

HIGHER INSTITUTE OF TECHNOLOGICAL STUDIES OF KEF

INTERNSHIP REPORT

TUNISIAN PLATFORM FOR STUDIUM RESERVATION

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General introduction

Football, a game that conquered the world and everyone want to play it and practice it which led to the formation of many stadiums stage. But finding those stadiums and reserving it took lot of time and sometime you lose time for nothing.

No one can doubt any longer that Information technology is a fundamental revolution and innovation that has significantly affected human life over the past century. Indeed, technology can save you time and using it in the right way can save you more and more time.

That's why I planned to make this project to merge between sport and technology and make a solution for easier and faster reservation.

My project is divided into four chapters: the first chapter entitled "**Presentation of internship framework**", we will present the framework of the work, while talking about its activities. In the second chapter entitled "**Requirements specification**", we will talk about the study existing as well as functional needs and non-functional needs. Afterwards, in the third chapter entitled "**Conception**", devoted to the design of the database. data. Finally, the last chapter of this report, "**Realization**", will be devoted to the technical study where we will detail the hardware and software working environment, the steps of realization and I will present some interfaces of our website.

Chapter 1: Presentation of internship framework

Introduction

In this chapter we will present a study of the project while introducing in a first part the study of the existing followed by the existing problem and then give an improvement summarizing all the solutions adopted.

1. Problematic

Time is wasted in searching, waiting for others the finish and exit and asking about local stadiums. Unorganized stadiums and matches lead to losing passionate and motivation for practicing sport and specifically Football.

2. Solution

An organized web site that can make finding stadiums inside or outside your area easier and make your reservation faster. And an easy way to communicate and discuss about.

Chapter 2: Requirements specification

Introduction

This chapter is devoted to the analysis and specification of functional needs and not functionalities of the solution which is an essential step for the realization of my project.

1. Identification of needs

At this level of abstraction, I have to capture the primary needs of the users. Clarify and organize the tasks needed.

The goal is defining the outline of the system to be modeled, and capture the main functionalities of the system

1.1. Functional requirements

Functional or business needs represent the actions that the system must perform, they only become operational if it satisfies them.

- **Player:** This actor could reserve stadium or join reservation for a stadium. Also, could create teams for team reservations.
- **Stadium's owners:** This actor could sign up his stadium(s).

1.2. Use case diagrams

Use case diagrams identify the functionality provided by the system (use cases), the users who interact with the system (actors), and the interaction between them. The main purposes of use case diagrams are:

- Provide a high-level view of what the system is doing.
- Identify the users (actors) of the system.

The diagram of the use cases in figure 1 gives an overview of the system:

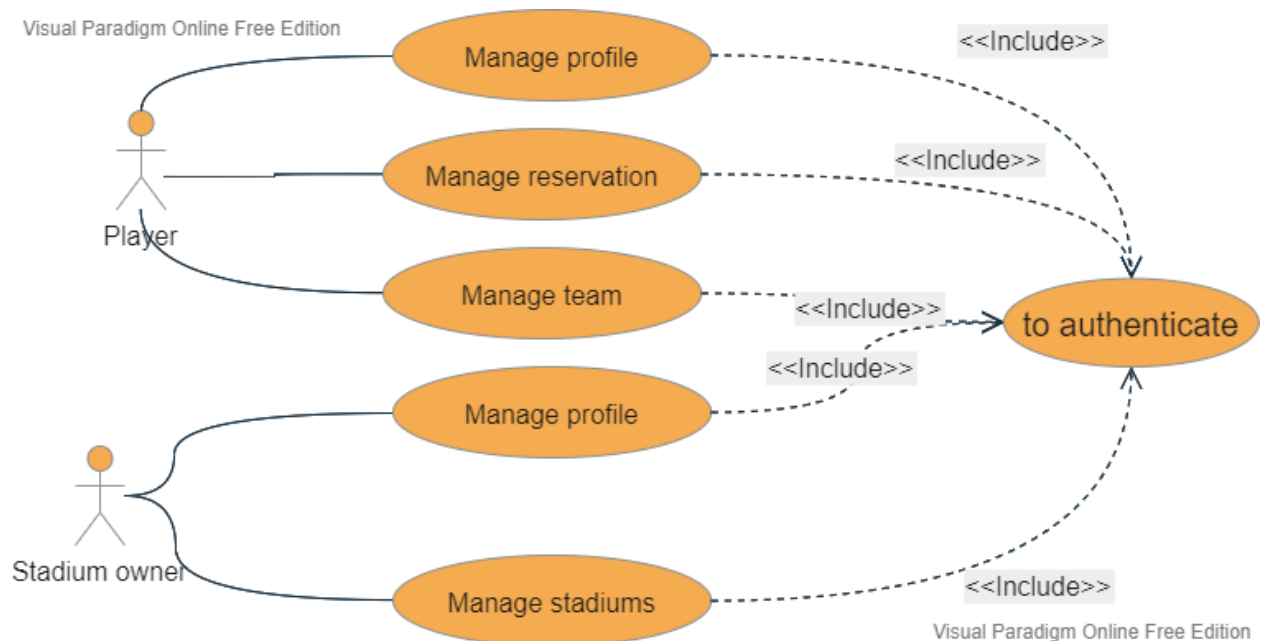


figure 1: Global system uses case diagram.

Use case «to authenticate »

Table 1: Description of the «to authenticate» use case

Use case	to authenticate
Actors	Player, Stadium owner
Pre-condition	The user must have access to the system.
Post-condition	Authenticated user
Description	<ol style="list-style-type: none">1- The System displays the interface.2- In the interface there's login button.3- Login: the user enters his username and password pass and click on the login button. Or click register link to sign in.4- Register: the user enters his full name, username, email and password.5- The system checks if the user exists in the data base or adding the user to the data base.6- The system back to the interface
Exception	In any case the user types wrong information the system will display a specific error message

Use case «Manage Profile»

Table 2: Description of the «Update Profile» use case

Use case	Update Profile
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Update profiles data
Description	<ol style="list-style-type: none">1- The user requests the profile interface2- The system displays the profile interface3- The user updates his information4- The system checks the information5- The system updates the profile
Exception	In case the user enters wrong type of information the system will reject his request

Table 3: Description of the «Delete Profile» use case

Use case	Delete profile
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Delete user profile
Description	<ol style="list-style-type: none">1- The user requests the profile interface2- The system displays the profile interface3- The user chooses to delete his profile4- The system deletes the user's profile and return him to main page
Exception	

Use case «Manage Reservation»

Table 4: Description of the «Create reservation» use case

Use case	Create reservation
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Sign up for a stadium reservation
Description	<ol style="list-style-type: none">1- The user requests to create a stadium reservation2- The system displays the reservation interface3- The user selects the stadium, the date and time4- The system checks the information5- The system saves the reservation in database6- The system displays lobby interface
Exception	In case the stadium is already booked the system will display that the stadium is unavailable for that time and date selected

