

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Software Engineering I

Go Football (GoFo)

Software Design Specifications

Version 1.0

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Document Purpose and Audience

- This document describes GoFo system for booking playing hours in football playgrounds To make the booking process easier and faster for the players and organize the reservation process for the owner of the playgrounds.
- This document is about what the proposed system must do, what is expected from the system and constraint on the system's development.
- The target audiences are Playgrounds owners and the administrator.

System Models

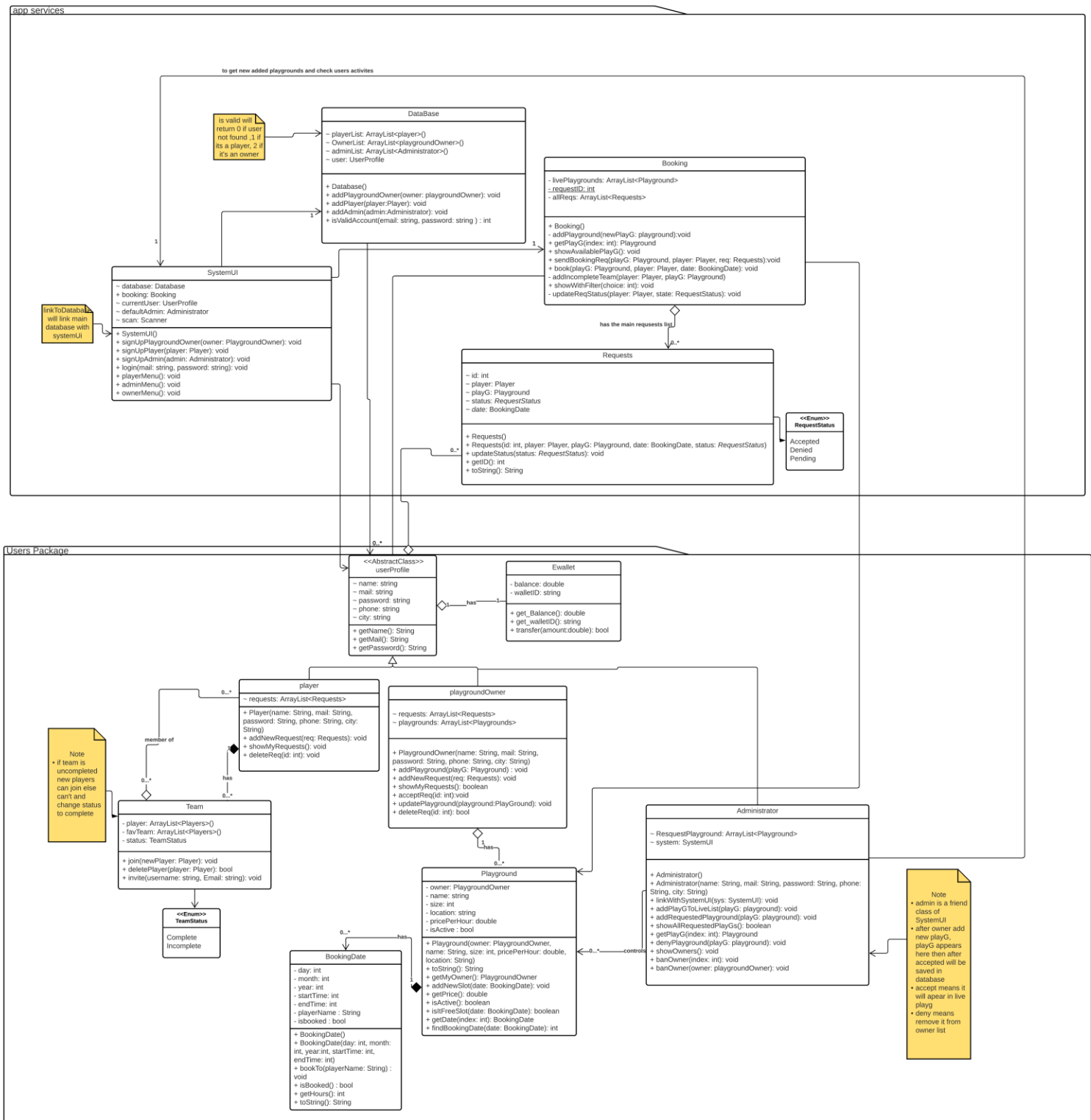
I. Class Diagram(s)



