

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Software Engineering I

GoFo

Software Design Specifications

Version 0.0

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Project: <Project Name>

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Contents

Instructions [To be removed]	Error! Bookmark not defined.
Team	3
Document Purpose and Audience	3
System Models	3
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	11



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Project: <Project Name>

Software Design Specification

Team

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Document Purpose and Audience

This is a software design specification document (SDS) which contains diagrams and illustration for many software aspects.

The document is intended to be for a project owner who has technical knowledge about computer science in general and specially software engineering field and also know what are the user requirements.

This project contains some UML diagrams as class diagrams, sequence diagrams and state diagrams.



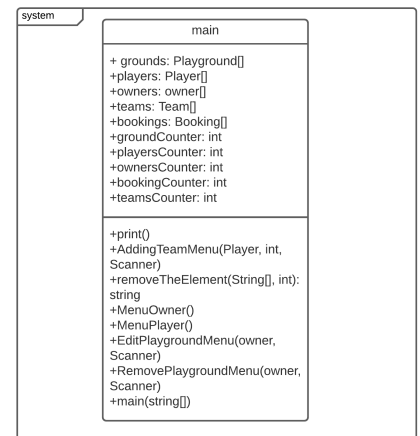
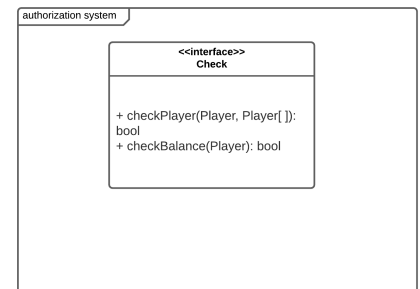
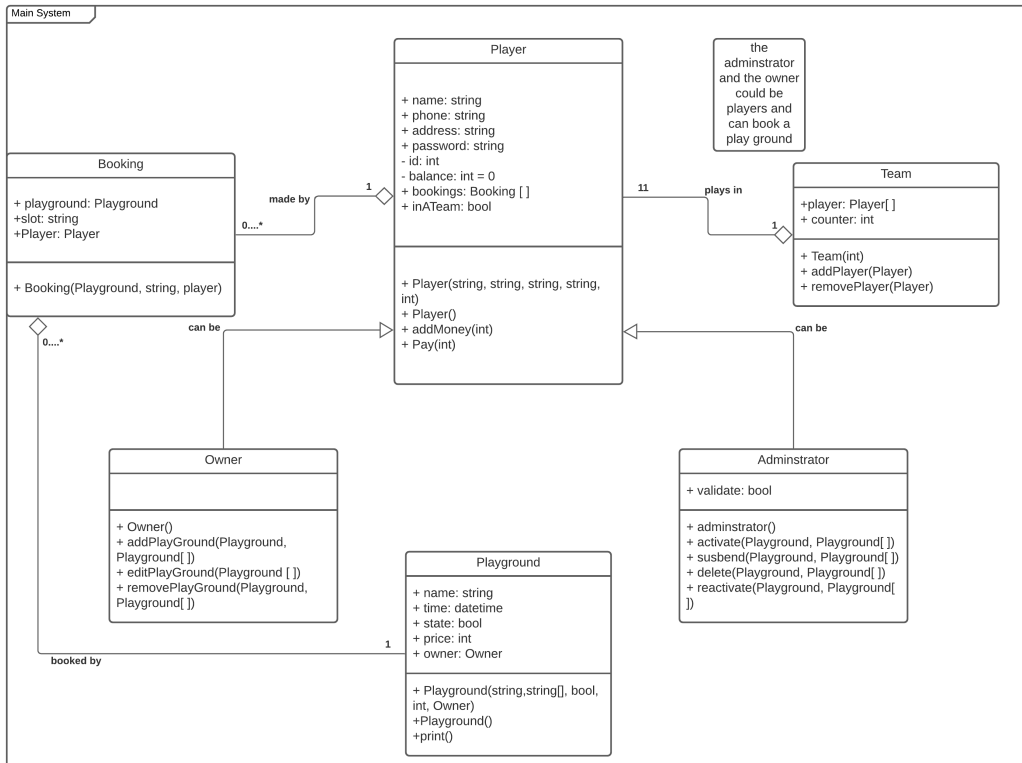
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Project: <Project Name>