Table 5: Description of the «Join a reservation» use case

Use case	Join a reservation
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Joining for current reservation
Description	<ol style="list-style-type: none">1- The user requests the 'reservation join' interface2- The system displays the 'reservation join' interface3- The user enters the channel's secret code to join4- The system adds your name in the data base for that reservation
Exception	In case the code is invalid the system displays an error message

Use case «Manage Team»

Table 6: Description of the «Create Team» use case

Use case	Create team
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Create team for team matches
Description	<ol style="list-style-type: none">1- The user requests team's interface2- The system display team interface3- The user chooses to create team4- The user enters team name, address and logo5- The system checks the information6- The system creates that team and set that user to a team leader with accept or deny team requests or kick players
Exception	In case that team's name is already user the system with deny his request

Table 7: Description of the «Join Team» use case

Use case	Join team
Actors	Player
Pre-condition	The user must have access to the system.
Post-condition	Create team for team matches
Description	<ul style="list-style-type: none">1- The user requests team's interface2- The system display team interface3- The user chooses to join team4- The user enters the team's name that he wants to join5- The system checks the information6- The system send request to join the team
Exception	In case the team's name is wrong the system will display an error message

Use case «Manage Profile»

Table 8: Description of the «Update Profile» use case

Use case	Update Profile
Actors	Stadium owner
Pre-condition	The user must have access to the system.
Post-condition	Update profiles data
Description	<ol style="list-style-type: none">1- The user requests the profile interface2- The system displays the profile interface3- The user updates his information4- The system checks the information5- The system updates the profile
Exception	In case the user enters wrong type of information the system will reject his request

Table 9: Description of the «Delete Profile» use case

Use case	Delete Profile
Actors	Stadium owner
Pre-condition	The user must have access to the system.
Post-condition	Delete user profile
Description	<ol style="list-style-type: none">1- The user requests the profile interface2- The system displays the profile interface3- The user chooses to delete his profile4- The system deletes the user's profile and return him to main page
Exception	

Use case «Manage stadiums»

Table 10: Description of the «Add stadium» use case

Use case	Add stadium
Actors	Stadium owner
Pre-condition	The user must have access to the system.
Post-condition	Adding new stadium for players to reserve
Description	<ul style="list-style-type: none">1- The user requests the interface for adding stadiums2- The system displays the add interface3- The user types the necessary information4- The system checks the information5- The system adds a new stadium
Exception	In case the user enters a big size image the system will reject his request

Table 11: Description of the «Delete stadium» use case

Use case	Delete stadium
Actors	Stadium owner
Pre-condition	The user must have access to the system.
Post-condition	Delete user's stadium
Description	<ul style="list-style-type: none">1- The user requests a stadium interface2- The system displays the stadium interface3- The user chooses to delete this stadium4- The system deletes the stadium and return him to main page
Exception	

1.3. Sequence diagrams

The UML Sequence Diagrams are interaction diagrams that detail how operations are carried out. They capture the interaction between objects in the context of a collaboration. Sequence Diagrams are time focus and they show the order of the interaction visually by using the vertical axis of the diagram to represent time what messages are sent and when.

Sequence diagram «To authenticate»

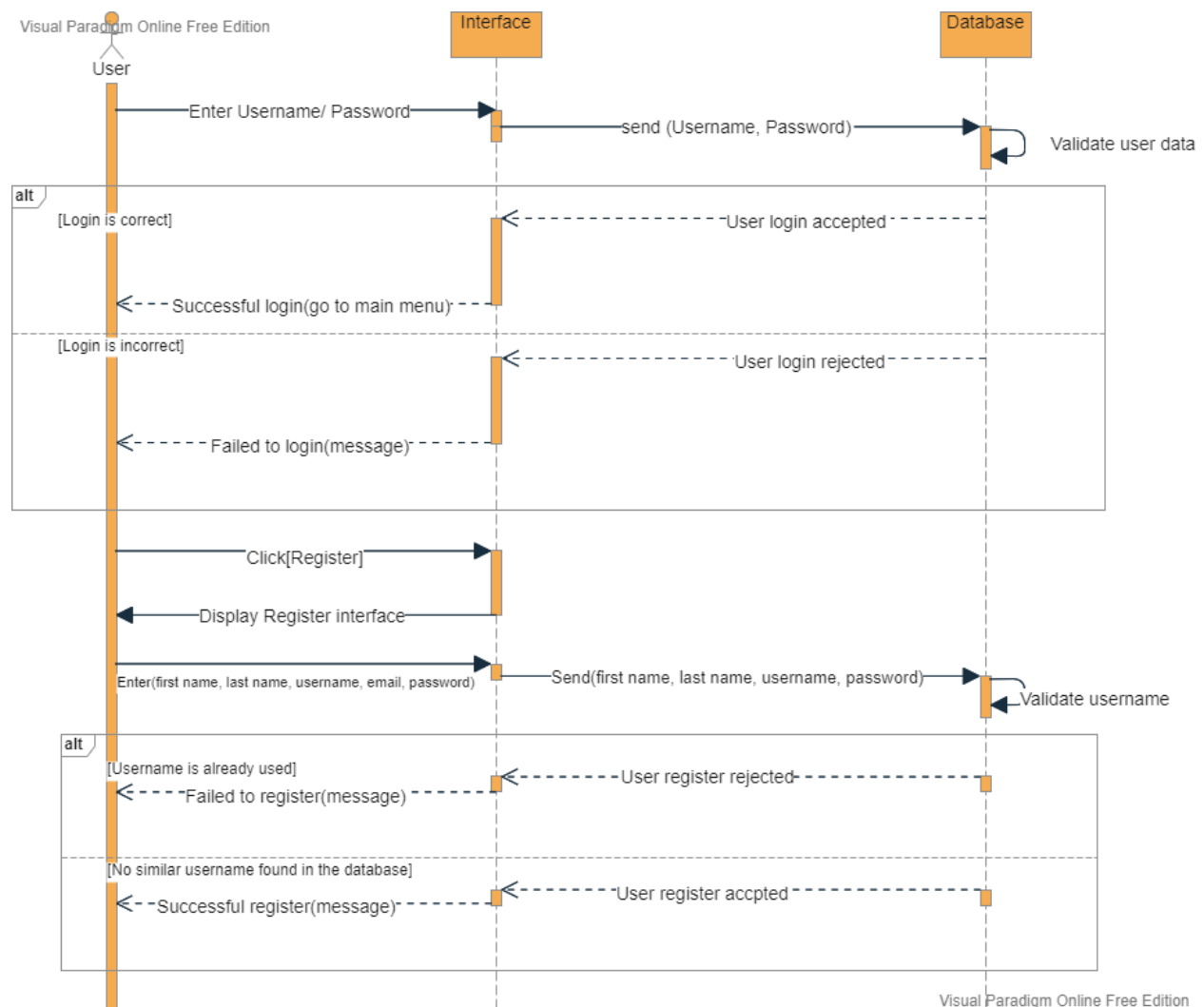


figure 2: Use case sequence diagram «To authenticate»

