SOFTWARE REQUIREMENT SPECIFICATION
FOR
PLAY ON ARENA
[21-11-2020]
CDAC, MUMBAI

Revision History:

Version.	DATE	Authored By	Reviewed By	REASON FOR CHANGE
00	21/11/2020	Team-43		1st release

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1. Introduction

1.1 Purpose

Play on Arena is a web application which provides an interface through which sports enthusiast can easily book the required turf as well as required kit for sports. The proposed system eliminates the manual entry of booking turfs and other services. The long waiting list for availabilty of turf It also provides an interface through which user can provide review about the turf.

1.2 Document Convention

Headings: -
Text: -Bold
Font-Size: - 14
Highlighting: - Times New Roman

Sub Headings: -
Text: -Bold
Font-Size: - 12
Highlighting: - Times New Roman

Header: -
Text: - Simple
Font-Size: -10
Highlighting: - Times New Roman

Footer: -
Text: - Simple
Font-Size: -10
Highlighting: - Times New Roman

Intended Audience and Reading Suggestions

This document is intended for developers, users, testers and project managers for the purpose of understanding the design of system in terms of different perspectives. Further, this document contains functionalities and characteristics of system along with the working

environment. It also includes other information related to system such as external interface requirements, features and other non - functional requirements.

1.2 Product Scope

Our project is targeted to reduce the cumbersome process of booking a turf. Manager will be . The Manger can add turfs, manage booking request of turfs. Admin can view Manager list. Admin can view which manager posted which turf. He can also view number of manager's and users, revenue generated from turfs.

1.3 References

https://angular.io/
https://material.angularjs.org/latest/
https://stackoverflow.com/
https://expressjs.com/
https://nodejs.org/en/

2. Overall Description

2.1 Product Perspective

Existing technologies in the market carry out management of turfs and other services in a similar manner like keeping manager records, managing bookings of turf and other activities. But these services are restricted to only particular cities in a state with only booking service.

Keeping in mind these types of projects we developed “Play on Arena” system. for booking turfs as a replacement to the current system which provides just booking of turfs. It also has software maintained records along with additional facilities for users like booking the required kit for the particular sports, food facility etc.

2.2 Product Functions

- The players(users) will be able to book a turf and other facilities.
- The user will be able to give a review about the turf.
- Admins can view, remove managers also view bookings, users and revenue.

- Managers can add turf, accept bookings, manage other services.

2.3 User Classes and Characteristics

Admin:

The admin will be able to access all the functions of the system. Admin can remove manager, view booking, view manager list, view revenue generated from individual manager.

Manager:

Manager can add, update, view, delete turfs accept bookings, manage other services and provide membership to players.

User:

This person can create an account, book a turf, cancel the booking, buy membership delete his account.

2.4 Operating Environment

- **Hardware platform:**
  - Processor – Above Pentium 4, with clock speed of 2.0 GHz
  - RAM – 1 GB or above
  - Hard Disk – Free disk space of above 1 GB
- **Software platform:**
  - Front-end: HTML, CSS, Bootstrap, Angular, Angular Material
  - Back-end: MySQL , Node Js, Java.
- **Supported tools:**
  - Visual Code Studio, MySQL Workbench, Eclipse

2.5 Design and Implementation Constraints

Constraints:

- User interface is only in English. No other language option is available
- User can log-in only with his assigned user-name and password
- Limited to HTTP/HTTPS

2.6 User Documentation

User documentation mainly comprises of Help menu of application. It will give all the minute details about the project, if any user has any query about any module or functionality, one can refer it and see how to operate the application. This report is the complete documentation of our project. It gives complete details about the project, its functionality, users, software used, hardware requirement,environment and so on.

2.7Assumptions and Dependencies

- Assumptions
  - There is an active internet connection with the system
  - The system has internet browser installed
  - Users know the English language, as the user interface will be provided in English.

- Dependencies:
  - There is a need of managers to add turfs and other services.
  - Feedback/ review from users(players) required.
  - Manager needs to accept the user request.

3. External Interface Requirements

3.1 User Interfaces

The main element is web-pages using HTML, Angular Material. Multiple interfaces are there like log-in pages, home pages of Admin, Manager, User and also the Forum. Admin will maintain all the records. The Managers will add turf and accept bookings from user as well provide other services. The User will book a turf and kit(if needed) , cancel the bookings, buy membership

3.2 Hardware Interfaces

In the hardware interface, the system interacts with hardware given the processor is above P4 with clock speed of 2.0 GHz with 1 GB RAM and the Hard Disk with 1 GB free space in the memory. In future enhancements, it can be made responsive to be able to work with mobile devices as well.

