

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Software Engineering I

GoFo

Software Design Specifications

Version 1.0

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June & 2021



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Contents

Team	1
Document Purpose and Audience	3
System Models	4
I. Class Diagram(s).....	4
II. Class Descriptions	5
III. Sequence diagrams.....	6
Class - Sequence Usage Table.....	10
IV. State Diagram	11
Tools	11
Ownership Report	12



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Document Purpose and Audience

- This document's purpose is targeted towards developers as a guide for developing the application.
- It shows them how the classes would interact with each other and the functionalities needed to be delivered



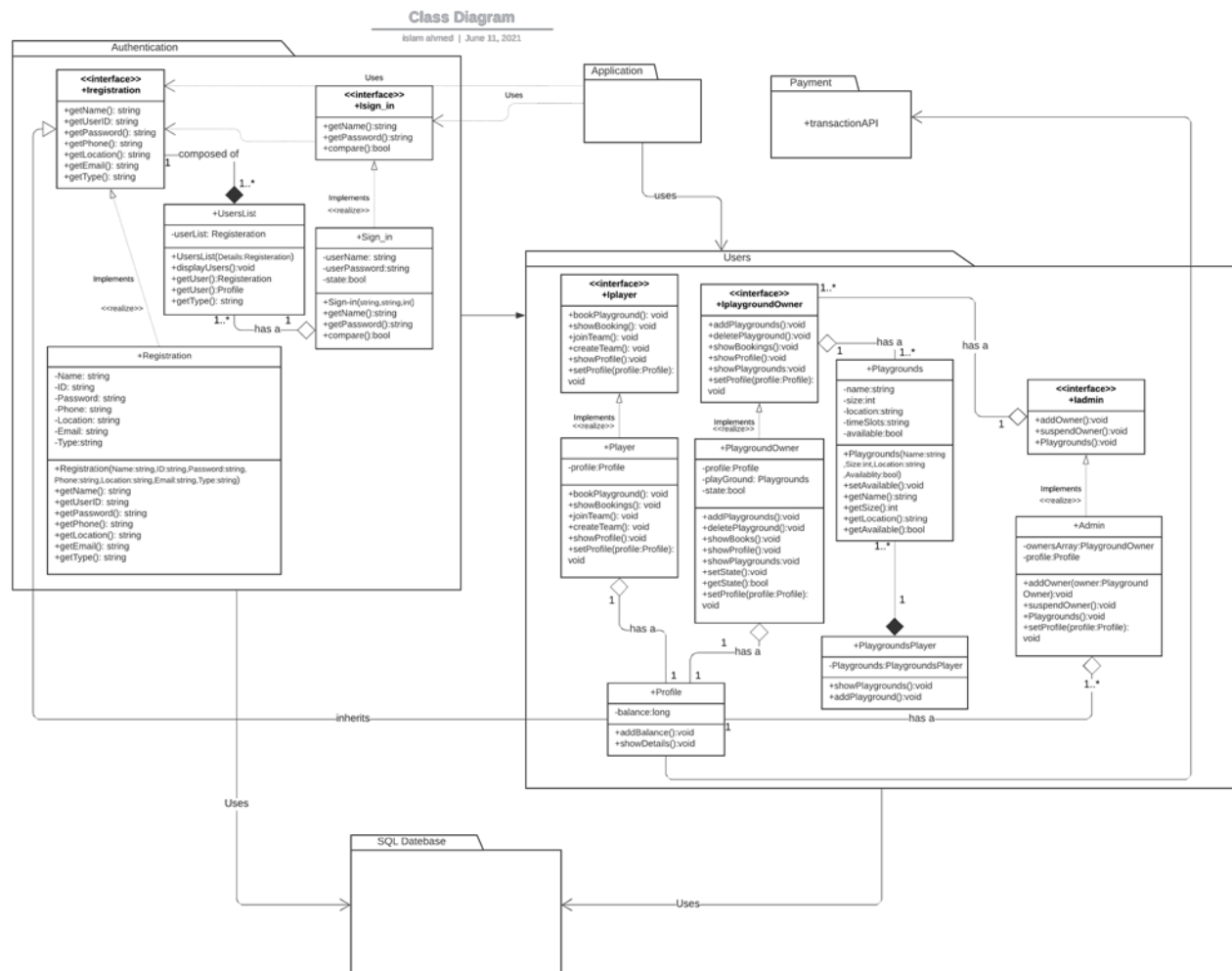
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System Models