Sequence diagram «Manage Profile»

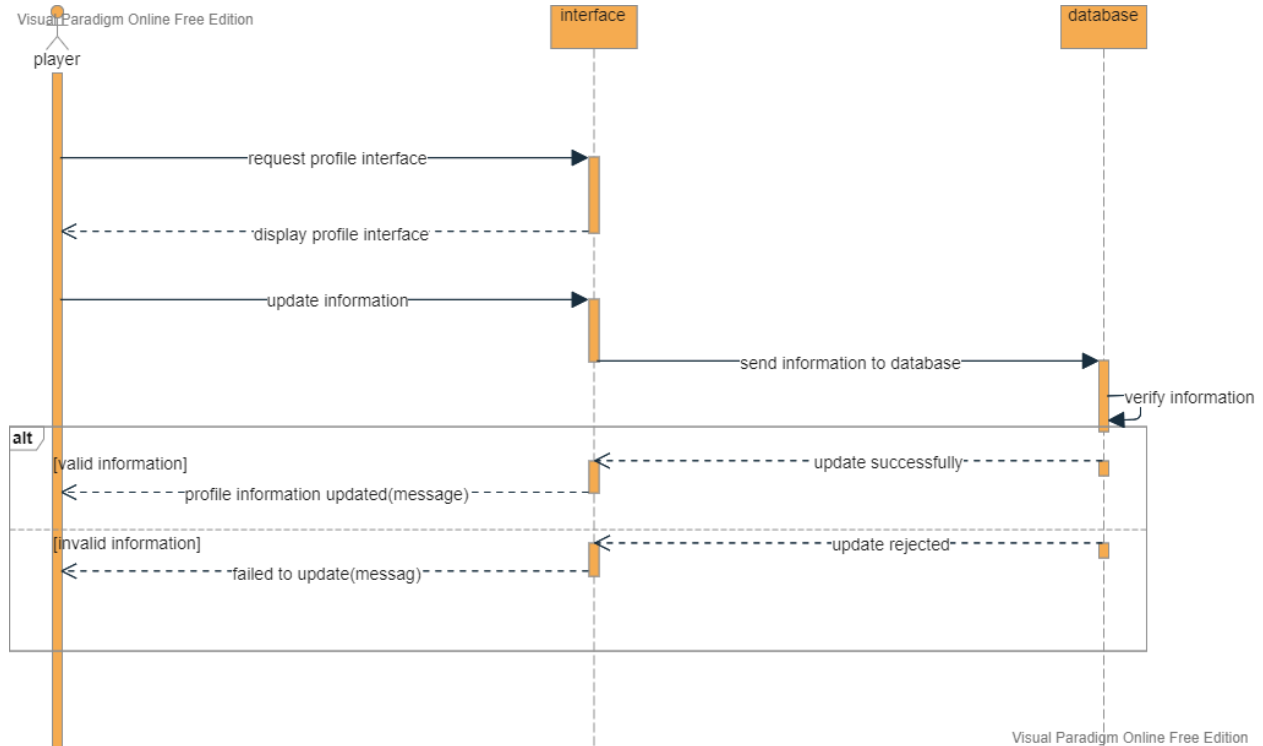


figure 3: Use case sequence diagram «Update profile»

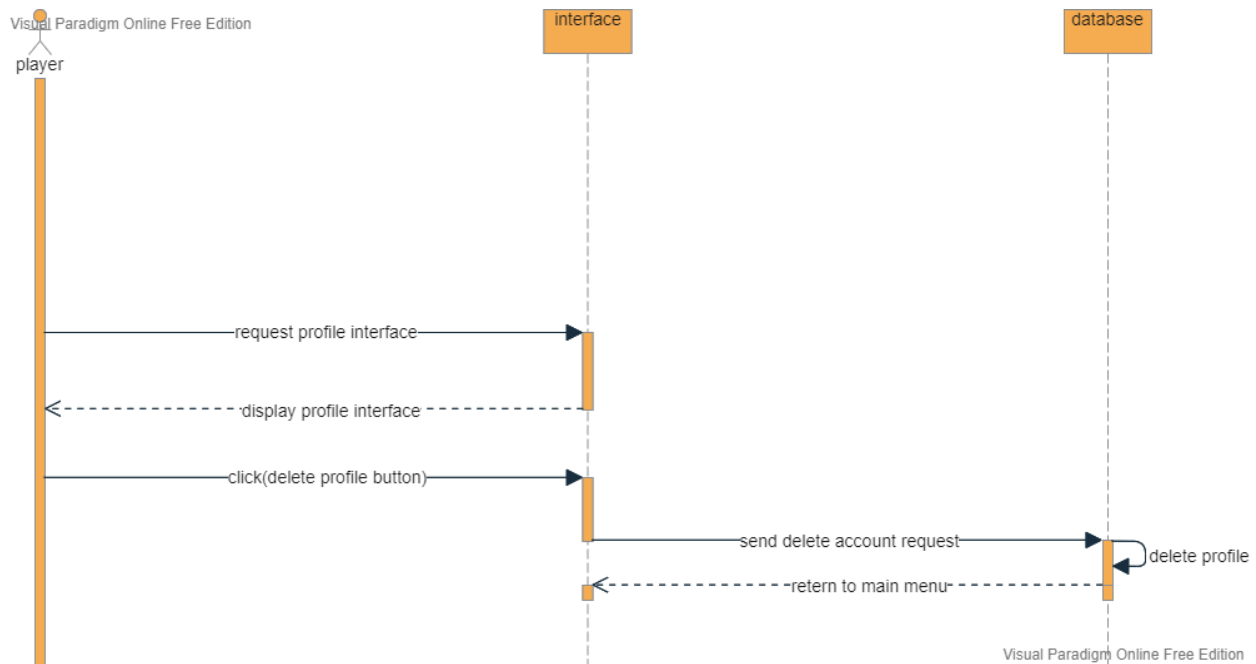


figure 4: Use case sequence diagram «Delete profile»

Sequence diagram «Manage Reservation»