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II. Class Descriptions

Class ID	Class Name	Description & Responsibility
1.	SystemUI	<ul style="list-style-type: none"> - This class will be responsible for users authentication to login or signup a new account - Will show user menu after logging in according to its type
2.	Database	<ul style="list-style-type: none"> - It keeps all system users (admin, player, playground owner) to know if a user registered or not
3.	Booking	<p>It keeps</p> <ul style="list-style-type: none"> - available playgrounds that verified by administrator - list of uncomplete teams that a player can join to them - after a player book a playground it sends request that show status of the reservation to player who booked this playground and to playground owner
4.	Requests	<ul style="list-style-type: none"> - keeps history of requests to player and playground owner - a player and owner can see their accepted "booked" requests information
5.	<<enumeration>> RequestStatus	<ul style="list-style-type: none"> - contains request status (pending, denied, accepted)
6.	<<AbstractClass>> userProfile	<ul style="list-style-type: none"> - contains users' information - classes player, playground owner, administrator inherit from it and each player and playground owner has Ewallet class
7.	Ewallet	<ul style="list-style-type: none"> - keeps user's balance and allows them to transfer money using Ewallet id
8.	Player	<ul style="list-style-type: none"> - contains player information and allows him to see his requests and books requests
9.	PlaygroundOwner	<ul style="list-style-type: none"> - contains playground owner information and allows him to see his requests and books requests and he can add or edit playgrounds
10.	Playground	<ul style="list-style-type: none"> - contains all playground details
11.	BookingDate	<ul style="list-style-type: none"> - keeps available booking dates for each playground
12.	<<enumeration>> playGStatus	<ul style="list-style-type: none"> - contains playground status (accepted, denied, banned)
13.	Team	<ul style="list-style-type: none"> - contains players information who joined same team - a player can add team members to its team - a player can add other players to his favorite team list
14.	<<enumeration>> TeamStatus	<ul style="list-style-type: none"> - contains team status (complete, incomplete)