Software Design Specification

System Models

I. Class Diagram(s)





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Project: <Project Name>

Software Design Specification

II. Class Descriptions

Class ID	Class Name	Description & Responsibility
1.	player	Player is the class responsible for players and their information. It allows us to create player objects and enter its information and create a players array to carry all the players accounts. Player class allow players to add money to their balance and pay for playgrounds.
2.	owner	Owner class inherit from player class so it have all player class attributes and methods and have 3 special methods which are to add playground to the playgrounds array and to edit playground data and to remove the playground.
3.	administrator	Owner class inherit from player class so it have all player class attributes and methods and have 4 special methods which are to activate playground, to suspend a playground, to delete playground and to reactivate it.
4.	playground	Playground class is a class that allows us to make playground objects and playground arrays and it contains playground information as its name, time, state and price.
5.	booking	Booking is the class that allows us to make bookings objects and bookings arrays.
6.	team	Team is class that allows us to make teams of 11 players.
7.	check	Check is an interface that allows to do most of the authorizations in the system
8.	system	System is the class that acts as our main in which the one how use the system interact with and it may doesn't have many functions but it holds many things which are too small to be functions as showing messages take inputs from the user.

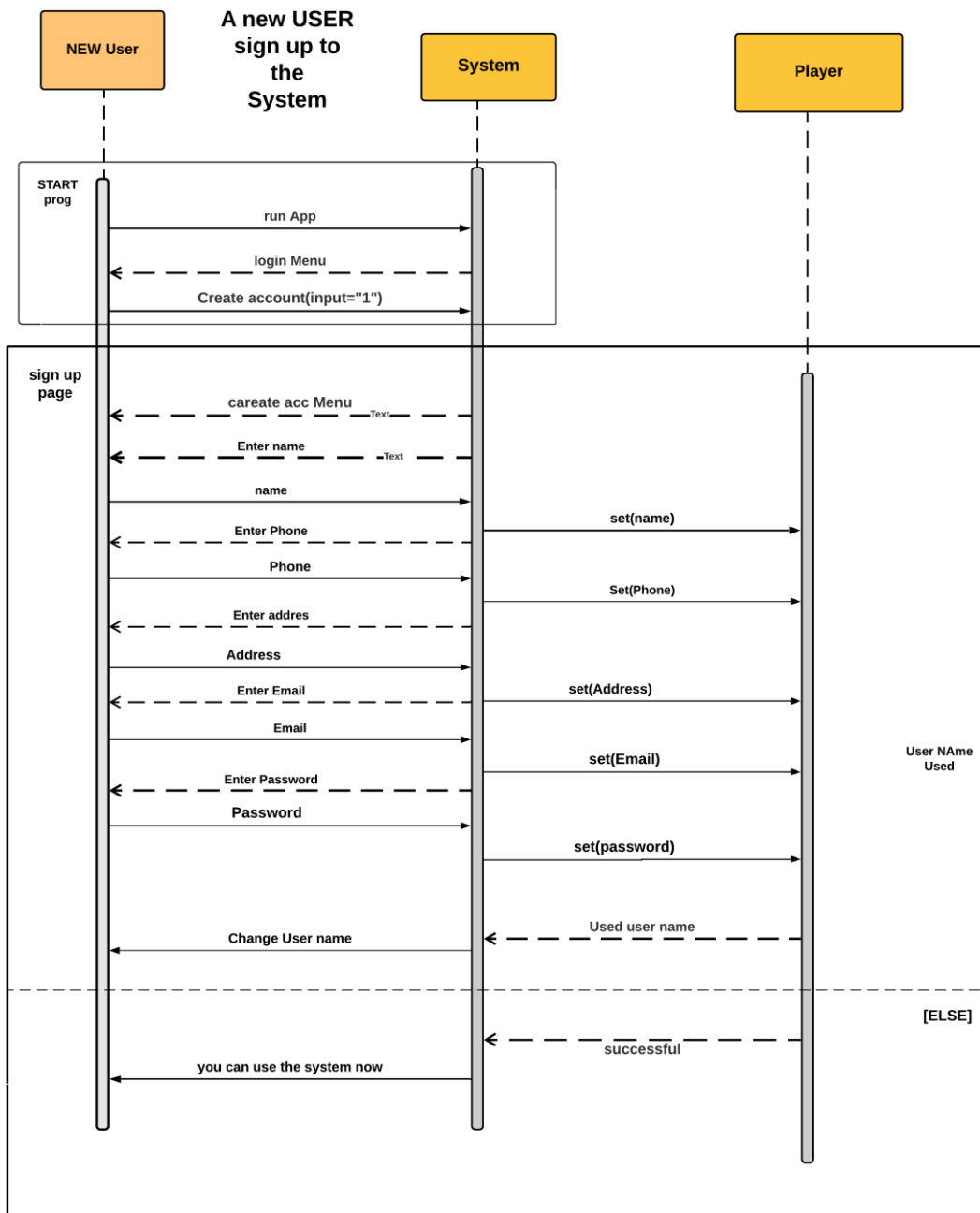


CS251: Phase 2 – <Team Name>

Project: <Project Name>

Software Design Specification

III. Sequence diagrams

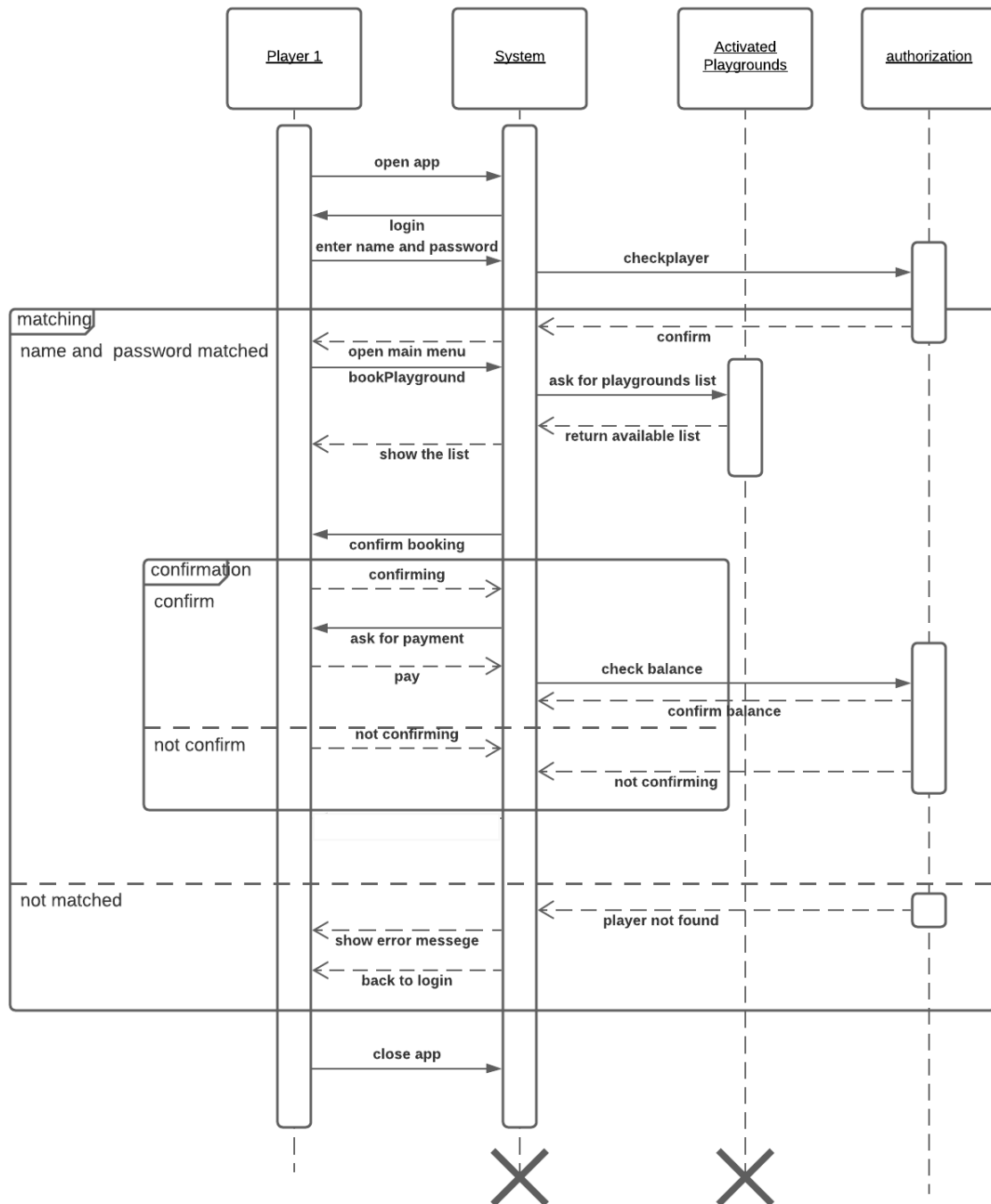




CS251: Phase 2 – <Team Name>

Project: <Project Name>

Software Design Specification

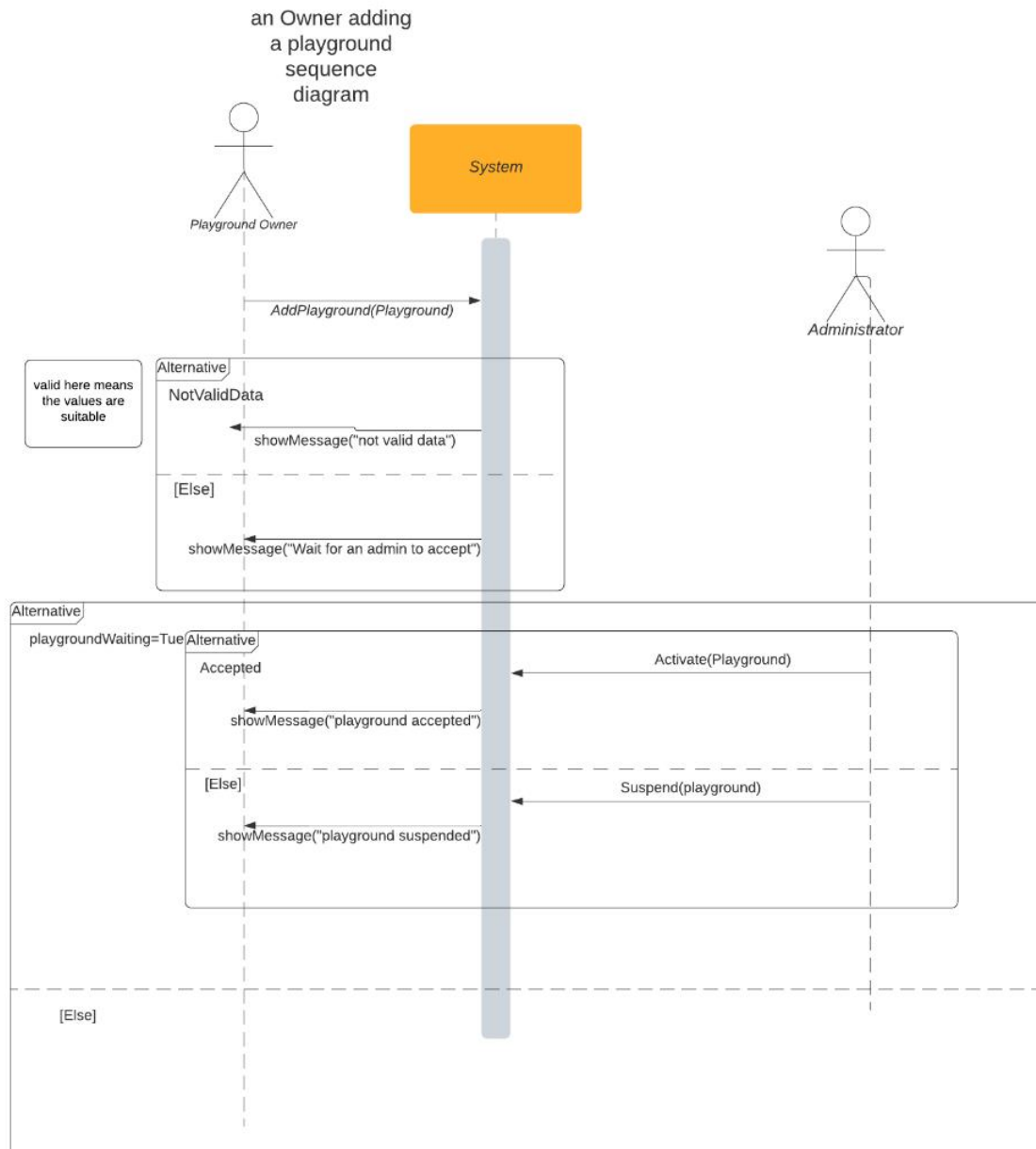




CS251: Phase 2 – <Team Name>

Project: <Project Name>

Software Design Specification