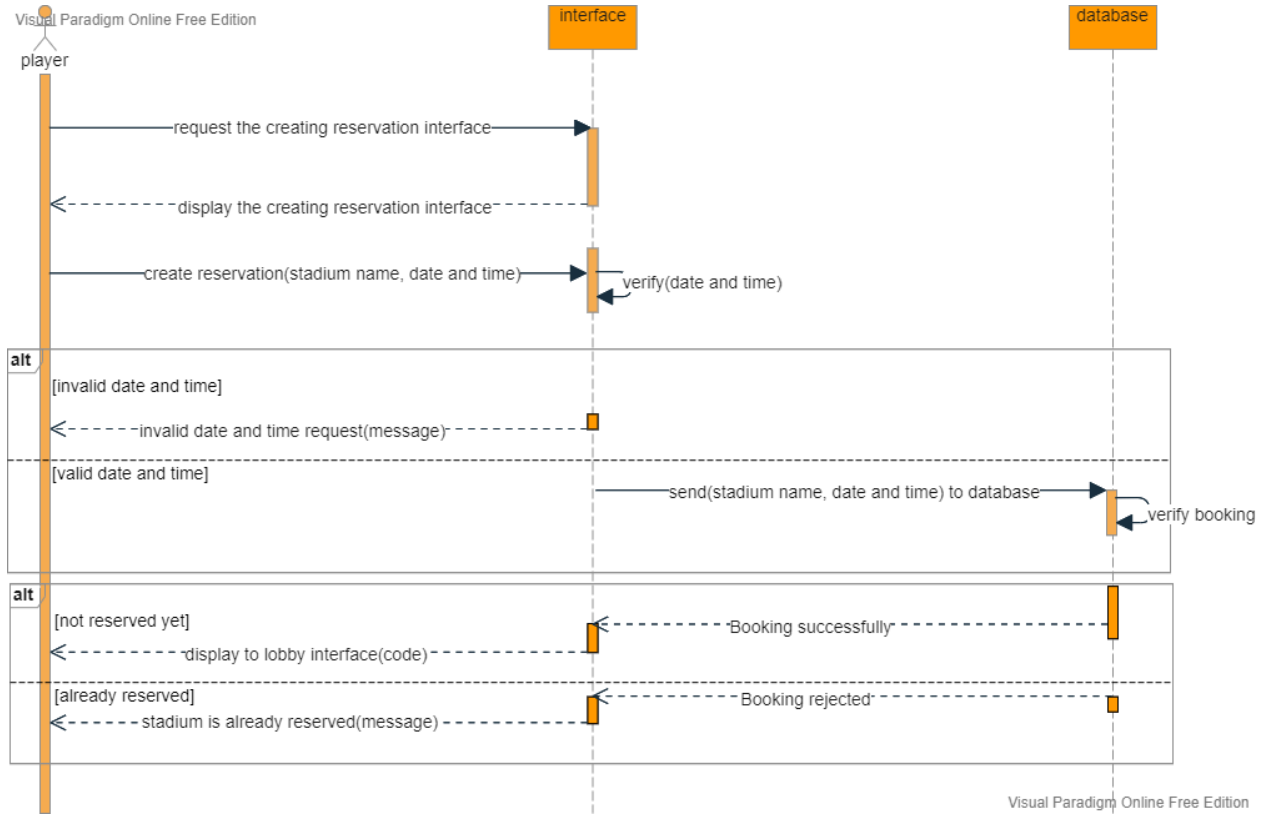


figure 5: Use case sequence diagram «Create reservation»

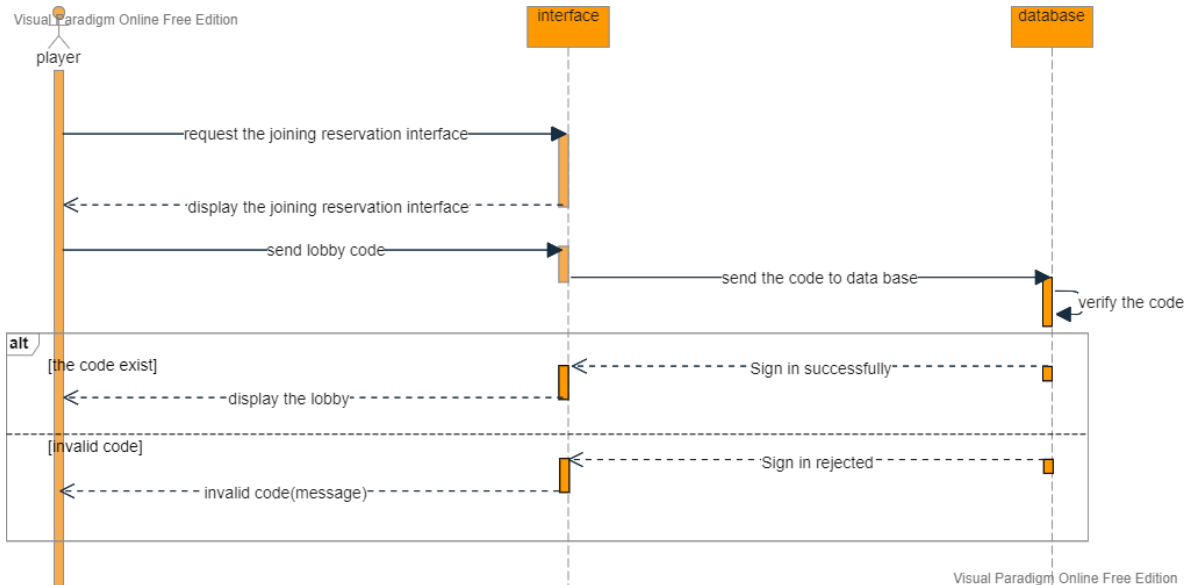


figure 6: Use case sequence diagram «Join reservation»

Sequence diagram «Manage Team»

