send my request to the playground owner</p>
----------------------------	---

Scenarios

Normal Scenario

Actor Action	System Response
1-Player asks for a specific playground free slots	
	2- System displays this playground free slots.
3-Player picks the free slot and send a booking request	
	4-System register this slot for him 5- System sends a request to the playground owner. 6-Booking has been successful

Exception Scenario

Actor Action	System Response
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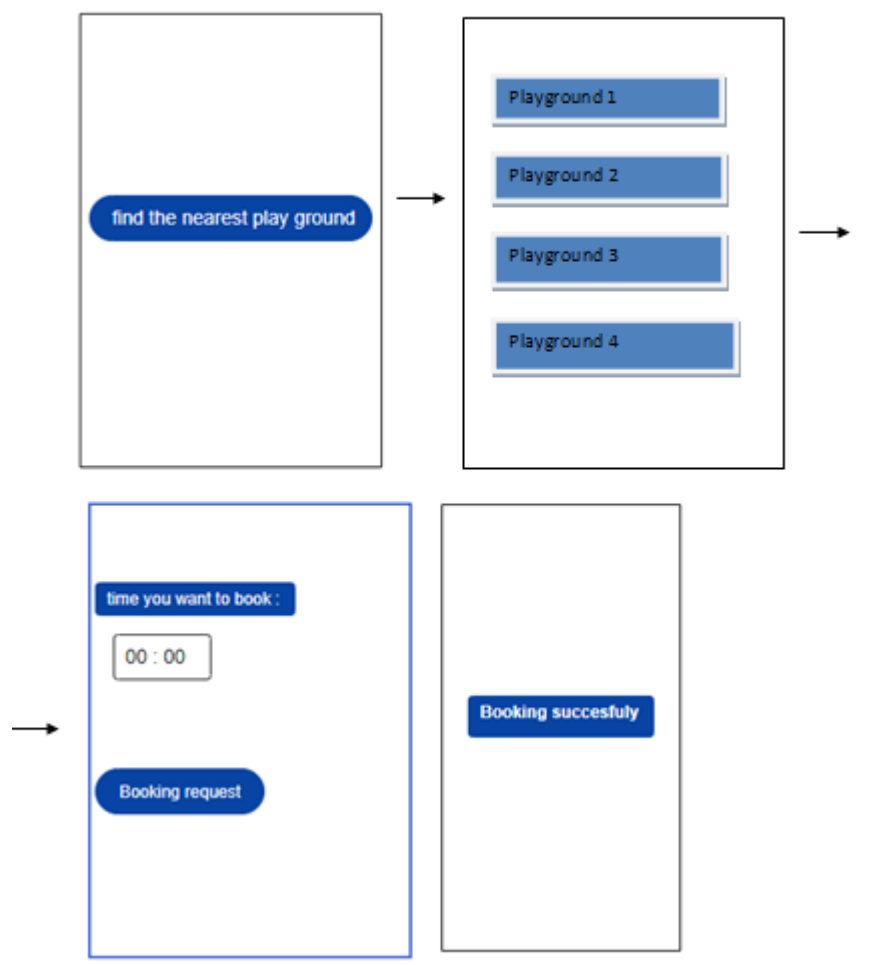
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Software Requirements Specifications

1-Player picks a reserved time slot	
	2-System denies request 3-Booking hasn't been successful