3.3 Software Interfaces

In software interfaces, Java is the back-end technology used along with MySQL Database. The front-end technologies include HTML, CSS, Bootstrap, Angular and Angular Material. Data will be communicated between these interfaces accordingly.

3.4 Communications Interfaces

The main communication interface for interacting with the System will be the web Browser.

4. System Features

4.1 Description

This system will help sports enthusiast to search and book their favorite sports ground. The system will add on many additional functionalities to existing system in the market. It will eliminate the wastage of resources in the current system. This software also aims at carrying out improvement in system through user review process.
This system will help us generate a performance result of the user and the manager as well.

4.2 Functional Requirements

4.2.1 Forum

- The system will allow user to add review and comments.
- The system also allows to search for any extra player if required.
- The system will show who has posted the request and who has answered the question.

4.2.2 Additional Functionality

- The User will be able to buy/rent the require sports kit.
- The system also provides food facility for the users.
- The system shall also display the ongoing events and offers for the users.

4.2.3 User

- The user will be able to book a ground also cancel the booking.
- The system will help user to buy membership, post feedback, set questions on forum.
- Thus, using this system, we will be able to save a lot of time and helps in improving.

4.2.4 Manager

- The manager will add new ground remove a ground.
- The manager will view all the bookings.
- The manager will add new ground remove a ground.
- The manager will add new membership offers.

4.2.4 Admin

- The Admin will view bookings, view manager, revenue, search manager, remove manager.

5. Performance Requirements

The system should store all the database records of each user, manager and admin properly and the application should be available for use 24*7 through the server. Also, the application should be user friendly with a proper user interface which makes it easy for the user to understand. All the options should be present in properly accessible places for user convenience.

5.2Security Requirements

All passwords of the administrators should be protected for privacy using whatever constraints required in the database or the application. Transactions regarding users and manager records should be carried out properly. Only admin staff will have access rights to the managers data according to the need for E.g.: -name, turf location, profile id etc. The database should be protected from attacks and unauthorized access. The interface should be protected from attacks. All passwords should be stored as a secure hash of the administrator password.

5.3Software Quality Attributes

5.3.1Availability

The system should run on a variety of operating systems that support the JavaScript language. The system should run on a variety of hardware.

5.3.2 Accessibility

The software will be accessible to admin, managers and users.

5.3.3 Compatibility

The software will be compatible with multiple platforms.

5.3.4 Durability

The software will be tested for working with multiple users.

5.3.5 Effectiveness

The software will be made to handle operations effectively.

5.3.6 Maintainability

The system should be easy to maintain. There should be a clear separation between the interface and the business logic code. There should be a clear separation between the data access objects that map the database and the business logic code.