I. Class Diagram(s)





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II. Class Descriptions

Class ID	Class Name	Description & Responsibility
1.	Iregistration	An interface to abstract the functionalities of the class “Registration”.
2.	Registration	A class to register all the new users details.
3.	UsersList	A class that takes all the details from the registration details and stores them.
4.	Isign_in	An interface to abstract the functionalities of the class “Sign_in”.
5.	Sign_in	A class that takes the user’s details and check if they exist or not.
6.	Iplayer	An interface to abstract the functionalities of the class “Registration”.
7.	Player	A class that has all the options that a user “player” would need such as (joining a team, creating a team, booking a playground,...etc.)
8.	IplaygroundOwner	An interface to abstract the functionalities of the class “PlaygroundOwner”.
9.	PlaygroundOwner	A class for the playground owner to manage their playgrounds and add more if they want. Also, they can view their current books.
10.	Playgrounds	A class containing all the details about a playground, the owners can use this class to add or remove, details and show the availability of their playgrounds.
11.	PlaygroundsPlayer	A class that is derived from Playgrounds to show the player all the playgrounds and let him choose from them.
12.	Profile	A class that every user has an instance of. It stores all his details from the registration class as it is derived from it.
13.	Iadmin	An interface to abstract the functionalities of the class “Admin”.
14.	Admin	A class for the system administrator to monitor all the playground owners in terms of fraudulent activities. It also allows them to suspend or delete and playground/owner, accept or deny owners' requests to add playgrounds.