Normal Scenario



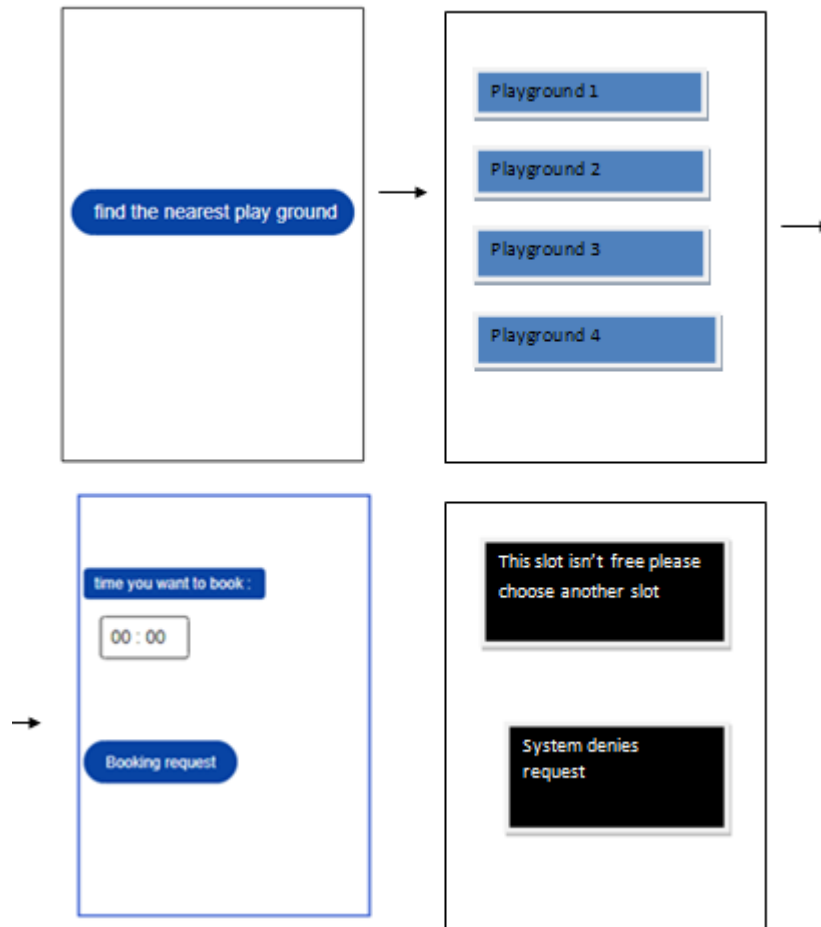


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Software Requirements Specifications

Exception Scenario



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
time	float/6	Mandatory :Y Updatable :Y



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Software Requirements Specifications

User Story #5

User Story ID	US #5
User Story Name	Payment
Actors	player
Description	As a player I like to be able to pay via eWallet So that I can confirm my booking
Per condition	player must have enough credits in his account
Post condition	money gets transferred to the playground owner's eWallet



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in player and I'm on the payment page</p> <p>When I fill in my eWallet information and I click the confirm button</p> <p>Then the system checks my account and confirms payment</p>
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Scenarios

Normal Scenario

Actor Action	System Response
1- User Enter his eWallet ID and password	
2- Click proceed checkout	
	3- System Verify user data 4- System checks if player has enough credits 5- player has enough credits
5- User clicks confirm payment	
	6- System transfers money to playground owner 7- adds playground to the player's bookings

Actor Action	System Response
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Software Requirements Specifications

1- User Enter his eWallet ID and password	
2- Click proceed checkout	
	3- data incorrect or doesn't have enough credits 4- Systems rejects payment and displays an error message

Screen Design



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Software Requirements Specifications

<p>Enter your eWallet ID:</p> <input type="text"/> <p>password:</p> <input type="password"/> <p>next</p>	<p>confirm payment</p>
<p>payment confirmed</p>	

normal scenario



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Software Requirements Specifications

Enter your eWallet ID:

password:

next

confirm payment

Error in pass or ewallet ID
enter it again correctly

Exceptional Scenario

Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
ewallet id	int/20	Mandatory :Y Updatable :Y



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Software Requirements Specifications

password	int/15	Mandatory :Y Updatable :Y

User Story #6

User Story ID	US #6
User Story Name	Send Email to player and choose a team
Actors	Player
Description	<p>As a player</p> <p>I like to be able to join a team</p> <p>So that my teammates get informed when I book a playground</p>
Per condition	Player has already booked a slot
Post condition	teammates get notifications with the booking info



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in player and i have already joined a team</p> <p>When I finish booking a playground and my request gets accepted then I choose to send invitations to my team</p> <p>Then the system sends emails to my teammates with booking information</p>
---------------------	--

Scenarios

Normal Scenario

Actor Action	System Response
1-The player enters his teammates emails.	
	2- System Verify the emails.
3-The player sends invitations to their emails.	
	4-System sends the invitation to their emails.

