Cairo University

Faculty of Computers and Artificial Intelligence

CS251

Software Engineering I

Project Name

Software Design Specifications

Version 1.0

ID	Name	Email	Mobile
20190207	**Rana Ihab Ahmed**	rana.ihab7@gmail.com	01284668776
20190105	Alaa Mahmoud Ebrahim	alaamahmoud.1223@gmail.com	01111115409
20190167	Habeba Rabie Hassan	habebarabie874@gmail.com	01288988845

June 2021

CS251: Phase 2 – <Team Name>
Project: <Project Name>

Software Design Specification

Contents

CS251: Phase 2 – <Team Name>
Project: <Project Name>

Software Design Specification

Team

ID	Name	Email	Mobile
20190207	**Rana Ihab Ahmed**	rana.ihab7@gmail.com	01284668776
20190105	Alaa Mahmoud Ebrahim	alaamahmoud.1223@gmail.com	01111115409
20190167	Habeba Rabie Hassan	habebarabie874@gmail.com	01288988845

Document Purpose and Audience

The purpose of this document is to describe and explain the GoFo application; the document will show the class diagram of the system, sequence diagram of the main four use cases and state diagram.

This document is written for the project manager and team responsible for the application to know what functions they will need to implement and their classes. It will also show them the steps of the functions through the sequence diagram. Also, this document will make it easier for the project manager to distribute the work among the members.