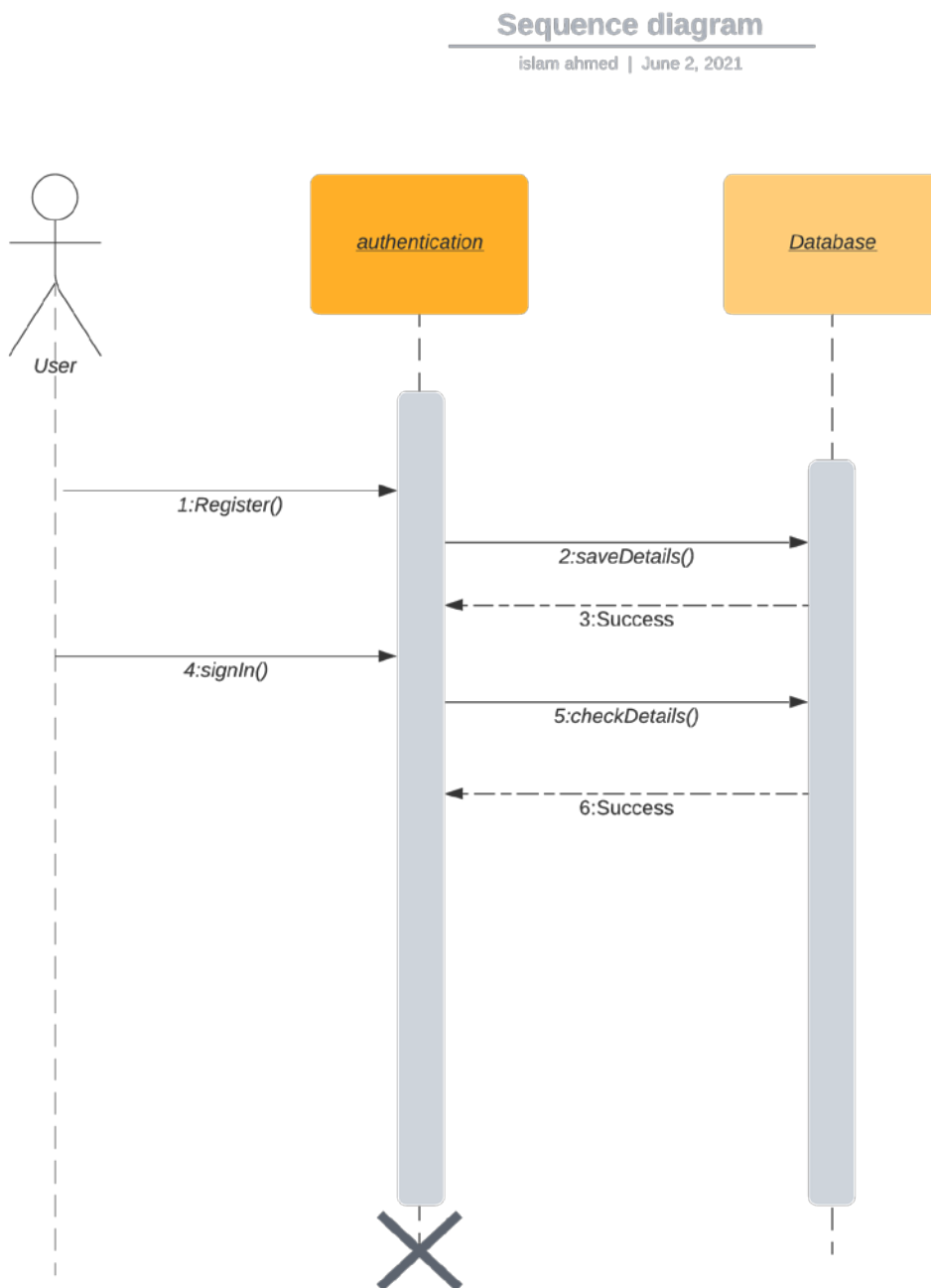


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III. Sequence diagrams





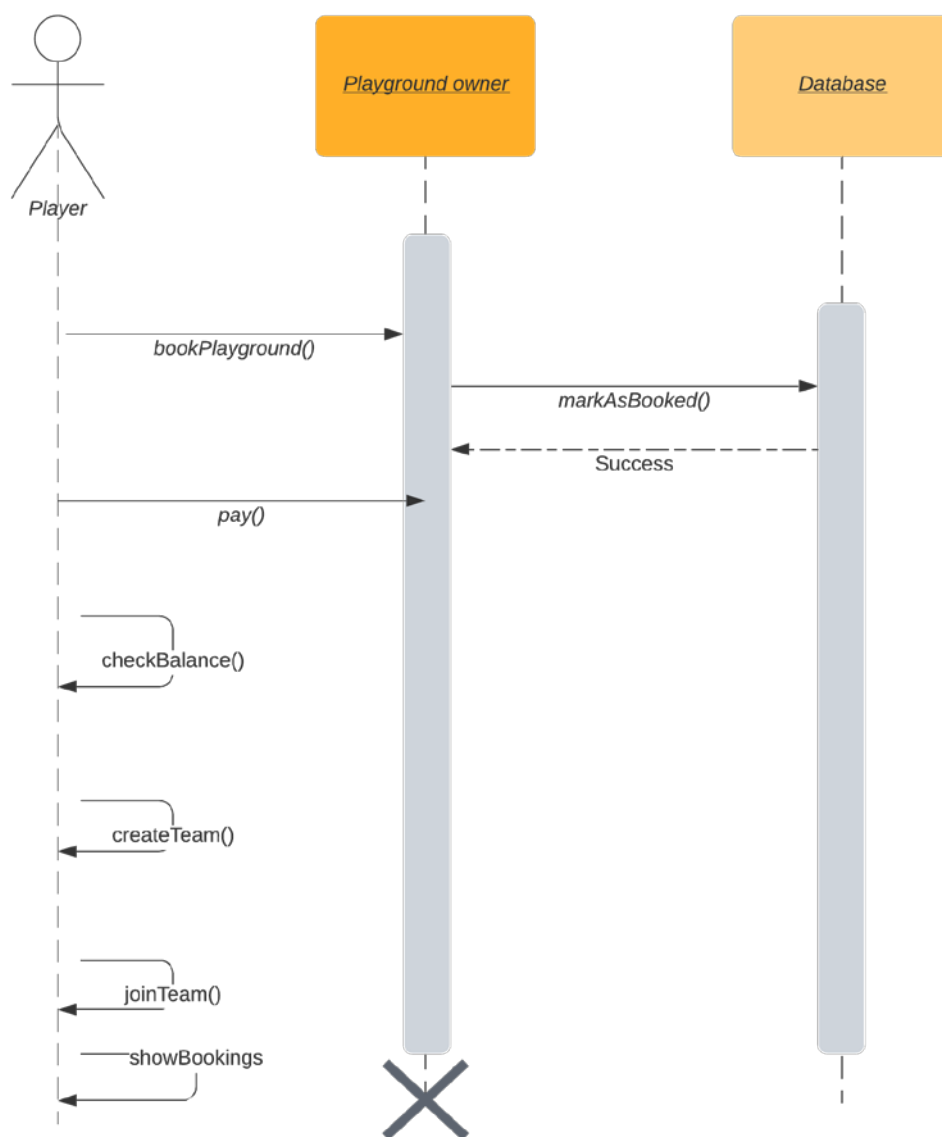
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Sequence diagram