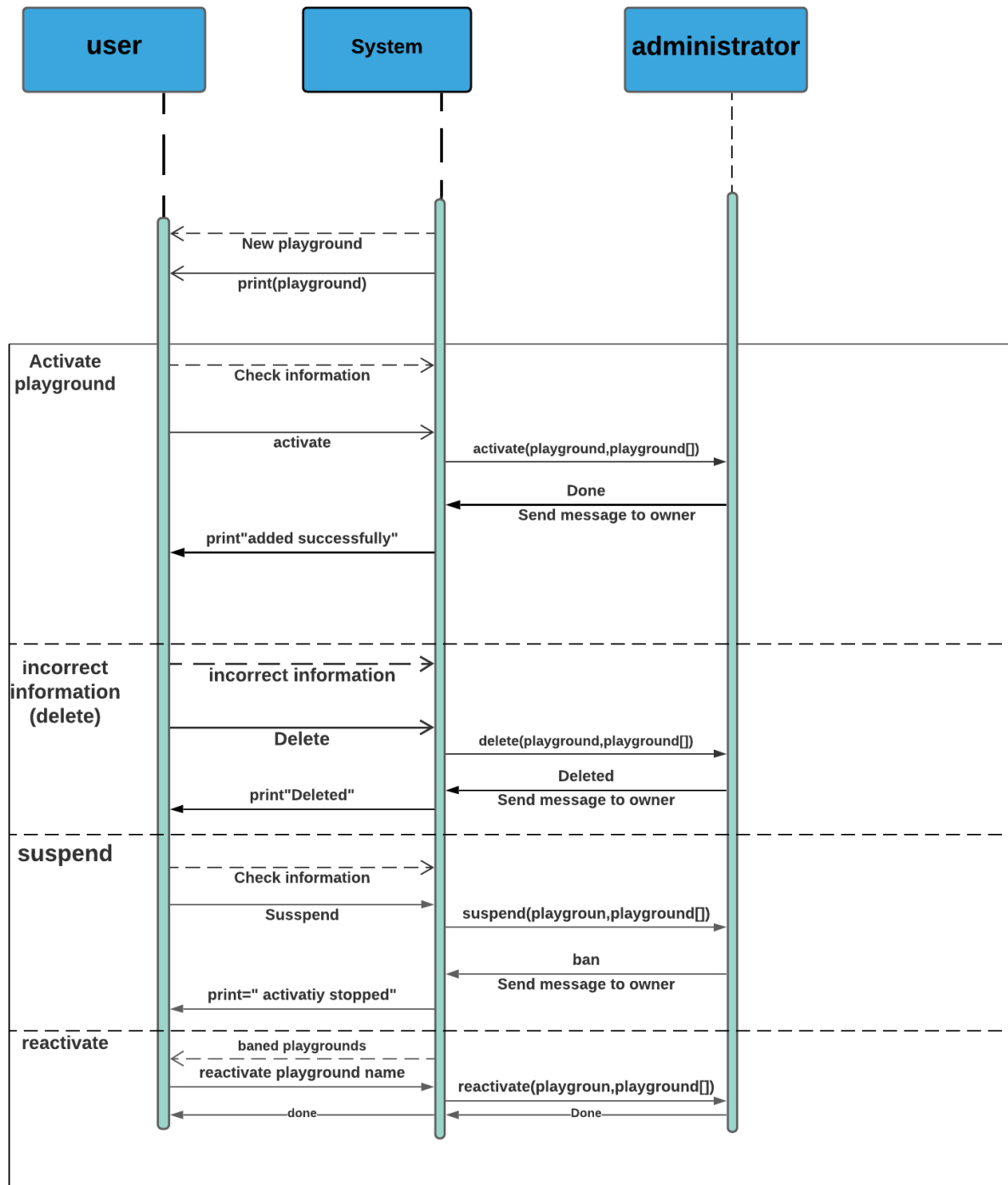




CS251: Phase 2 – <Team Name>

Project: <Project Name>

Software Design Specification





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Software Design Specification

Class - Sequence Usage Table

Sequence Diagram	Classes Used	All Methods Used
1. Sign up to system	Player class System class Check interface	createAccount() setName() setPhone() setAddress() setEmail() setPassword() checkPlayer()
2. Booking a play ground	Player class System class Check interface Playground class	Login() bookPlayground() checkPlayer() checkBalance(player, player[]) Pay(int)
3. Adding play ground	Owner class Administrator class Owner class system	Addplayground() activatePlayground() susbendPlayground()