Exceptional Scenario

Actor Action	System Response
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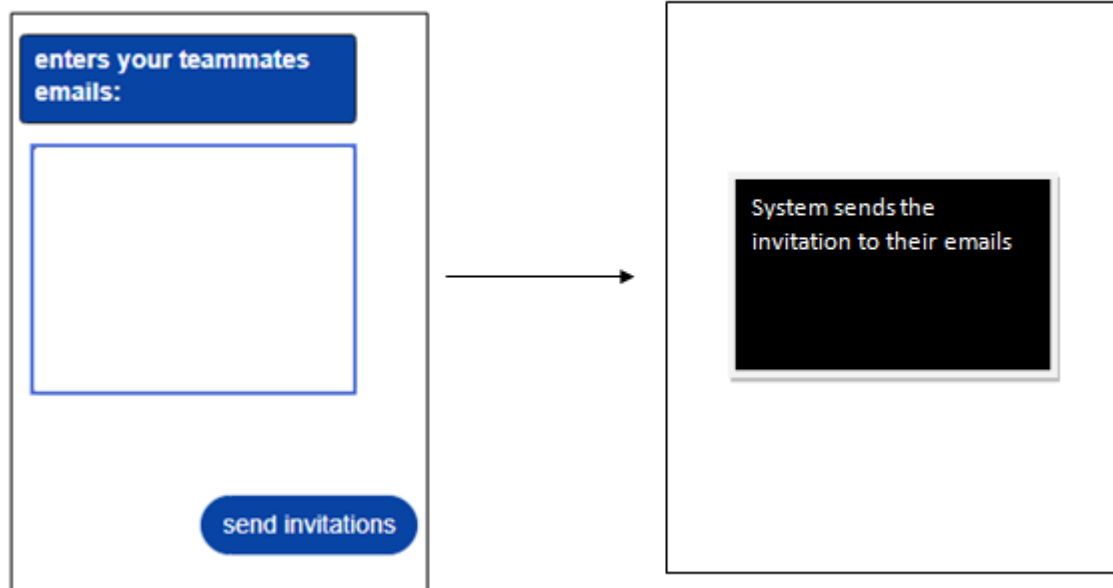
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Software Requirements Specifications

1-The player enters his teammates email	
	2-These emails aren't valid. 3-Invitation has been failed.-