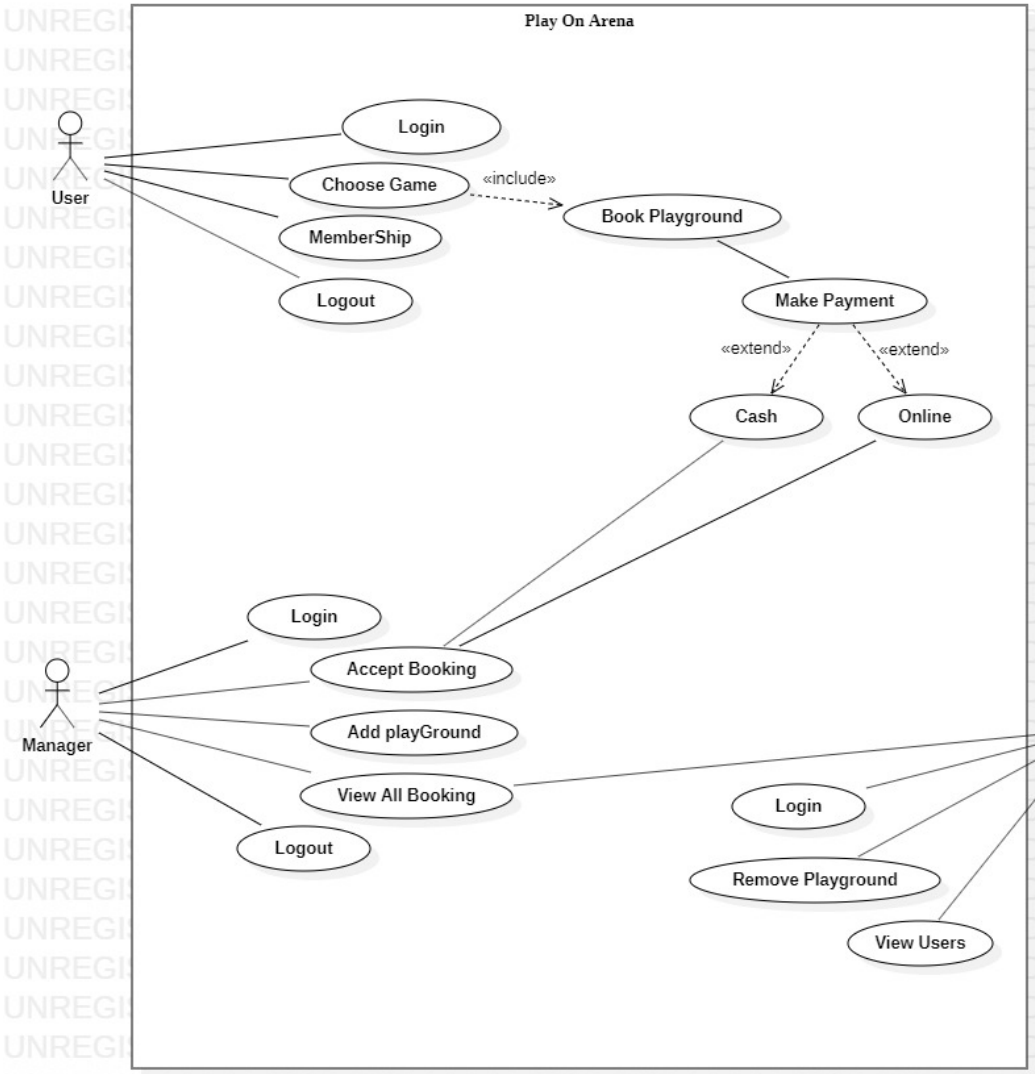
6.Other Requirements

➢ Appendix A: Glossary

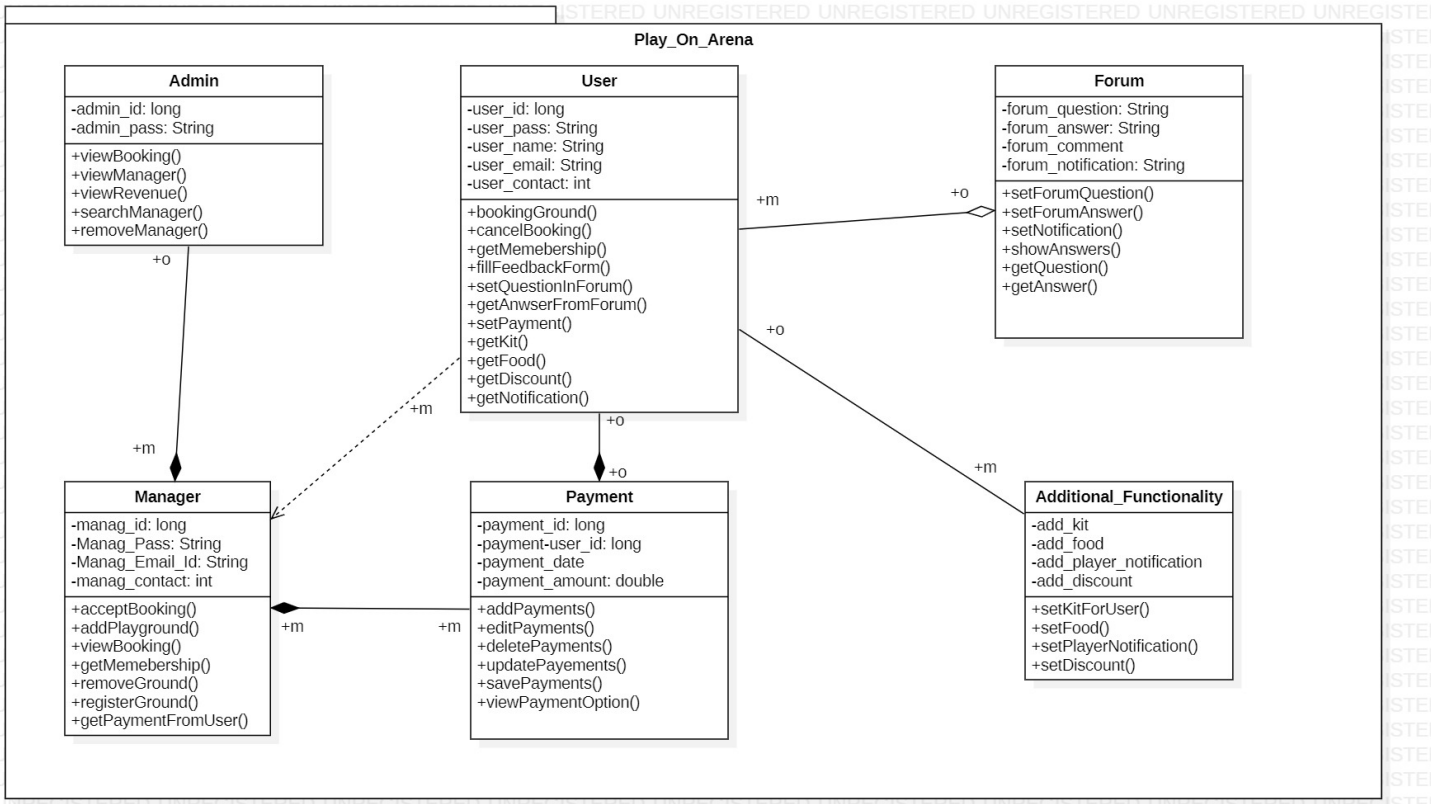
- **SRS:** Software Requirement Specification
- **GUI:** Graphical User Interface
- **P4:** Pentium 4
- **SQL:** Structured Query Language
- **HTML:** Hyper Text Markup Language
- **CSS:** Cascading Style Sheet