4. Administrator's functions	System Class Administrator Class Playground Class	activate(playground,playground[]) delete(playground,playground[]) suspend(playground,playground[]) reactivate(playground,playground[]).

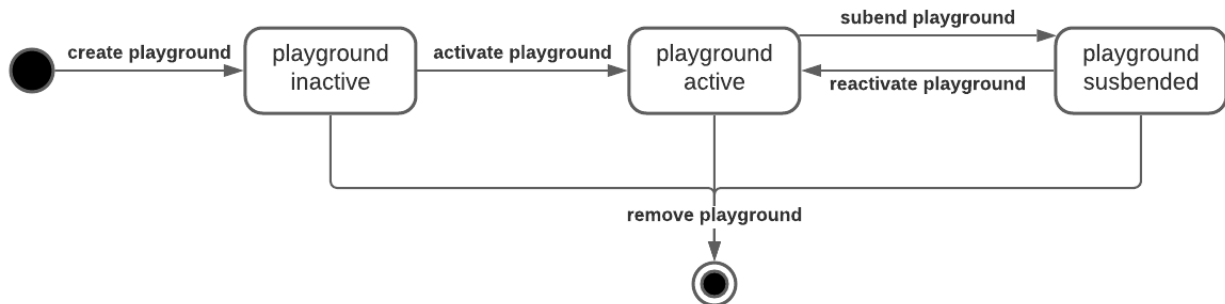


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Project: <Project Name>

Software Design Specification

IV. State Diagram



Tools

Lucid chart, Microsoft Word

Ownership Report

owner	items
Paula Adel Kamal	Part pf class diagram and sequence diagram 2 and state diagram
Andrew Nasief	Part pf class diagram and sequence diagram 1 and sequence diagram 4
Nader Zaki	Part pf class diagram and sequence diagram 3