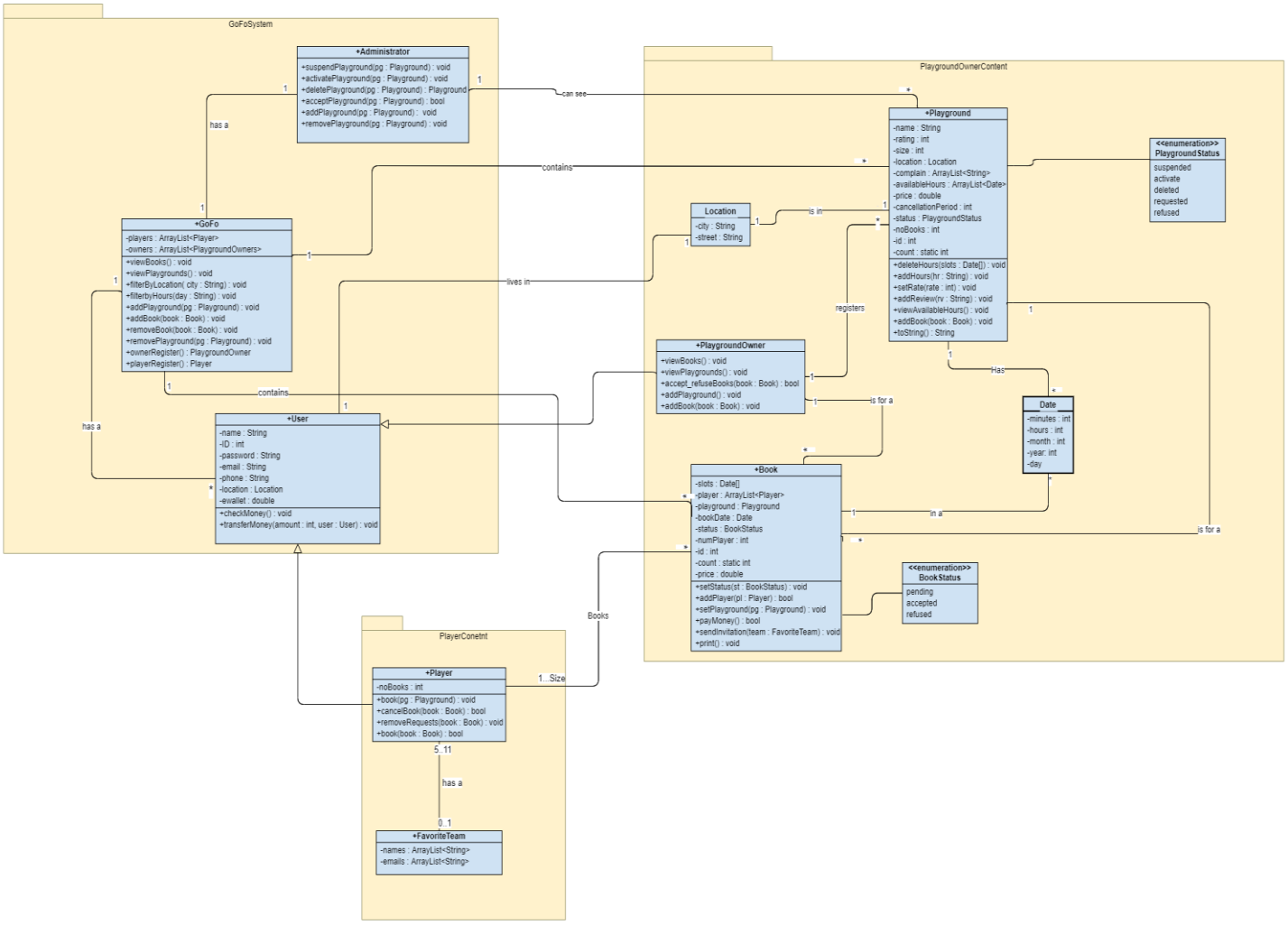
System Models

I. Class Diagram(s)

For better view of class diagram, please see the ClassDiagram.png in the zip file and zoom in or visit this link:

https://online.visual-paradigm.com/share.jsp?id=313336373837302d3131

Software Design Specification



II. Class Descriptions

Class ID	Class Name	Description & Responsibility
1.	GoFo	GoFo class is responsible for keeping track of all playgrounds, players, owners and all the books in the system. Moreover viewing, filtering, or removing playgrounds or books. In addition to register the players and the playground owner in the system.