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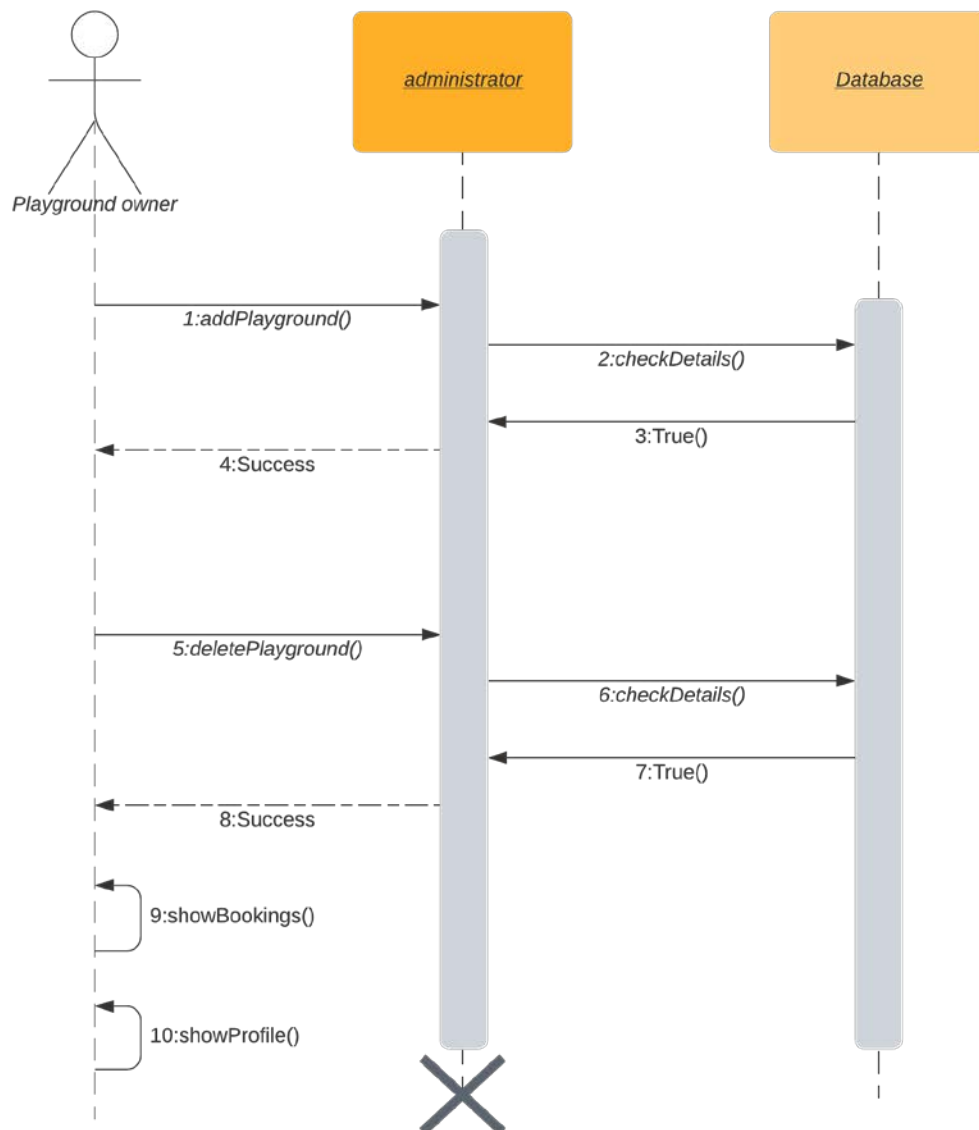
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Sequence diagram