Normal Scenario



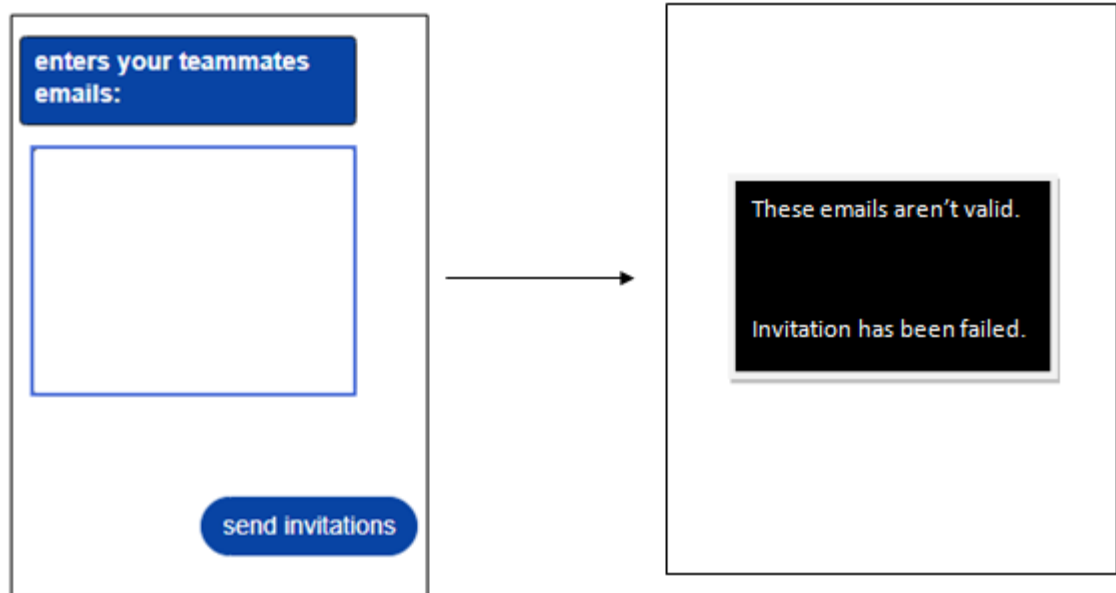


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Software Requirements Specifications

Exceptional Scenario



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
emails	string/50	Mandatory :Y Updatable :Y



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Software Requirements Specifications

User Story #7

User Story ID	US #7
User Story Name	Send Complaints
Actors	Player
Description	<p>As a player</p> <p>I like to be able to send complaints about bad playgrounds</p> <p>So that they improve their service or get removed</p>
Per condition	player has booked the playground he wants to send complaint about before
Post condition	Complaint is sent to an administrator to review



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in player and have booked a playground using the application</p> <p>When write a complaint about that playground and I click the submit button</p> <p>Then the system sends my complaint to the administrator to review</p>
----------------------------	--

Scenarios

Normal Scenario

Actor Action	System Response
1-The player enters the playground name	
	2- System checks if this playground exists 3-Enter your complaint.
4-The player enters his complaint about this playground.	
	5-complaint has been sent and System has submitted it .

Exceptional Scenario

Actor Action	System Response
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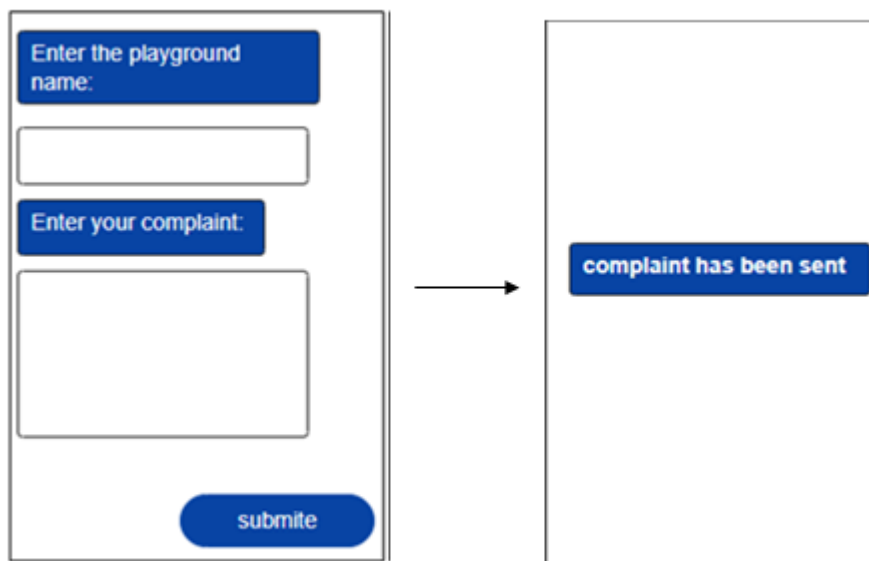
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Software Requirements Specifications

1-The player enters the name of the playground	
	2-This playground is not found.