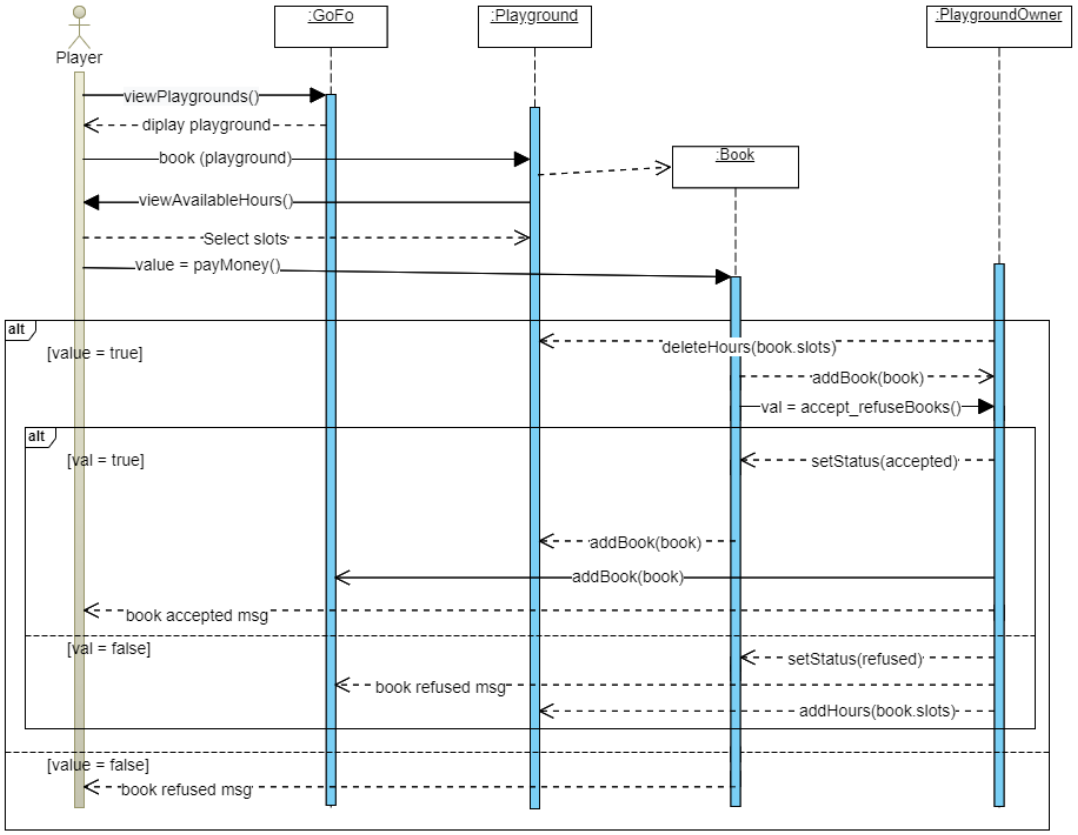
Software Design Specification

Class ID	Class Name	Description & Responsibility
2.	Administrator	Administrator class is responsible for performing the functions that the administrator can do such as: suspending, activating, deleting, or adding playground by the system admin.
3.	User	User class is responsible for adding the user's info (name, id, password, email, phone, location and ewallet). In addition to the money of the user whether checking it or transfering it to another account
4.	PlaygroundOwner	PlaygroundOwner class is responsible for enabling the playground owner to manage his requests and playgrounds by accepting or refusing the requests, adding playgrounds and viewing them.
5.	Playground	Playground class is responsible for setting the information of the playground in the system. In addition to the ability of updating some of them as the available hours. Moreover, the rating and the review of them
6.	Player	Player class is responsible for viewing the books info to the player and give him the ability to book, cancel or remove booking requests
7.	Book	Book class is responsible for holding all the information of any booking. In addition to assigning the playground for the book and adding the players. Moreover, sending invitations and pay money for the book
8.	FavouriteTeam	FavouriteTeam class is responsible for storing the names and emails of players to facilitate sending invitation emails to them when requested by the player.
9.	Date	This is a class like a struct holds different values of the date like hour, minute, year, month and day. It will be used when entering the available hours of a playground.
10.	Location	This is like a struct to hold the value of the street and city of a location.