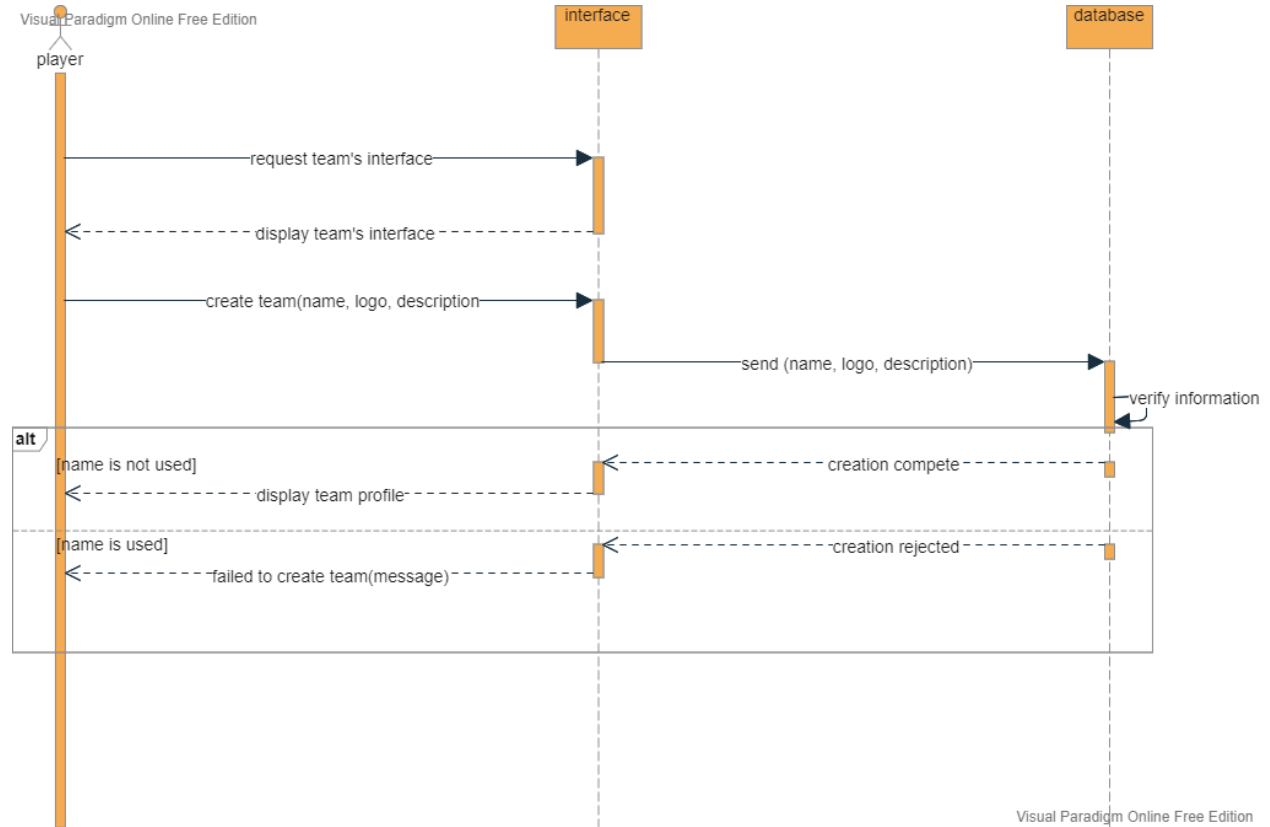


figure 7: Use case sequence diagram «Create team»

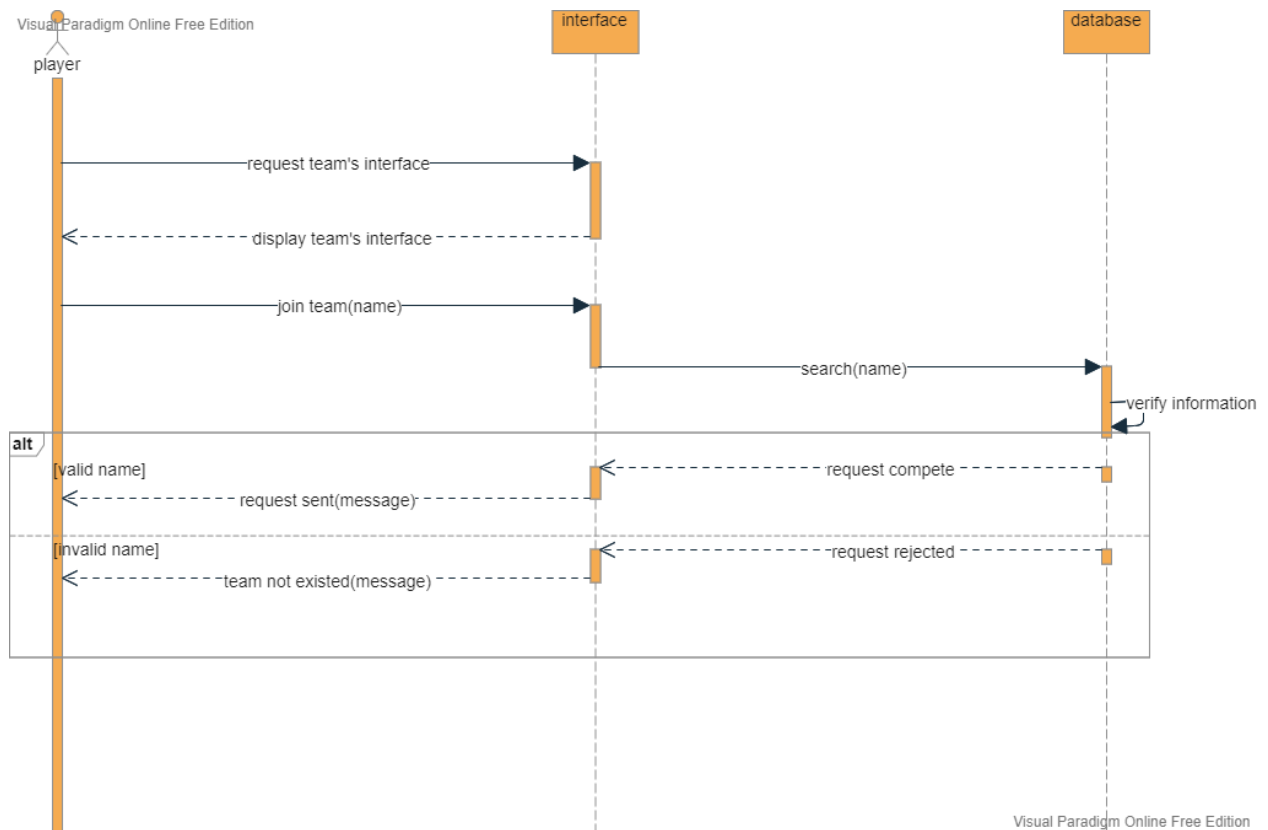


figure 8: Use case sequence diagram «Join team»

Sequence diagram «Manage Profile»