Appendix B: Analysis Models

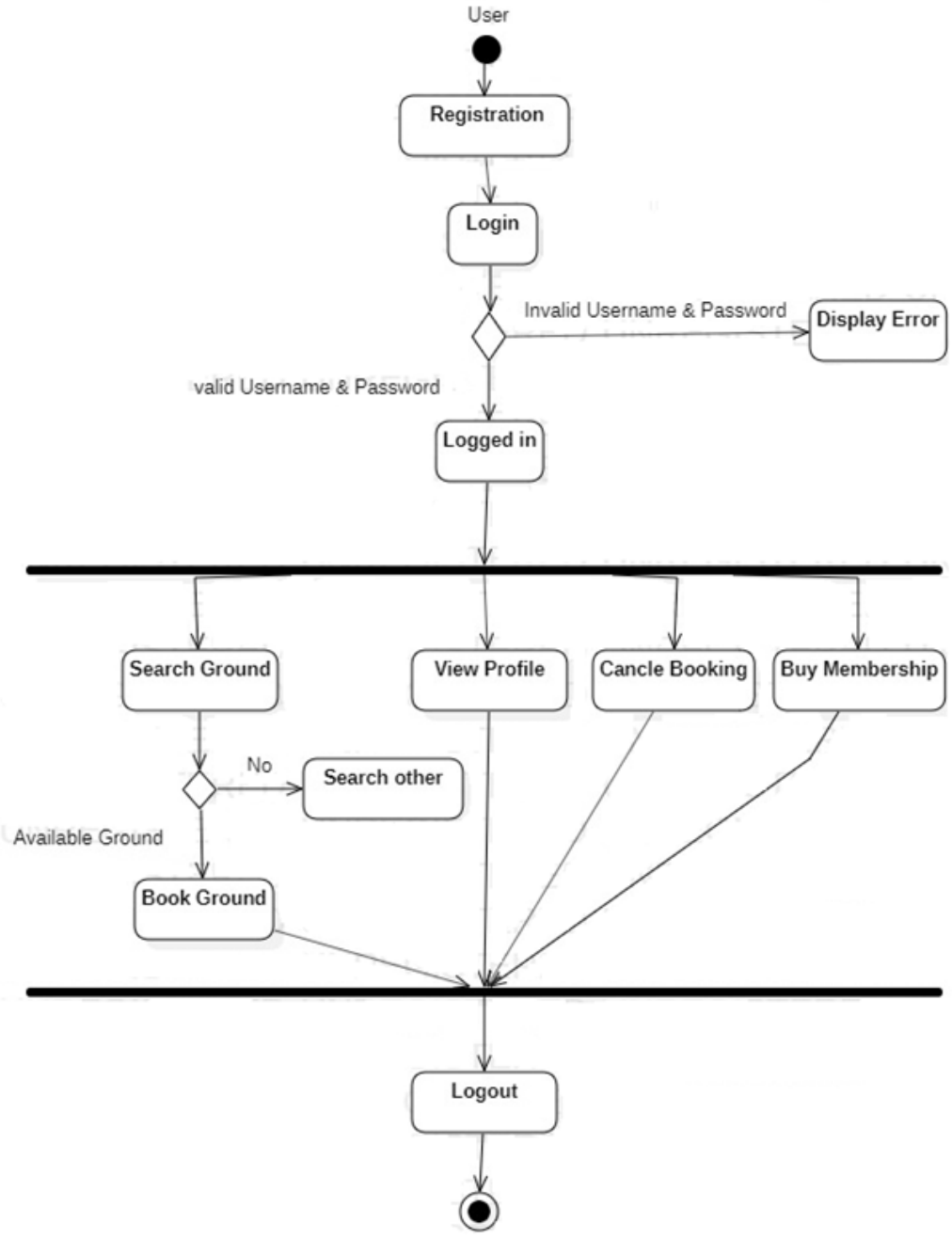
a) **Use Case Diagram**



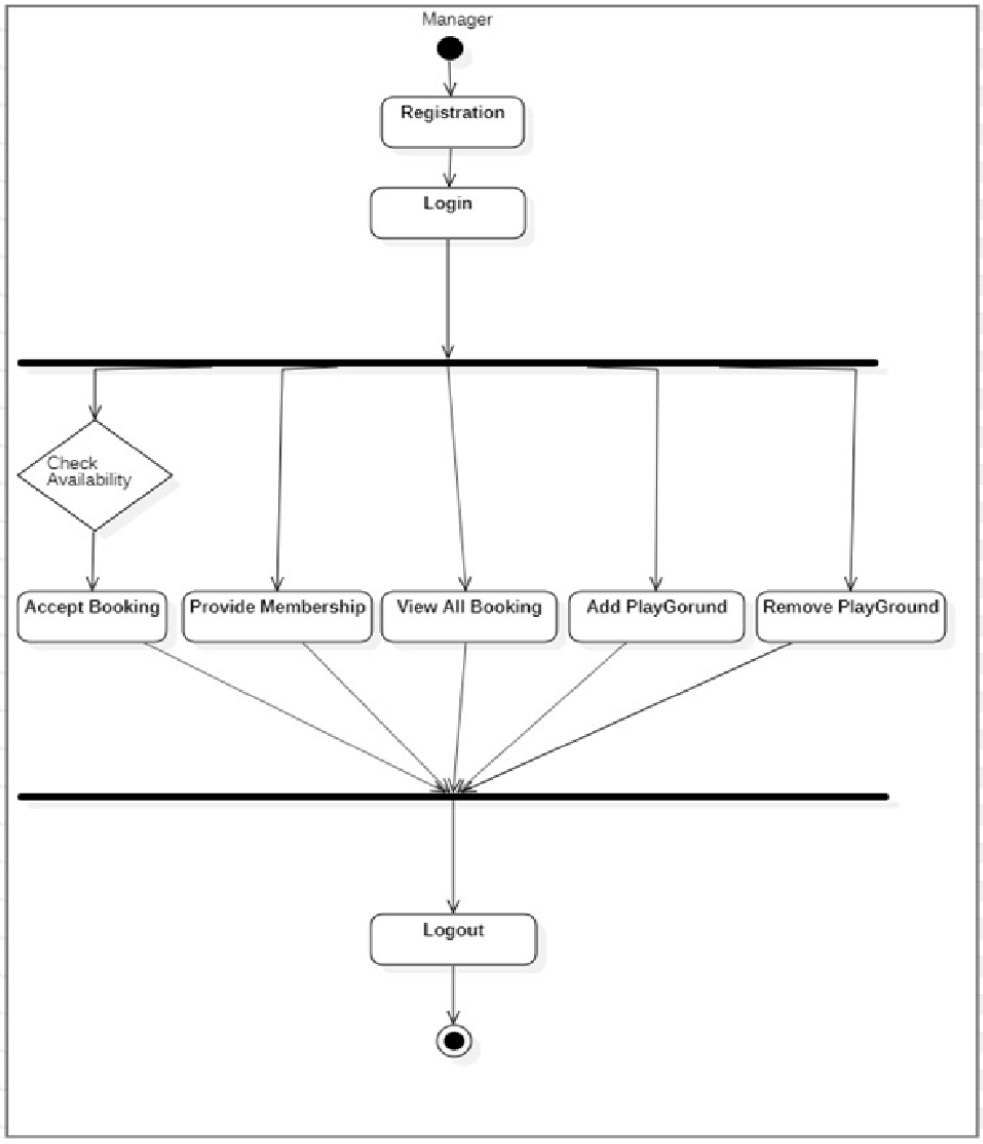