Software Design Specification

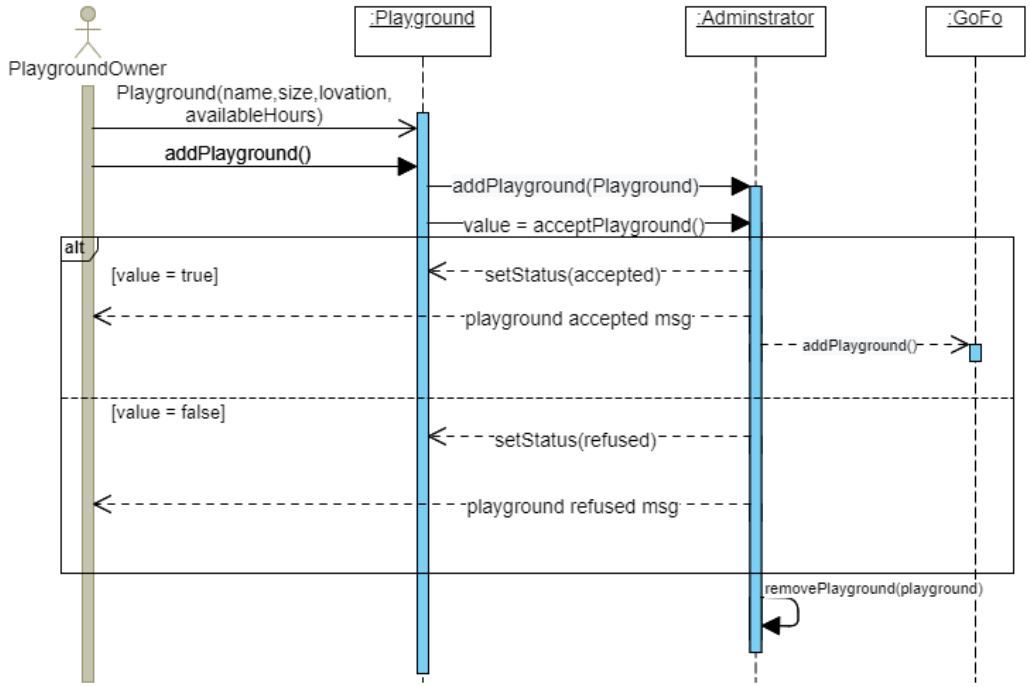
III. Sequence diagrams

Book Playground



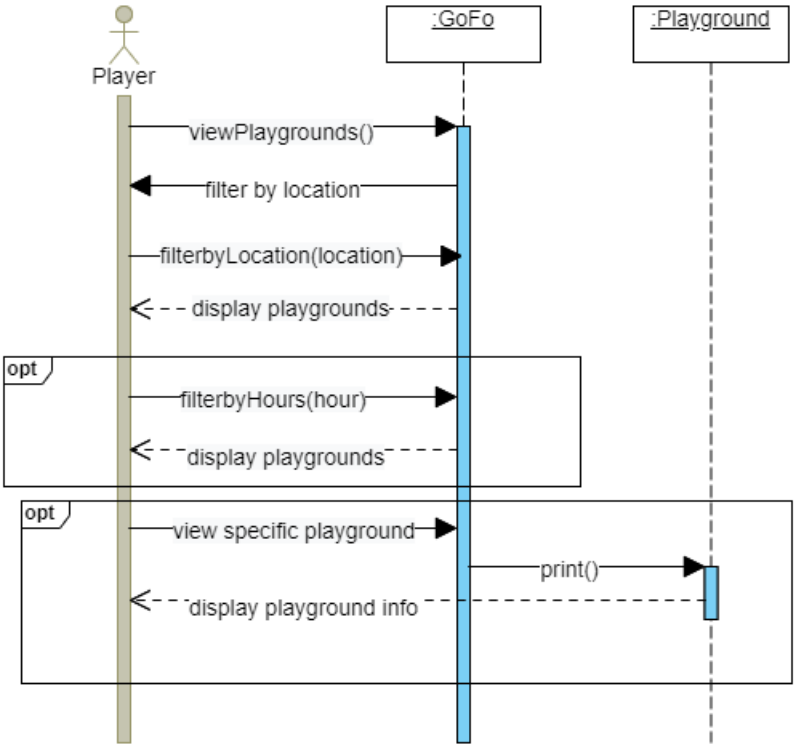
Software Design Specification

Register Playground



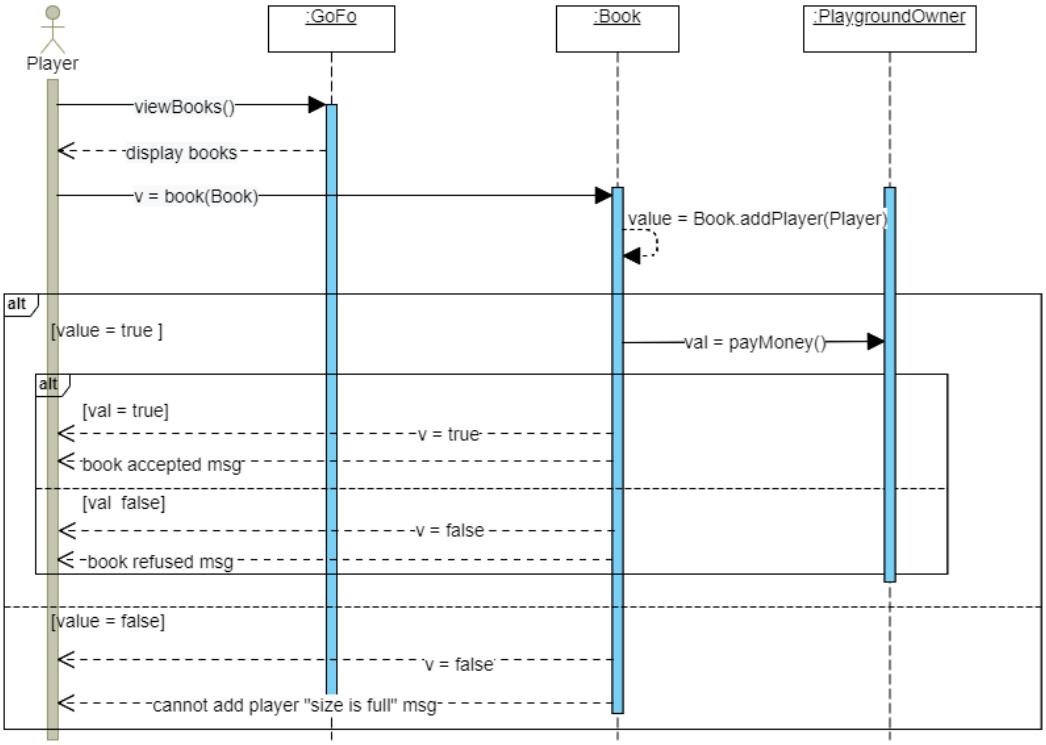
Software Design Specification

View Playgrounds



Software Design Specification

Join Team



Class - Sequence Usage Table

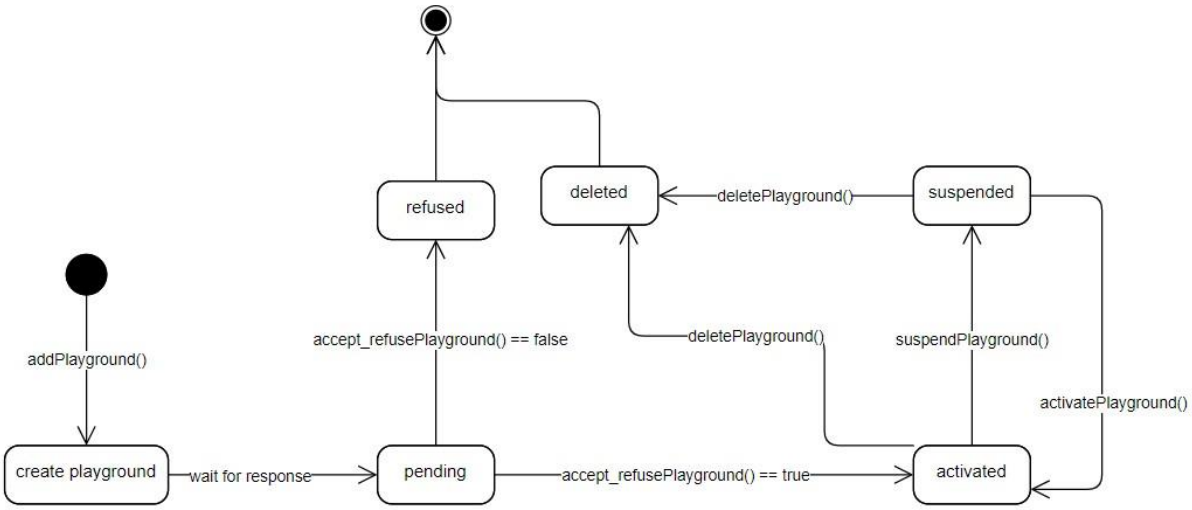
Sequence Diagram	Classes Used	All Methods Used

Software Design Specification

Sequence Diagram	Classes Used	All Methods Used
1. Book Playground	Class GoFo Class Playground Class Book Class PlaygroundOwner Class Player	viewPlaygrounds() → GoFo book(playground) → Player viewAvailabeHours() → Playground payMoney()→ Book deleteHours(book.slots) → Playground addBook(book) → Playground addBook(book) → PlaygroundOwner addBook(book) → GoFo accept_refuseBooks() → PlaygroundOwner setStatus(BookStatus) → Book setHours(book.slots) → Playground
2. Add Playground	Class PlaygroundOwner Class Playground Class Adminstrator Class GoFo	Playground(name,size,lovcation,availableHours) → Playground addPlayground() → PlaygroundOwner addPlayground(Playground) → Adminstrator acceptPlayground() → Adminstrator addPlayground() → GoFo removePlayground(Playground) → Adminstrator setStatus(PlaygroundStatus) → Playground
3. Filter Playgrounds	Class GoFo Class Player Class Playground	ViewPlaygrounds() → GoFo filterByLocation(location) → GoFo filterByHours(hour) → GoFo print() → Playground
4. Join Team	Class GoFo Class Book Class PlaygroundOwner	ViewBooks() → GoFo Book(Book) → Player payMoney() → Book addPlayer(Player) → Book

Software Design Specification

IV. State Diagram



Tools

- Visual paradigm for class diagram, sequence diagram and state diagram.

Ownership Report

Item	Owners
Rana Ihab Ahmed	Class diagram, document Purpose, state diagram. **Implementation:** gofo, main, book
Alaa Mahmoud Ebrahim	Sequence diagram, sequence usage table **Implementation:** player, user, main, favorite team
Habeba Rabie Hassan	Class description, state diagram **Implementation:** date, location, playground, PlaygroundOwner