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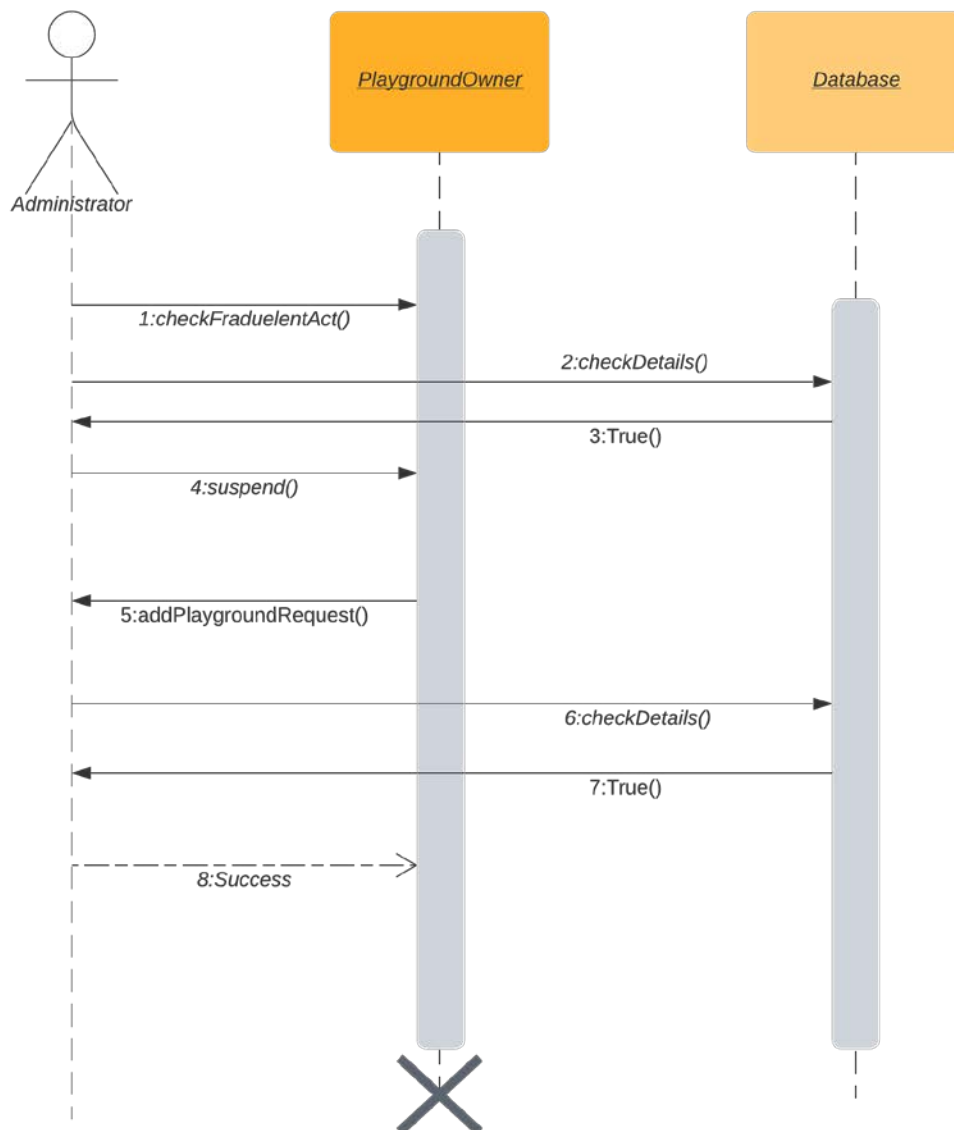
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Sequence diagram

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Class - Sequence Usage Table

Sequence Diagram	Classes	Methods
1- Register Playground	Class PlaygroundOwner Class Admin	getName(); getUserID(); getPassword(); getetPhone(); getLocation(); getEmail(); getType(); addOwner(); setAvailable();
2-Book Playground	Class Player Class PlaygroundOwner	showPlaygrounds(); bookPlaygrounds();
3- Suspend Owner	Class PlaygroundOwner Class Admin	suspend();
4- Show Bookings	Class Player Class PlaygroundOwner	showBookings();
5- Create Team	Class Player	createTeam();
6- Join Team	Class Player	joinTeam();
7- Check Ewallet	Class player Class PlaygroundOwner	checkProfile();