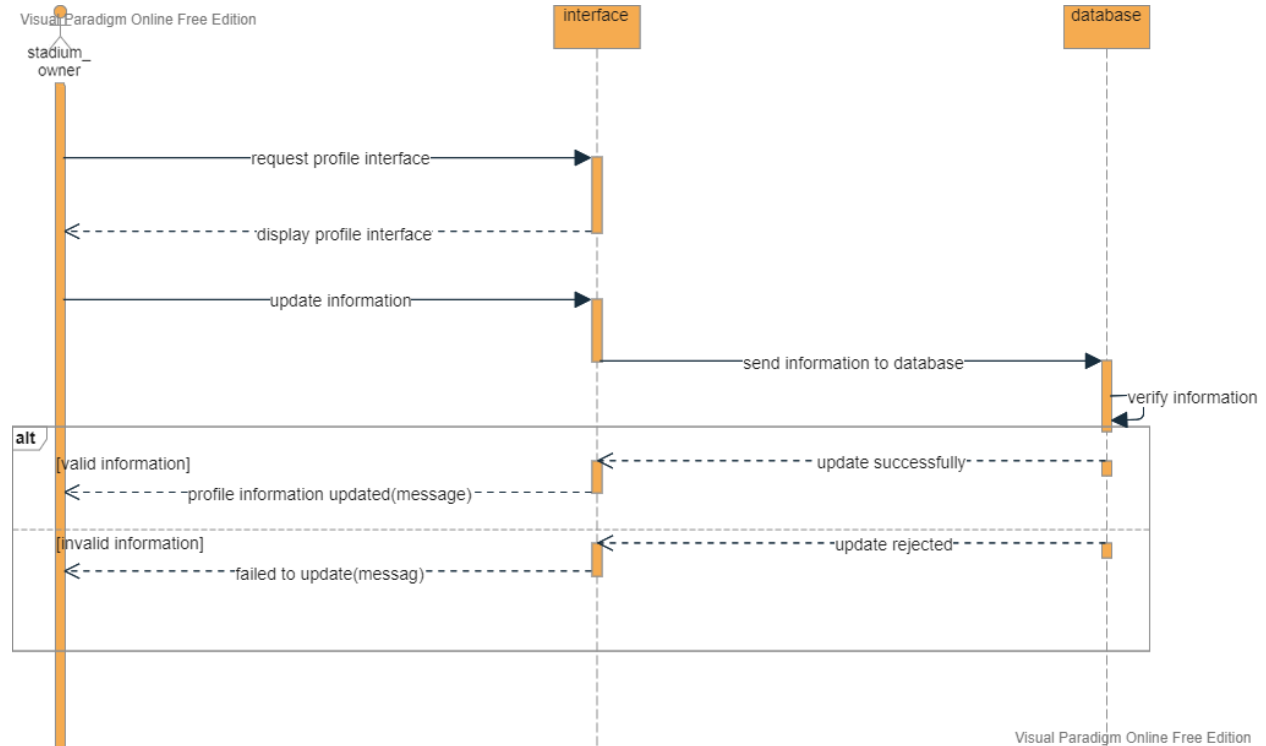


figure 9: Use case sequence diagram «Update profile»

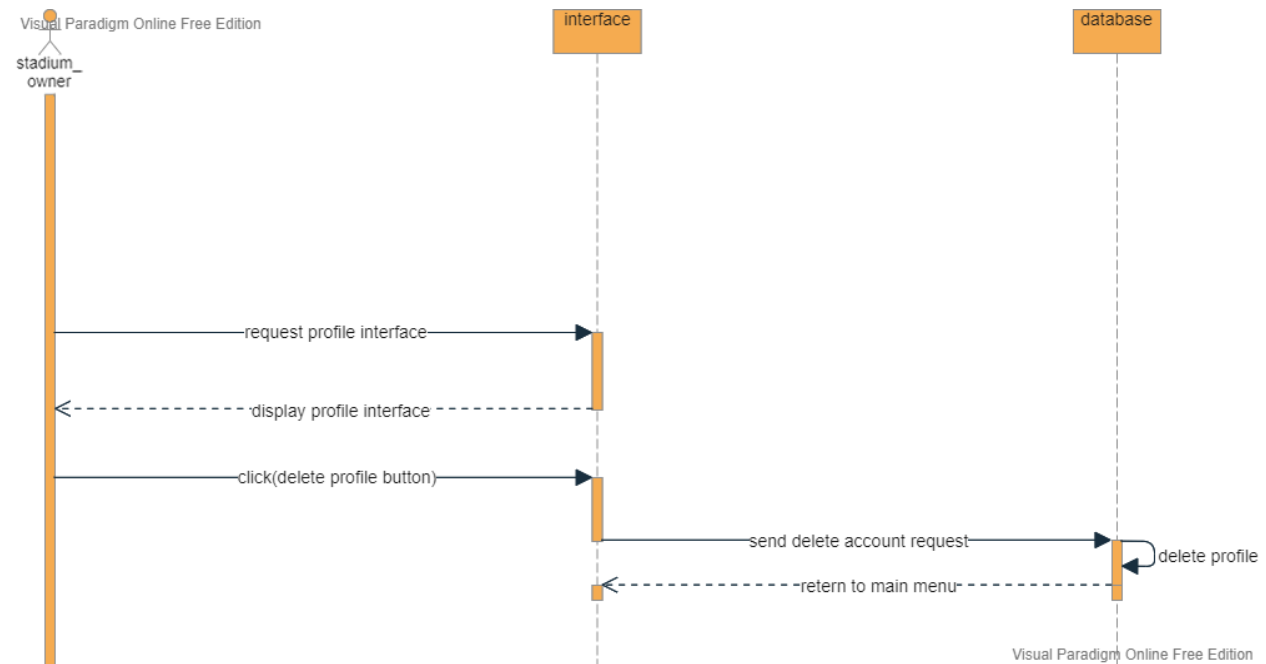


figure 10: Use case sequence diagram «Delete profile»

Sequence diagram «Manage stadiums»