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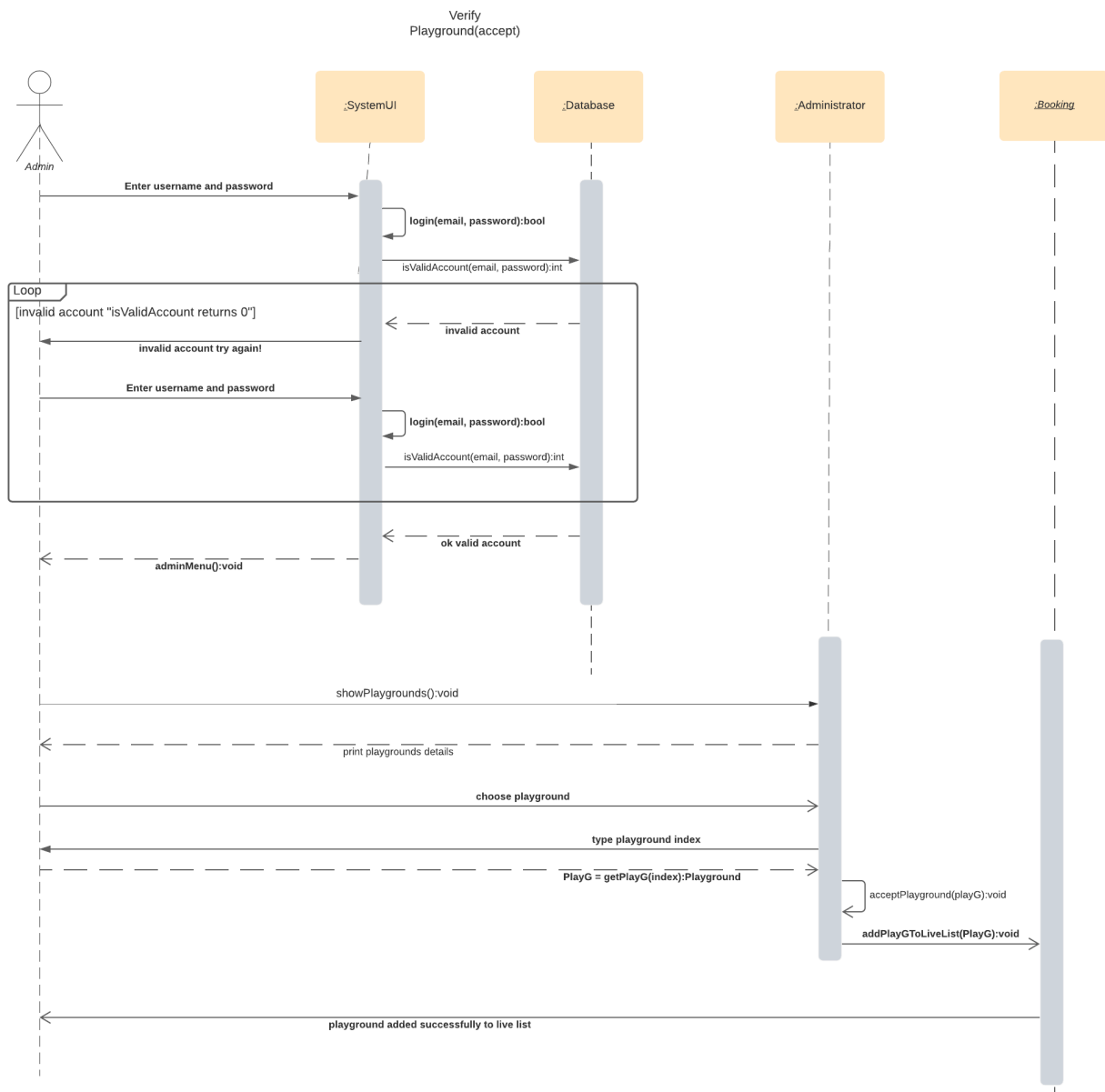
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Class ID	Class Name	Description & Responsibility
15.	Administrator	<ul style="list-style-type: none"> - has list of new playgrounds that will added to system after verifying these new playgrounds he can deny or accept them - after he accepted verified playgrounds they will added to to live available playgrounds - can access database and booking classes to see users activities

III. Sequence diagrams

Diagram#1 (verify playground “accept”)