b) **Class Diagram**



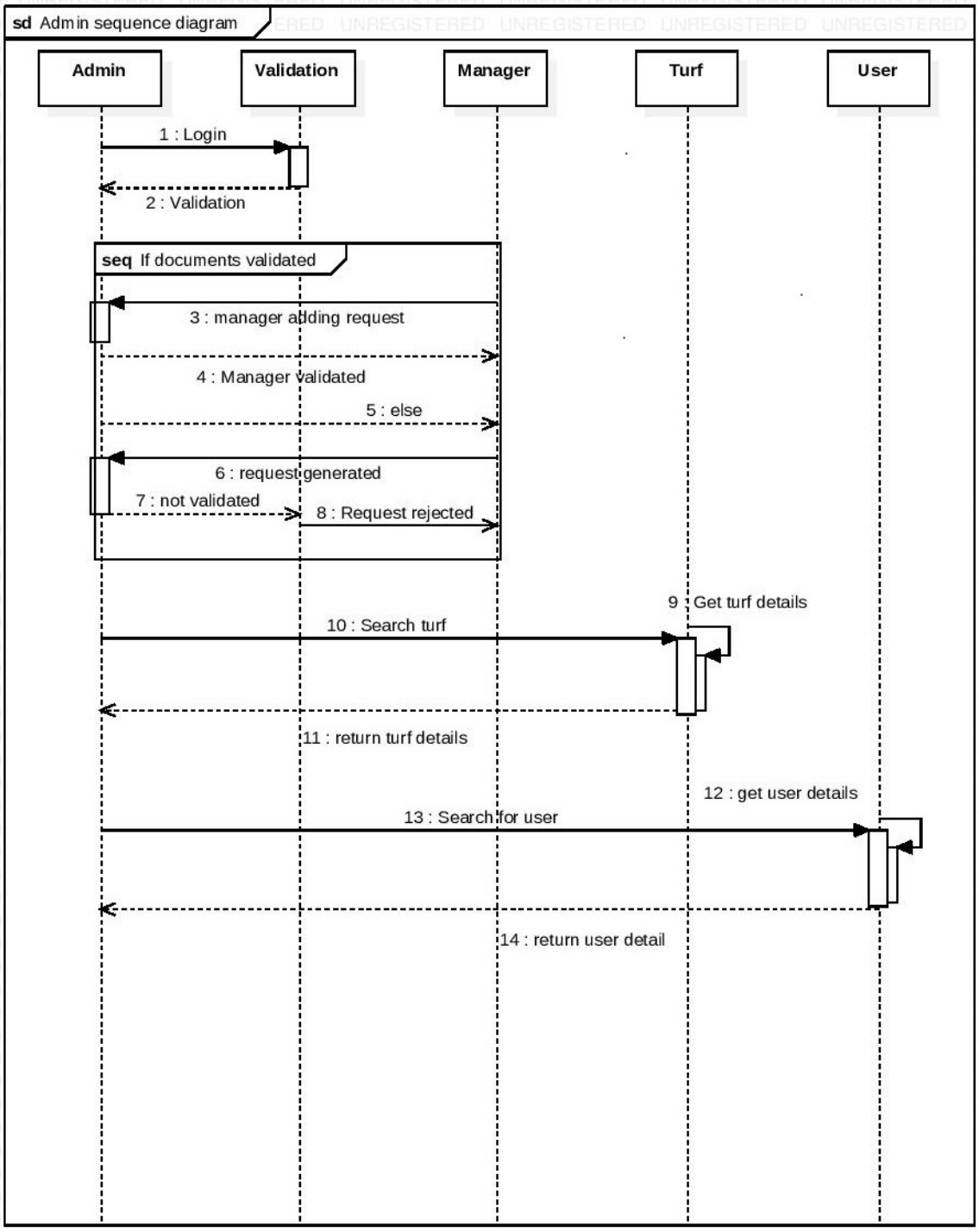
c) **Activity Diagram 1.1:**