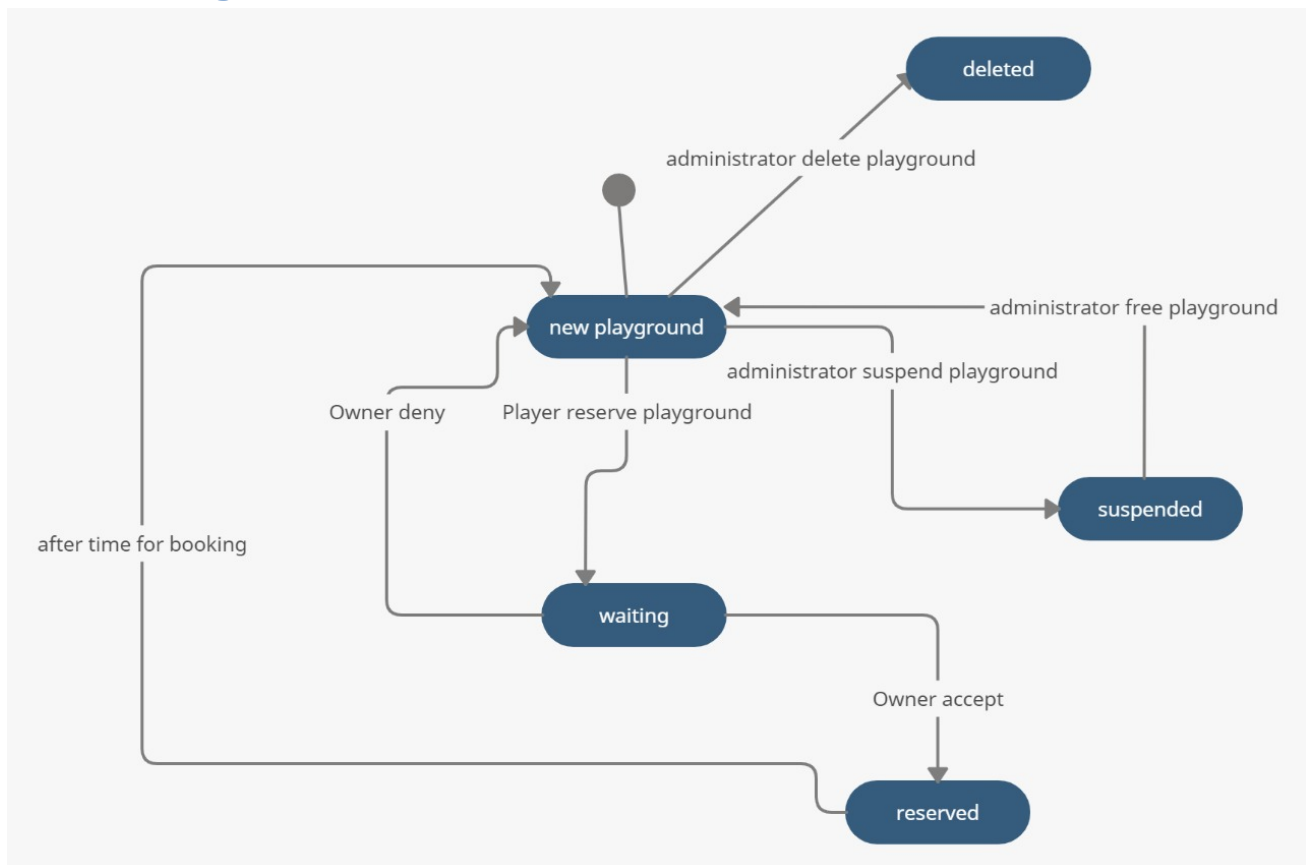


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IV. State Diagram





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Tools

ArgoUML , lucid.app and intellij ide.

Ownership Report

Item	Owners
Islam Ahmed Mohamed Saber	Class diagram and class description,main class , playgrounds,playgroundOwner,Sign_in,Registration,player,playgroundsPlayer,profile
Mazen Amr Abaza	Sequence diagram and sequence usage table,playgroundOwner
Ahmed Hamdy Mohamed	State diagram,Sign_in