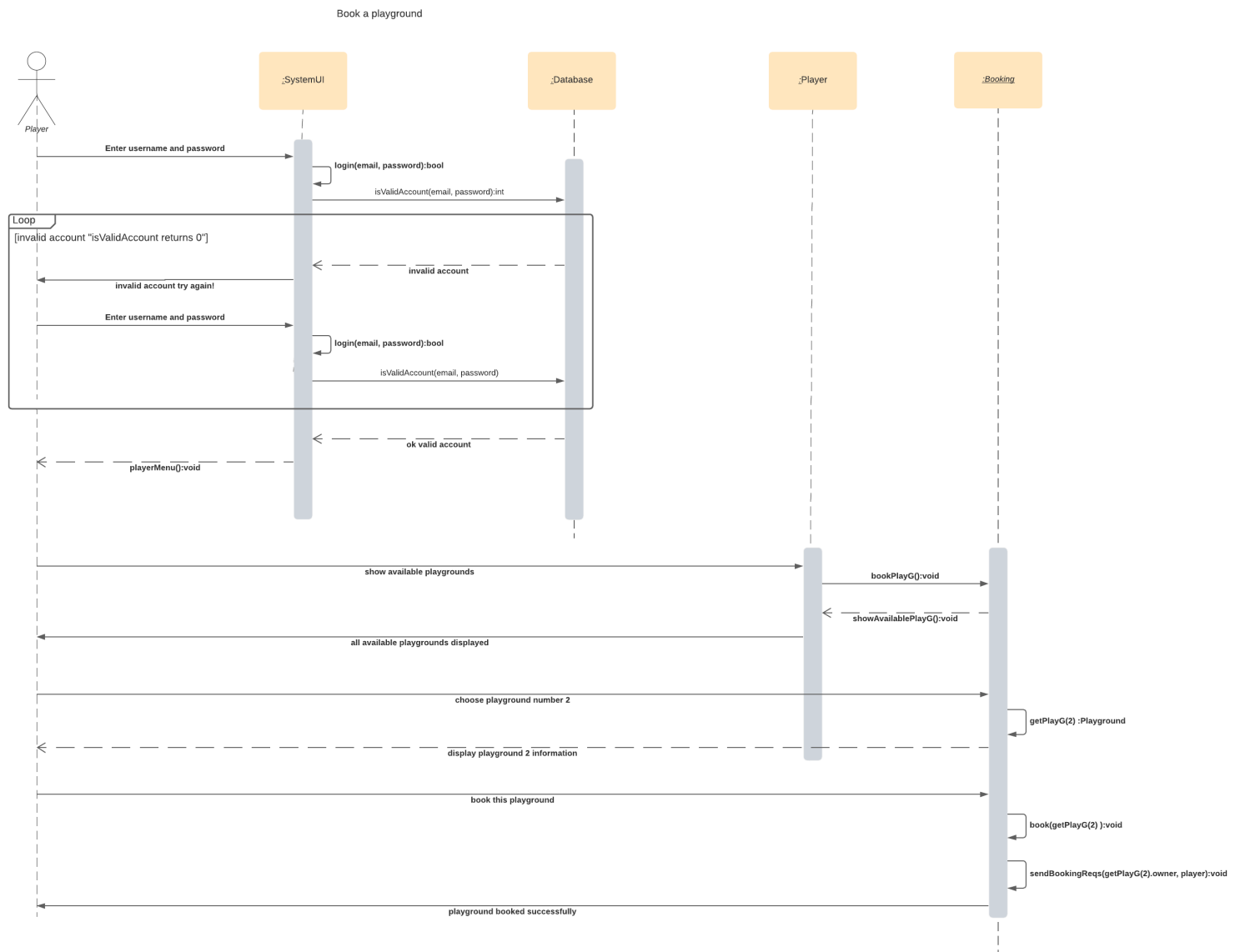


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Diagram#2 (Book a playground)