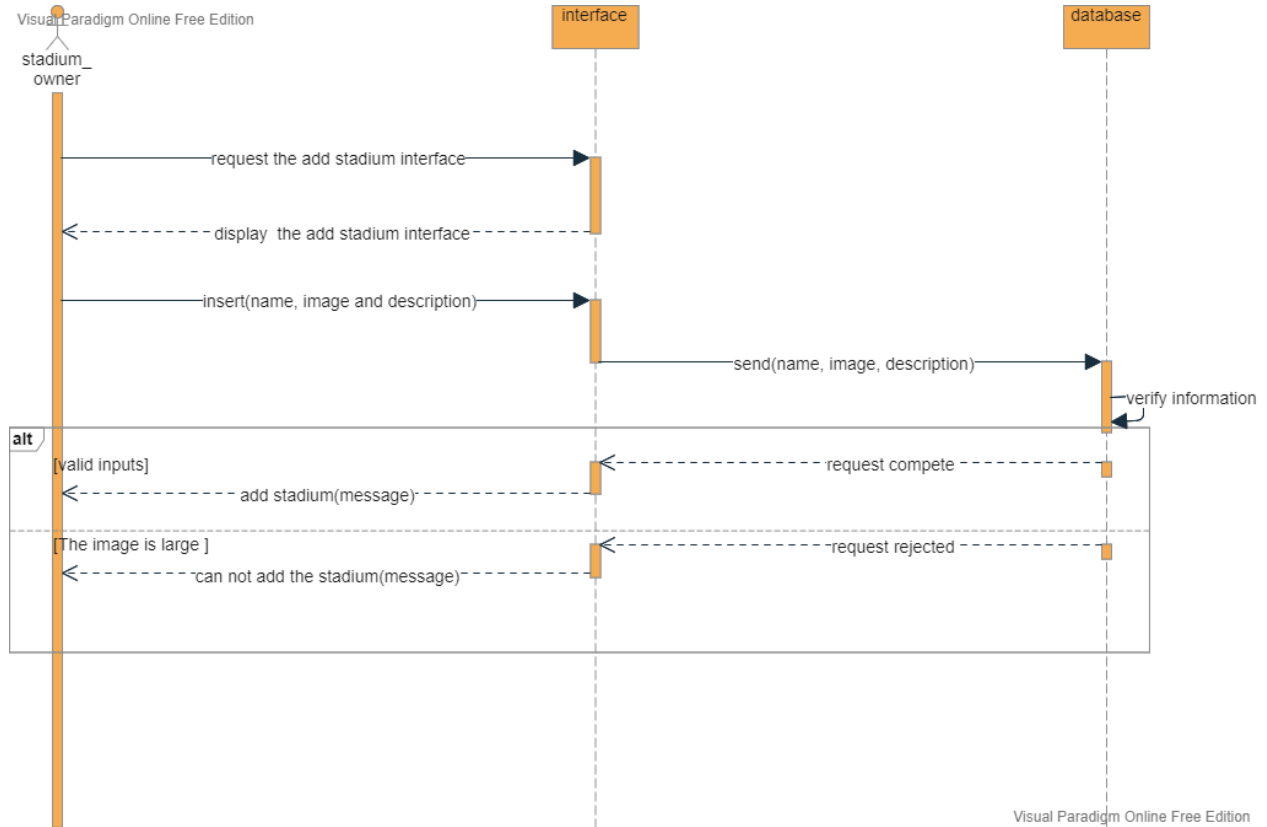


figure 11: Use case sequence diagram «Add stadium»

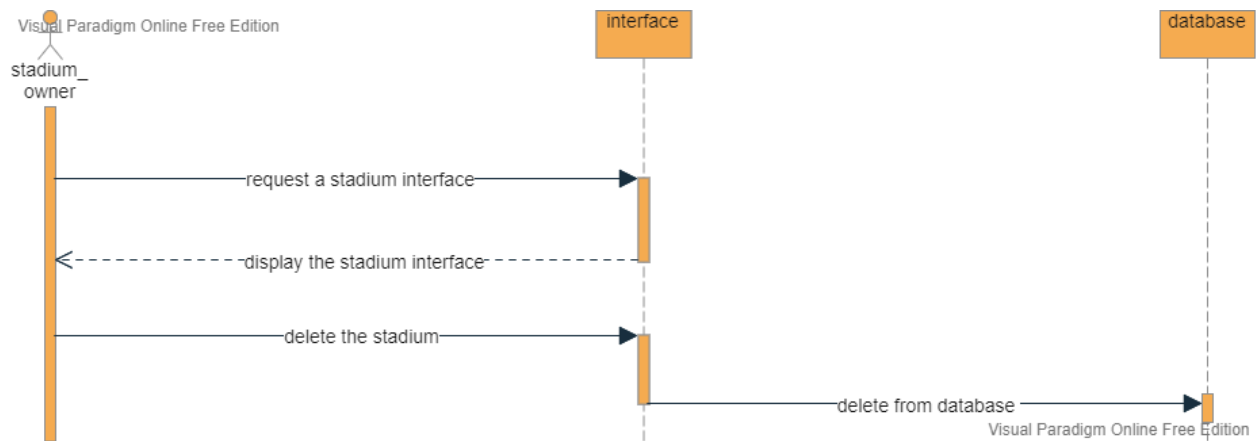


figure 12: Use case sequence diagram «Delete stadium»

1.4. Class diagrams

A class diagram is primarily designed for developers to provide the conceptual model and architecture of the system being developed. Typically, a class diagram consists of more than one class or all the created classes for a system.

It is a type of structure diagram and looks similar to a flow chart having three main parts illustrated in rectangular boxes. The first or top part specifies the class name, the second or middle specifies attributes of that class and the third or bottom section lists the methods or operations that specific class can perform.

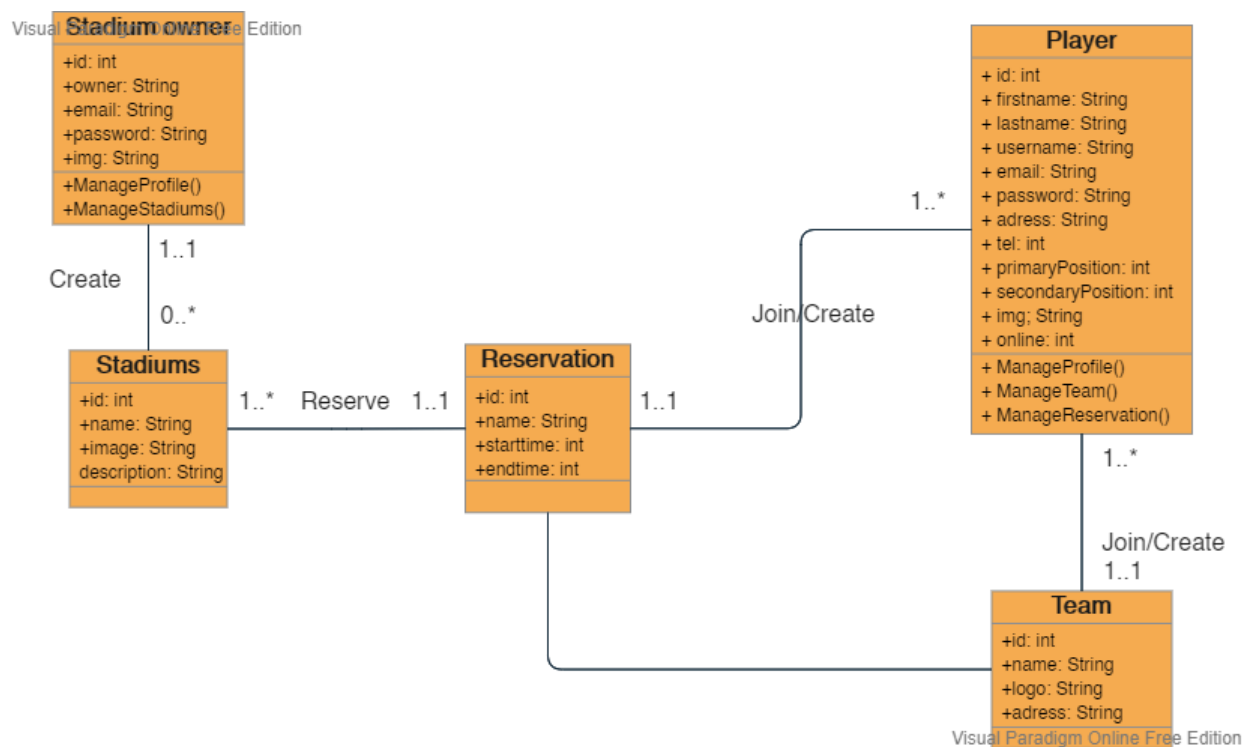


figure 13: Class diagram

Conclusion

In this chapter I have been able to provide a clearer vision of the subject and a deeper understanding of the tasks at hand. Then, the research of the actors and the development of the use case diagrams and the sequence diagrams will allow me to start the design which will be described in the next chapter.