Normal Scenario



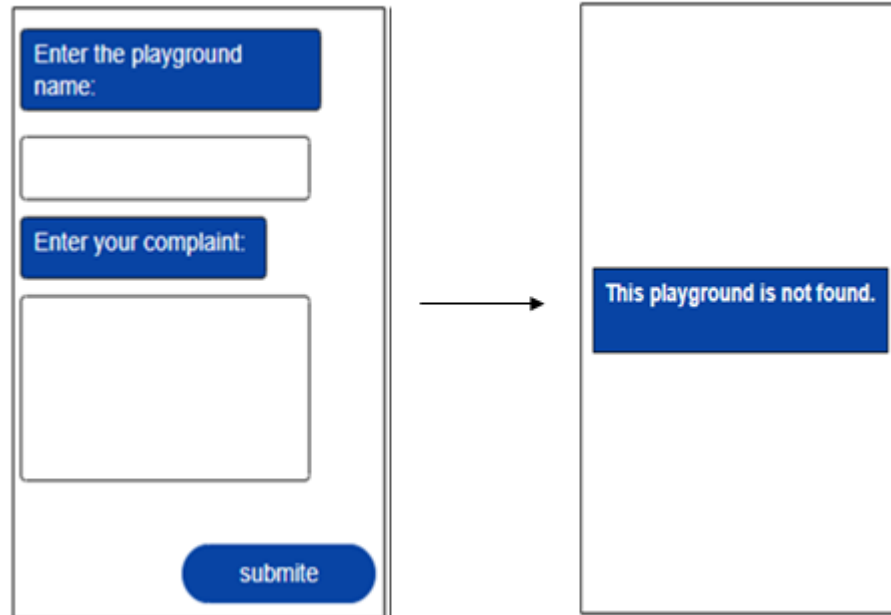


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Software Requirements Specifications

Exception Scenario



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
playground name	string/30	Mandatory :Y Updatable :Y
complaint	string/1000	Mandatory :Y Updatable :Y



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Software Requirements Specifications

User Story #8

User Story ID	US #8
User Story Name	cancellation
Actors	Player
Description	<p>As a player</p> <p>I like to be able to cancel a booking request</p> <p>So that I get my money back if I'm not going to use the playground</p>
Per condition	Player has booked this playground, and within the cancellation period determined by the playground owner
Post condition	playground owner gets informed that this booking has been cancelled
Acceptance Criteria	<p>Given I'm a logged-in player and I'm on "my books" page</p> <p>When I choose a booking and I click the cancel booking button</p> <p>Then the system cancels my booking and informs the playground owner</p>



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Software Requirements Specifications

Scenarios

Normal Scenario

Actor Action	System Response
1-The player requests for cancellation for his booked slot.	
	2- System checks if the cancellation period has been exceeded. 3-System cancels the booked slot and updates the slots. 4-System returns the money to the player.