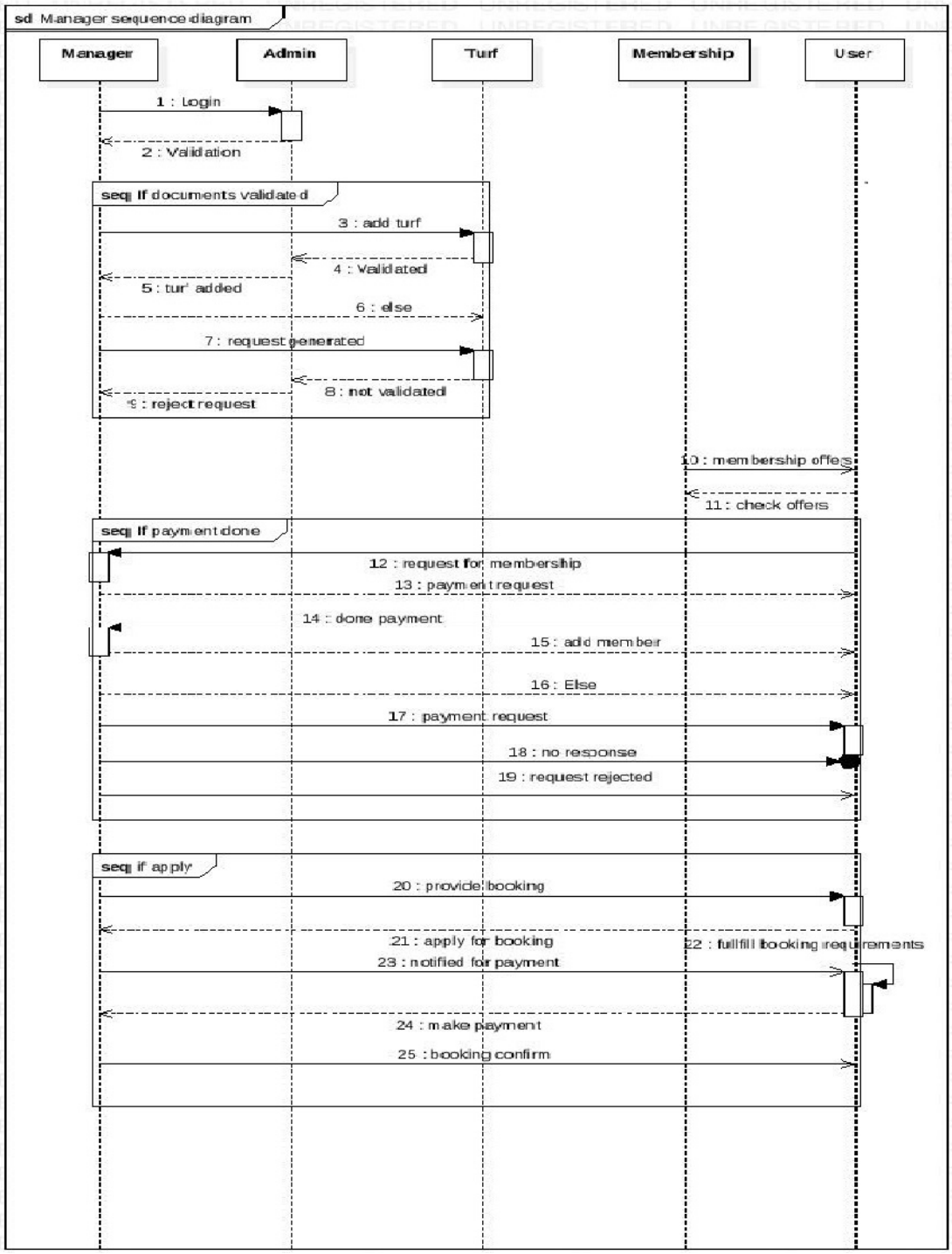
Activity Diagram 1.2:



d) **Sequence Diagram 1.1:**



Sequence diagram 1.2



Sequence Diagram 1.3: