

**Cairo University**

**Faculty of Computers and Artificial Intelligence**



# **CS251**

# **Software Engineering, I**

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Software Design Specifications

Version 1.0

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## Software Design Specification

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Instructions [To be removed]

### Team

ID	Name	Email	Mobile
20190414	Mohamed Ahmed Abdallah	mohamedahmedabdallah.154@gmail.com	01205093340
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### Document Purpose and Audience

Purpose:

The purpose of this document is to clarify software system models.

This document is used to explain important system about football club that people can play in it by booking it previously.

Audience:

Software Development Team

Stakeholders

### System Models

#### I. Class Diagram(s)



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### II. Class Descriptions

Class ID	Class Name	Description & Responsibility
1	Player	<ul style="list-style-type: none"> <li>-this class has aggregation with Playground_registration and Booking_system</li> <li>-This class has protected attributes.</li> <li>-setter and getter for these attributes.</li> <li>-default constructor</li> <li>-parametrize constructor that take object from class Booking_system</li> <li>- parametrize constructor that take object from class Playground_registration</li> <li>- parametrize constructor for attributes.</li> </ul>
2	Playground_owner	<ul style="list-style-type: none"> <li>-This class has protected attributes</li> <li>-setter and getter for these attributes.</li> <li>-default constructor</li> <li>- parametrize constructor for attributes</li> </ul>



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3	Administrator	<ul style="list-style-type: none"> <li>-this class has aggregation with Playground_regstriation</li> <li>-This class has protected attributes</li> <li>-setter and getter for these attributes.</li> <li>-default constructor</li> <li>- parametrize constructor for attributes</li> <li>- parametrize constructor that take object from class Playground_regstriation</li> </ul>
4	Log_in	<ul style="list-style-type: none"> <li>-this class has aggregation with Playground_owner, player and Administrator</li> <li>-This class has protected attributes.</li> <li>-setter and getter for these attributes.</li> <li>-default constructor</li> <li>-parametrize constructor that take object from class player</li> <li>- parametrize constructor that take object from class Playground_owner</li> </ul>



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		<ul style="list-style-type: none"> <li>- parametrize constructor that take object from class Administrator</li> <li>- parametrize constructor for attributes.</li> </ul>
5	E_wallet	<ul style="list-style-type: none"> <li>-This class has protected attributes.</li> <li>-function to get amount</li> <li>-parametrize constructor that take set amount</li> <li>-parametrize constructor that take set user name</li> <li>-function to pay</li> <li>-function to collect</li> </ul>
6	Booking_system	<ul style="list-style-type: none"> <li>-This class has protected attributes.</li> <li>-setter and getter for these attributes.</li> <li>-default constructor</li> <li>- parametrize constructor for attributes.</li> <li>-function for search for available playgrounds</li> </ul>
7	Playground_regstration	<ul style="list-style-type: none"> <li>- This class has protected attributes.</li> </ul>



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		<ul style="list-style-type: none"><li>-setter and getter for these attributes.</li><li>-default constructor</li><li>- parametrize constructor for attributes.</li></ul>
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### III. Sequence diagrams

#### Sequence Diagrams



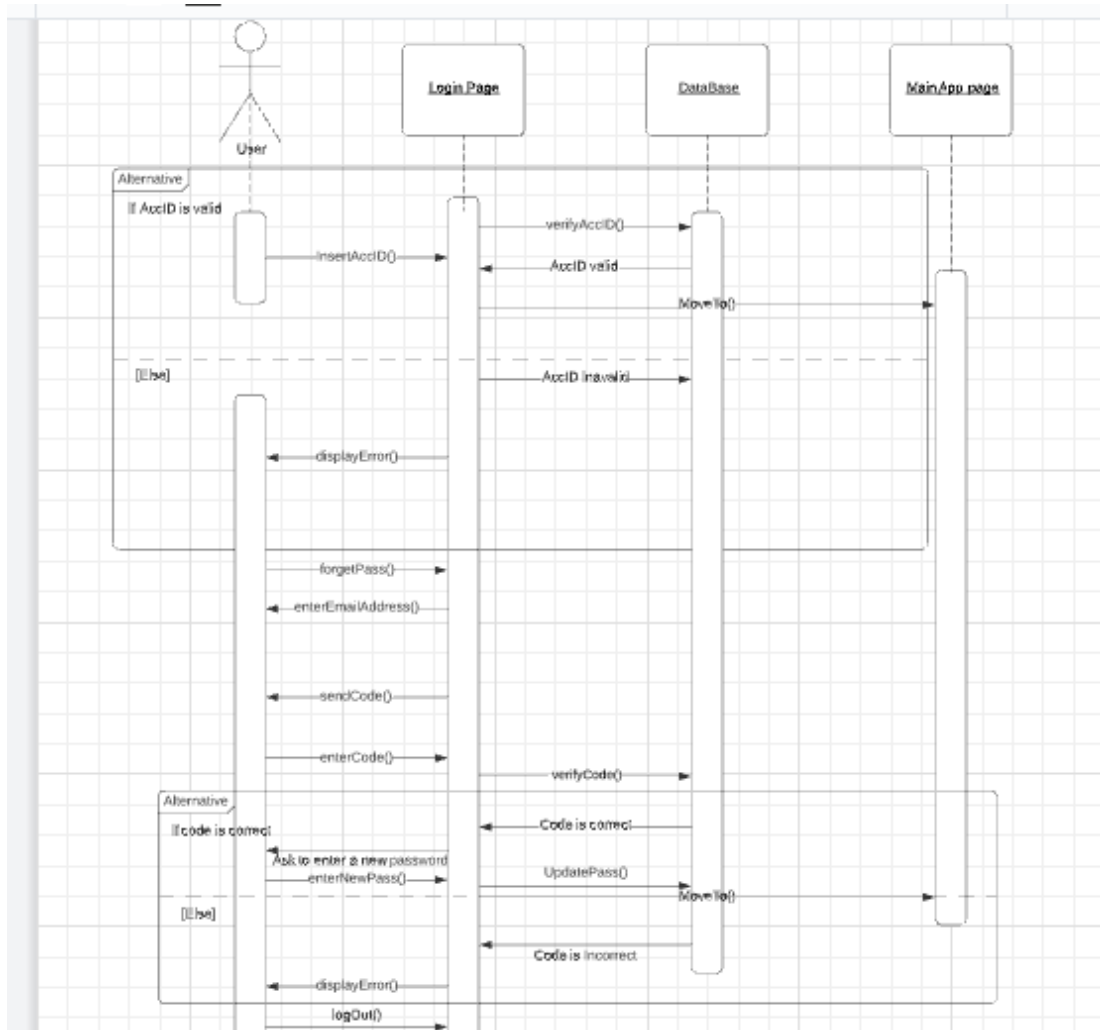


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1) Login :



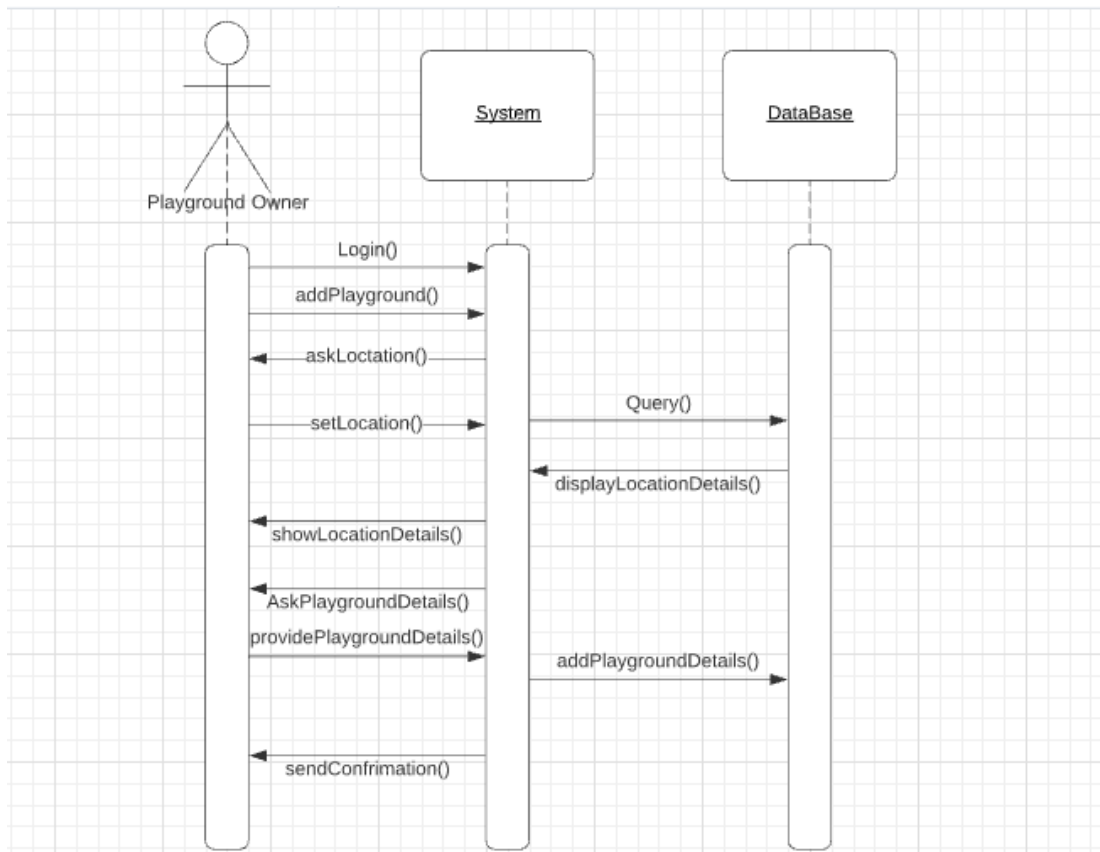


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### 2) Add Playground :



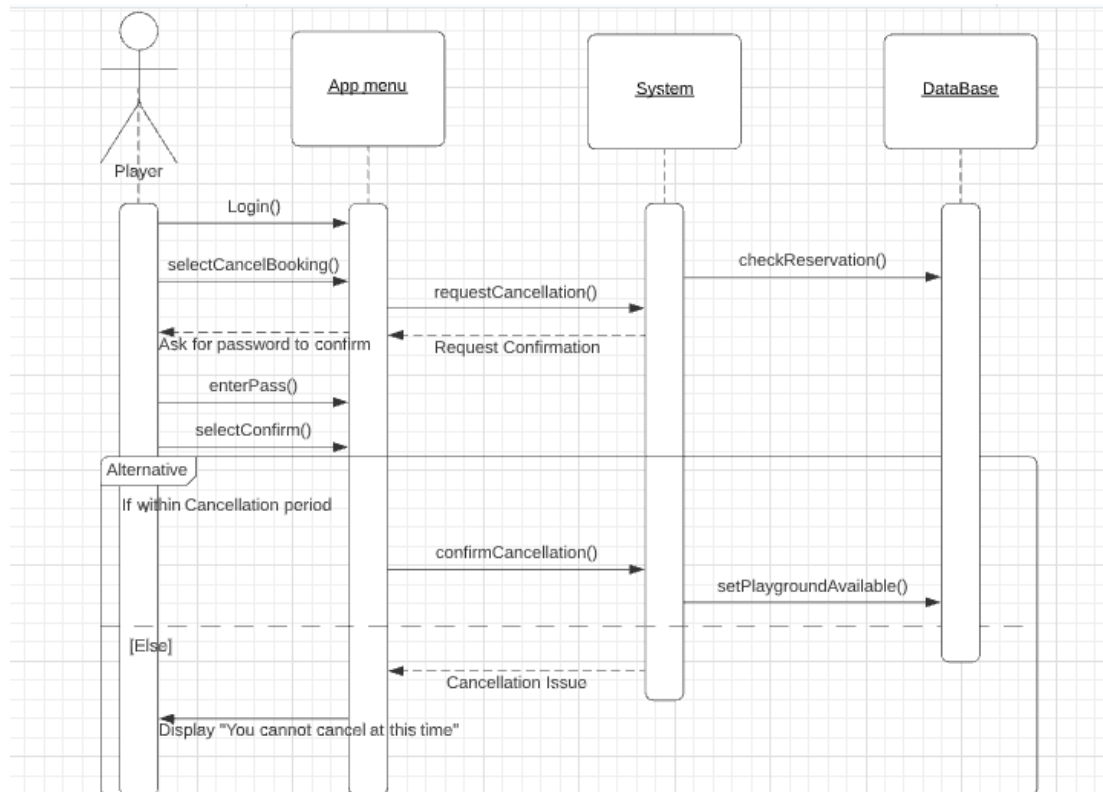


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### 3) Booking Cancellation :



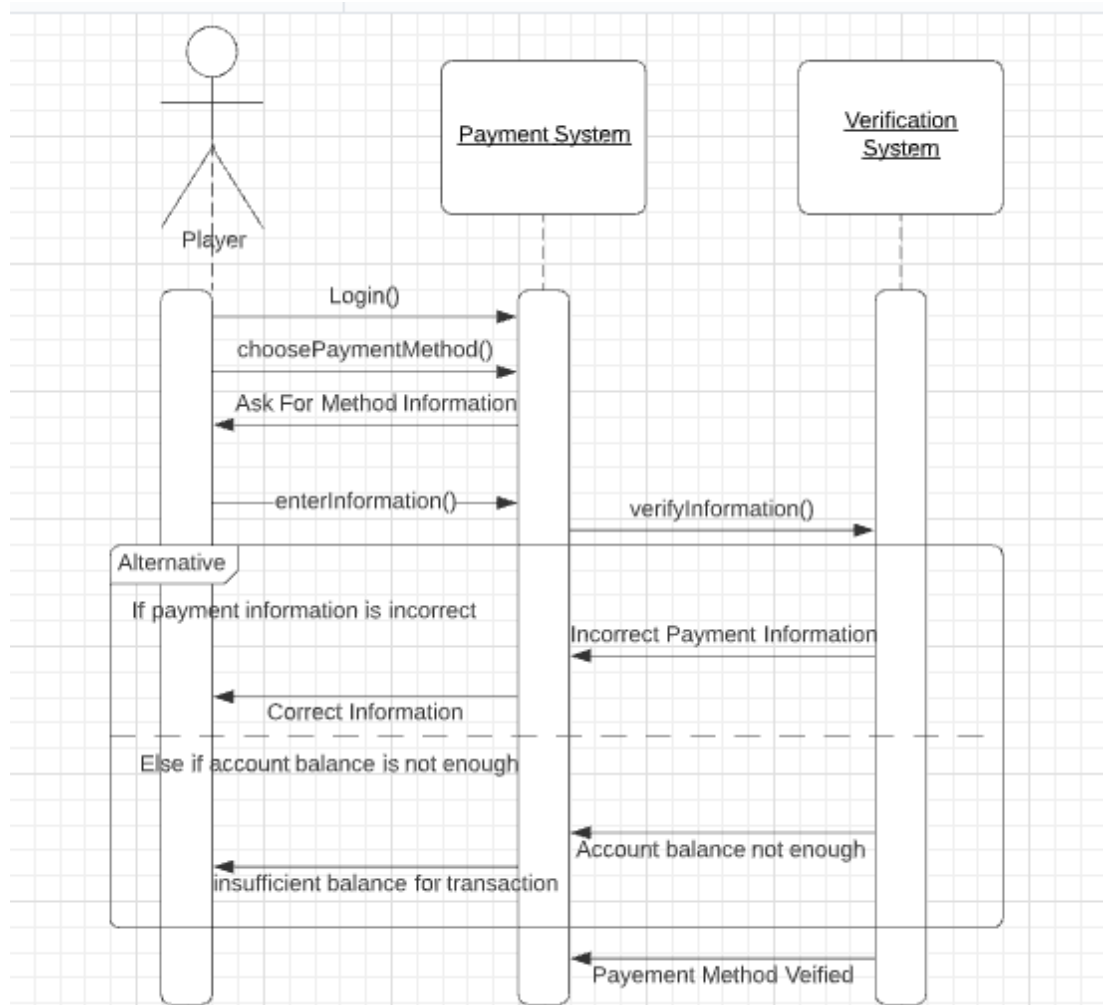


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### 4) Payment :