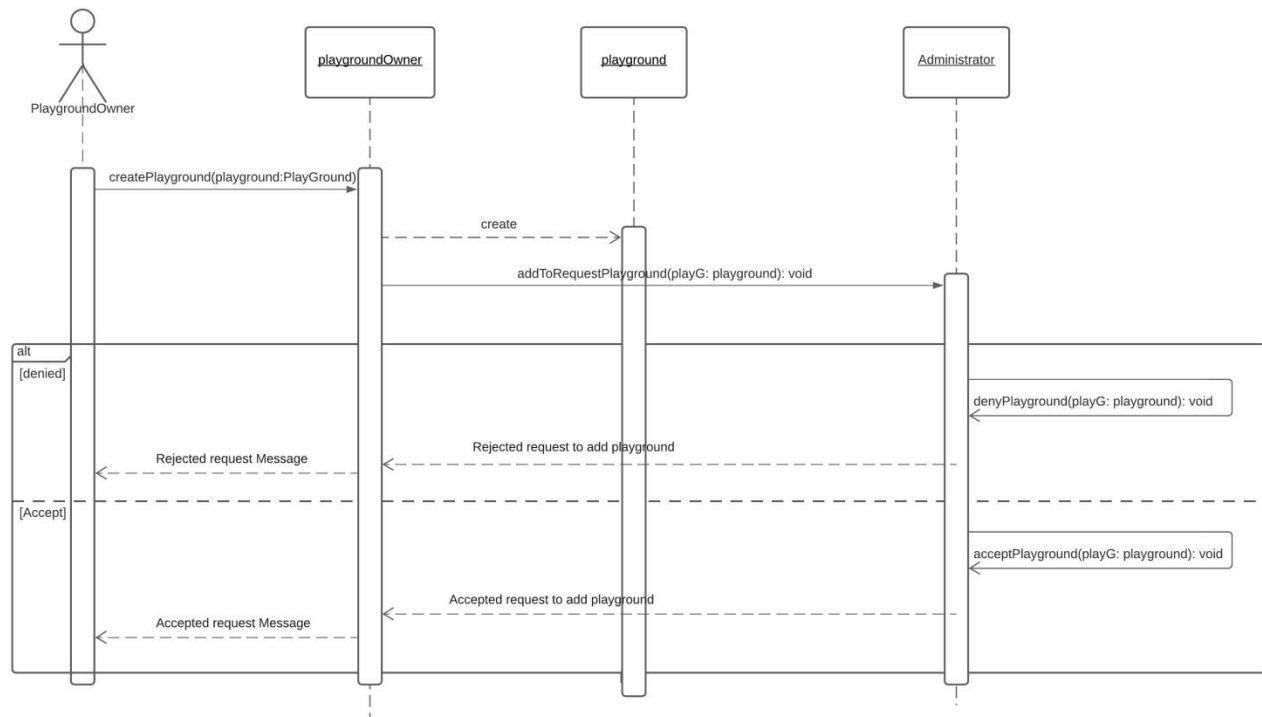


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Diagram#3 Add Playground



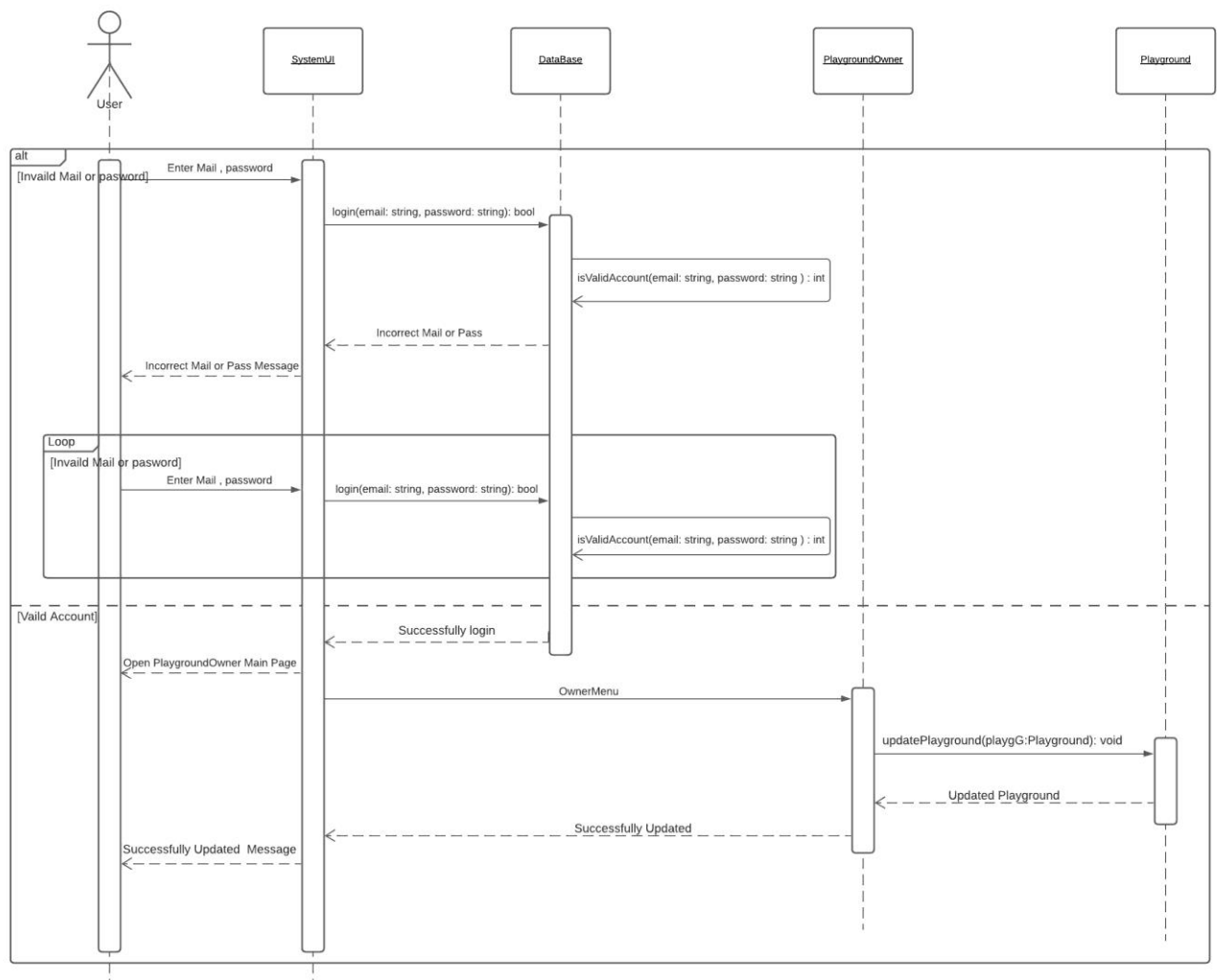


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Diagram#4 Edit Playground





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Class - Sequence Usage Table

Sequence Diagram	Classes Used	All Methods Used
1) diagram#1 (verify playground “accept”)	Class SystemUI Class Database Class Administrator Class Booking	login(mail: string, password: string): bool adminMenu():void isValidAccount(email: string, password: string) : int showPlaygrounds():void getPlayG(index: int): Playground acceptPlayground(playG: playground): void addPlayGToLiveList(playG: playground): void
2) diagram#2 (Book a playground)	Class SystemUI Class Database Class Player Class Booking	login(mail: string, password: string): bool isValidAccount(email: string, password: string) : int playerMenu():void bookPlayG():void showAvailablePlayG():void getPlayG(index: int): Playground book(playG: Playground): void sendBookingReqs(owner: PlaygroundOwner, player: Player):void
3) diagram#3 Add Playground	PlaygroundOwner Playground Administrator	createPlayground():void addToRequestPlayground(playG: playground): void acceptPlayground(playG: playground): void denyPlayground(playG: playground): void



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Sequence Diagram	Classes Used	All Methods Used
4) Diagram#4 Edit Playground	SystemUI DataBase playgroundOwner Playground	login(mail: string, password: string): bool isValidAccount(email: string, password: string) : int ownerMenu(): void updatePlayground(playground:PlayGround): void