Exceptional Scenario

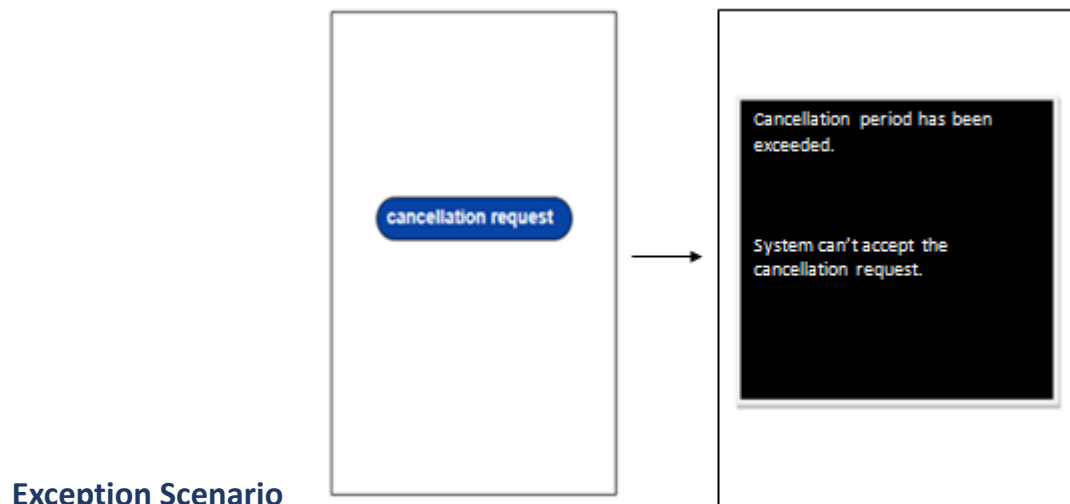
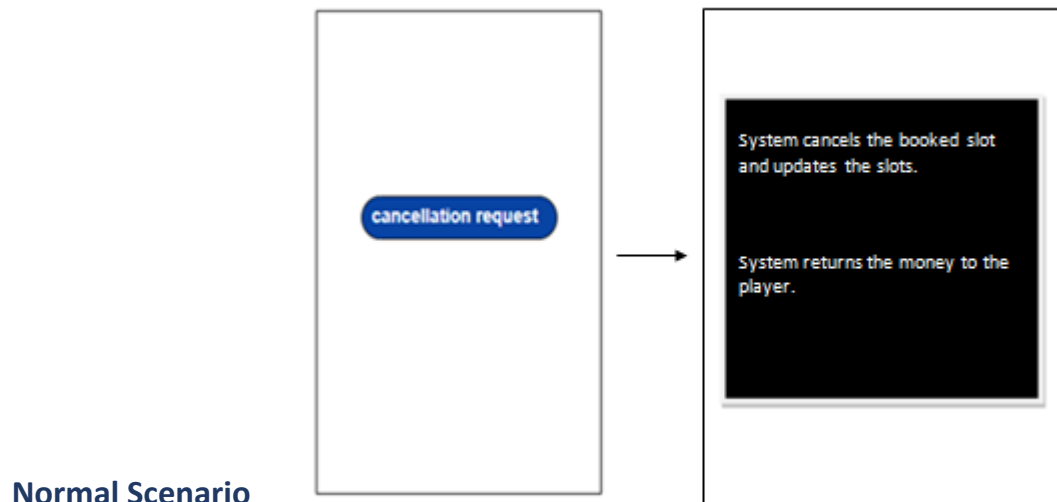
Actor Action	System Response
1-The player requests for cancellation to his booked slot.	
	2-cancellation period has been exceeded. System can't accept the cancellation request.



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Software Requirements Specifications



Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule



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Software Requirements Specifications

User Story #9

User Story ID	US #9
User Story Name	Delete and suspend a playground
Actors	Administrator
Description	<p>As an administrator</p> <p>I like to be able to suspend or delete a playground</p> <p>So that I make sure that all playgrounds are of good quality</p>
Per condition	Administrator should be logged into the system
Post condition	the administrator review gets sent to the playground owner



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Software Requirements Specifications

Acceptance Criteria	<p>Given I'm a logged-in administrator and I'm on the complaints page</p> <p>When I see a playground with many complaints and I click the suspend or delete buttons</p> <p>Then the system informs the playground owner with players complaints</p>
----------------------------	--

Scenarios

Normal Scenario

Actor Action	System Response
1- Administrator enter the name of the playground	
	2- System checks if this playground exists 3- You can (Delete/suspend) this playground.
4-Administrator chooses one of the options.	
	5- Process completed

Exceptional Scenario

Actor Action	System Response
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Software Requirements Specifications

1- Administrator enters the name of the playground.	
	3- System checks if this playground exists 4- The playground is not found.