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### Sequence Usage Table

Sequence Diagram	Classes Used	All Methods Used
1. Login	Login Page Database Main App page	insertAcc() verifyAcc() moveTo() displayError() forgetPass() SendCode() enterCode() verifyCode() updatePass() enterNewPass() logOut()
2. Add Playground	System Database	Login() addPlayground() askLocation() setLocation() showLocationDetails() askPlaygroundDetails() providePlaygroundDetails()



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		sendConfirmation()  Query()  displayLocationDetails()  addPlaygroudDetails()
3. Booking Cancellation	App menu  System  Database	Login()  selectCancelBooking()  enterPass()  selectConfirm()  requestCancellation()  requestConfirmation()  confirmCancellation()  checkReservation()  setPlaygroundAvailable()
4. Payment	Payment System  verification System	Login()  choosePaymentMethod()  enterInformation()  verifyInformation()

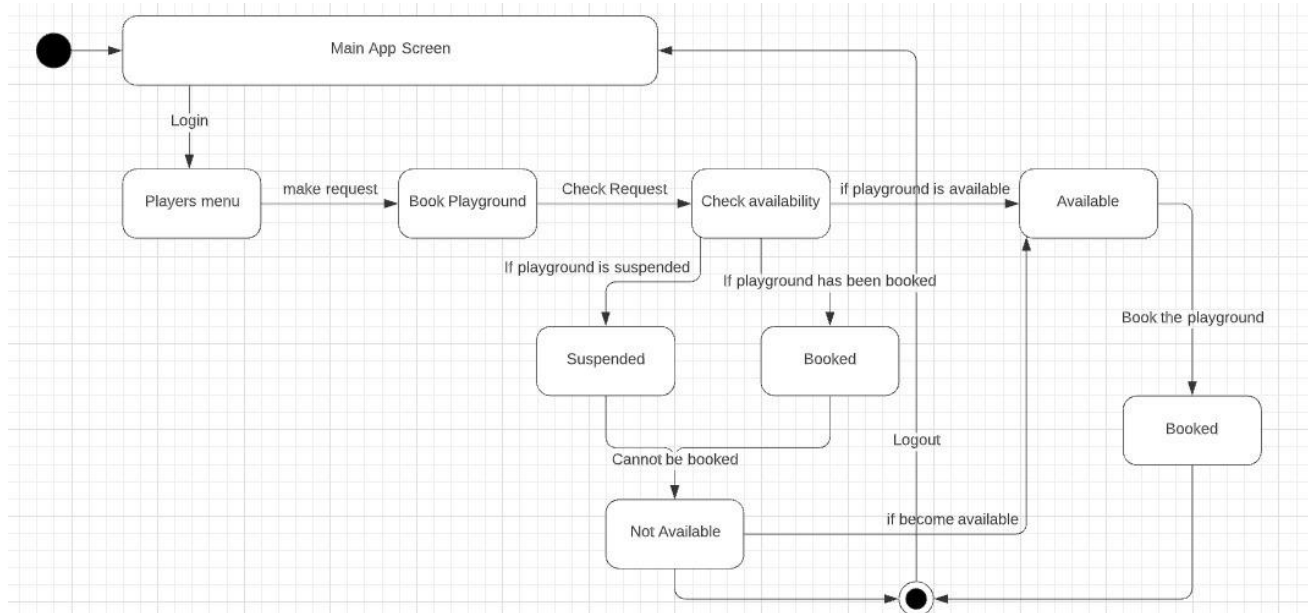


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### IV. State Diagram



### Tools

“lucid chart”

### Ownership Report

Item	Owners
Mohamed Ahmed Abdallah	Document purpose and audience Class description and responsibility
Omar Gamal Mohamed	state diagram sequence diagrams sequence usage table
Ziad Ahmed Awad	Class diagrams