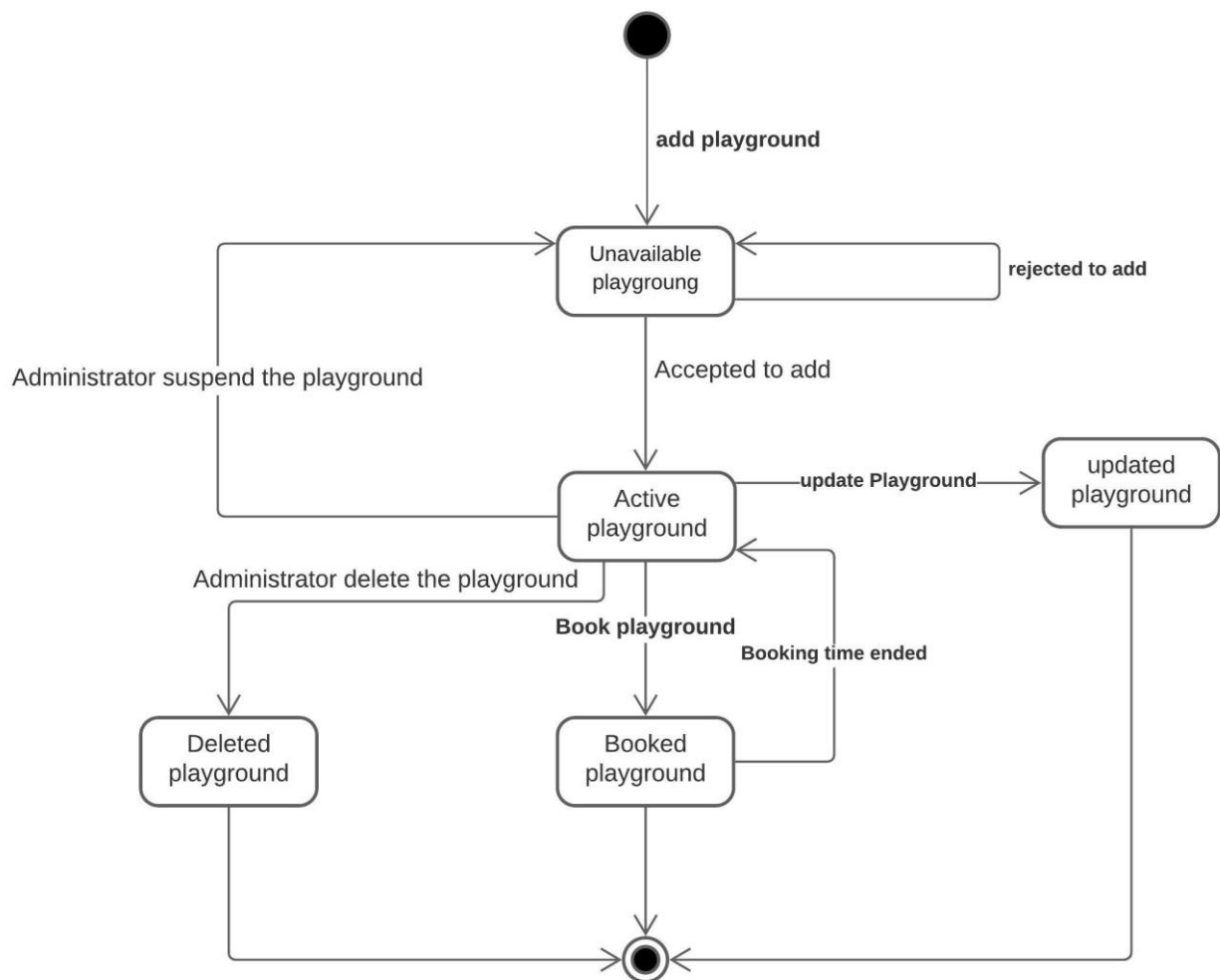


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State Diagram





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Tools

- **Lucidchart:** <https://www.lucidchart.com/>

Ownership Report

Owners	Item
Ahmed Mohamed Ahmed	<ul style="list-style-type: none">- Part of class diagram and sequence diagrams 1 and 2- Part of coding implementation
Mohamed Reda El-Baz	<ul style="list-style-type: none">- Part of class diagram and sequence diagrams 3 and 4- State Diagram- Part of coding implementation