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Screen Design

<div>Registration as administrator</div> <div>Name : <input type="text"/></div> <div>ID : <input type="text"/></div> <div>E-mail : <input type="text"/></div> <div>password : <input type="password"/></div> <div>phone : <input type="text"/></div> <div>Registration</div>	<div>enter the name of the playground:</div> <div><input type="text"/></div> <div>Delete suspended</div>
<div>Process completed</div>	

Scenario

Normal



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Software Requirements Specifications

Registration as administrator

Name :

ID :

E-mail :

password :

phone :

Registration

enter the name of the playground:

Delete

suspended

The playground is not found

Exception

Scenario

Data Dictionary:

Element Label	Type/Length	Data Validation / Business Rule
---------------	-------------	---------------------------------



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Software Requirements Specifications

name	string/30	Mandatory :Y Updatable :Y
Id	int/15	Mandatory :Y Updatable :Y
email	string/50	Mandatory :Y Updatable :Y
password	int/15	Mandatory :Y Updatable :Y
phone	int/12	Mandatory :Y Updatable :Y
playground name	string/30	Mandatory :Y Updatable :Y

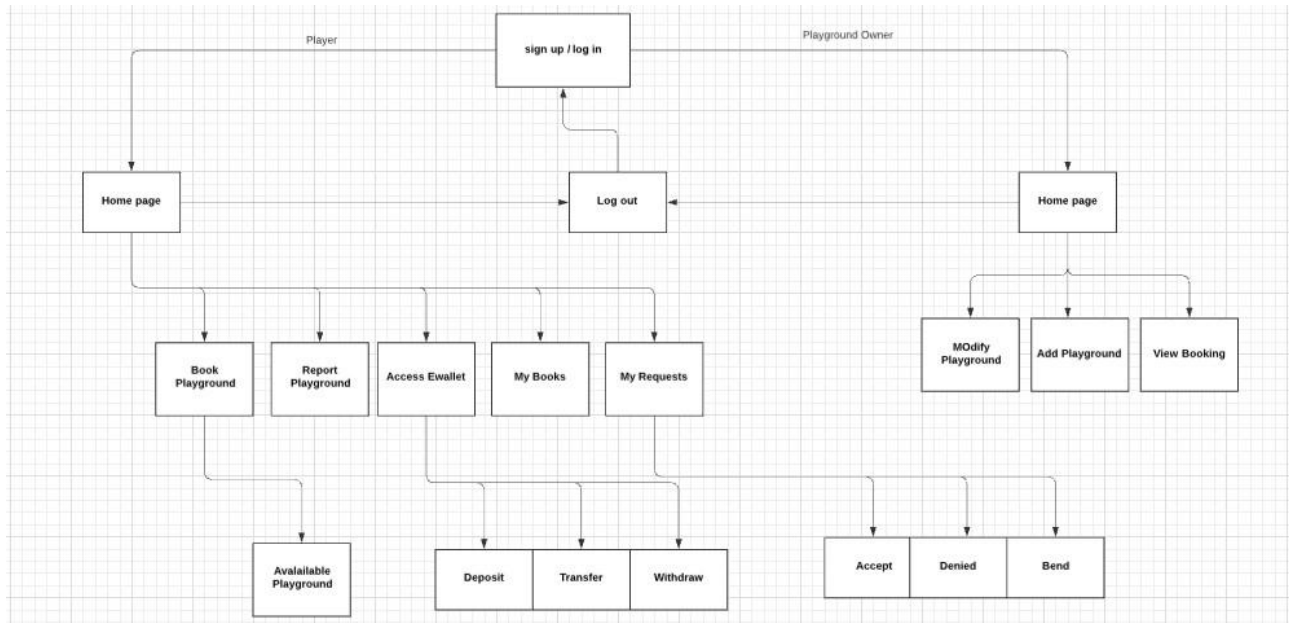
System Navigation Map



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Software Requirements Specifications



Tools

Visual-Paradigm and LUCID and makeups

Ownership Report

Student	Items he created
Modaser	Functional and Non-Functional Requirements and System Navigation Map and part of User story
Khaed	Introduction and Document Purpose and Audience and <i>screen design</i>
Hossam	<i>Use case and (Definitions, acronyms, and abbreviations) and part of User story</i>