Chapter 3: Conception

Introduction

Database conception is the most difficult task in the information system development process

Using a conception method to facilitate communication and cooperation between the different actors of an application

1. Processing conception

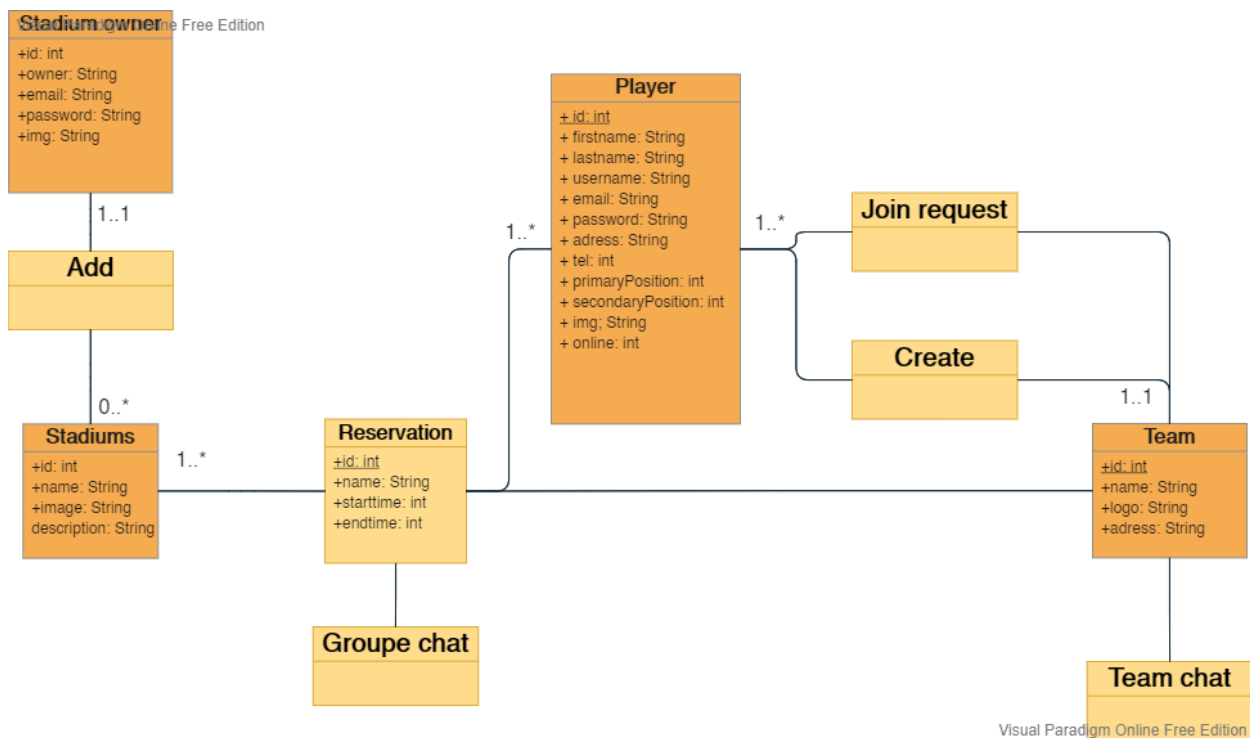


figure 14: Conceptual data model

Logical data model

2. Tables

2.1. Player

Player (id, username, firstname, lastname, email, password, address, tel, primaryPosition, secondaryPosition, img, online)

Table 12: Player's table

Attribute	Designation	Type
Id	Identify the player	Int
Username	Unique name for the player	Varchar
Firstname	Player's first name	Varchar
Lastname	Player's last name	Varchar
Email	Player's email	Varchar
Password	Secret pass code	Varchar
Address	Player's address	Varchar
tel	Player's phone number	Int(8)
primaryPosition	Player's first position	Int
secondaryPosition	Player's second position	Int
Image	Player's picture	Varchar
Online	Player's state	Int

2.2. Stadium owner

Stadium_owner (id, owner, email, password, img)

Table 13: Stadium owner's table

Attribute	Designation	Type
Id	Identify the stadium owner	Int
Owner	Unique name for the owner	Varchar
Email	Stadium owner's email	Varchar
password	Stadium owner's password	Varchar
Img	Stadium owner's picture	Varchar

2.3. Stadiums

Stadiums (id, name, image, description)

Table 14: Stadium's table

Attribute	Designation	Type
Id	Identify the stadium	Int
name	Unique name for the stadium	Varchar
image	Stadium's picture	Varchar
description	Stadium's description	Varchar

2.4. Team

Team (id, name, logo, address)

Table 15: Team's table

Attribute	Designation	Type
Id	Identify the team	Int
name	Unique name for the team	Varchar
Logo	Team's logo	Varchar
Address	Team's Address	Varchar

Conclusion

The conception constitutes the bridge between the specification of the needs and the realization. I now move on to the integration and development of my application in its real environment, this which will be the subject of the next chapter

Chapter 4: Realization

Introduction

The realization is the last step of this project, it comes to concretize the work of the needs study and the conceptual study. The achievement is very important since, thanks to its computer project will actually exist. In this chapter, I will present my hardware and software environment, then I will describe the work carried out by detailing some screenshots of the functionalities carried out.

1. Hardware environment

To implement my application, I am using a laptop computer that has the following characteristics:

Table 16: Hardware environment

Processor	Core i5
Computer	Lenovo
Operation system	Windows 10 Pro
RAM Memory	16 Gb
Hard Drive	2 Tb

2. Software environment

2.1. What is MVC?

MVC (Model view controller) is a software design pattern commonly used for developing user interfaces that divide the related program logic into three interconnected elements. This is done to separate internal representations of information from the ways information is presented to and accepted from the user.

Traditionally used for desktop graphical user interfaces (GUIs), this pattern has become popular for designing web applications. Popular programming languages have MVC frameworks that facilitate implementation of the pattern.

Model

The central component of the pattern. It is the application's dynamic data structure, independent of the user interface. It directly manages the data, logic and rules of the application.

View

Any representation of information such as a chart, diagram or table. Multiple views of the same information are possible, such as a bar chart for management and a tabular view for accountants.

Controller

Accepts input and converts it to commands for the model or view.

2.2. Interactions between components

The figure 15 below summarizes the relationships between the components of MVC architecture

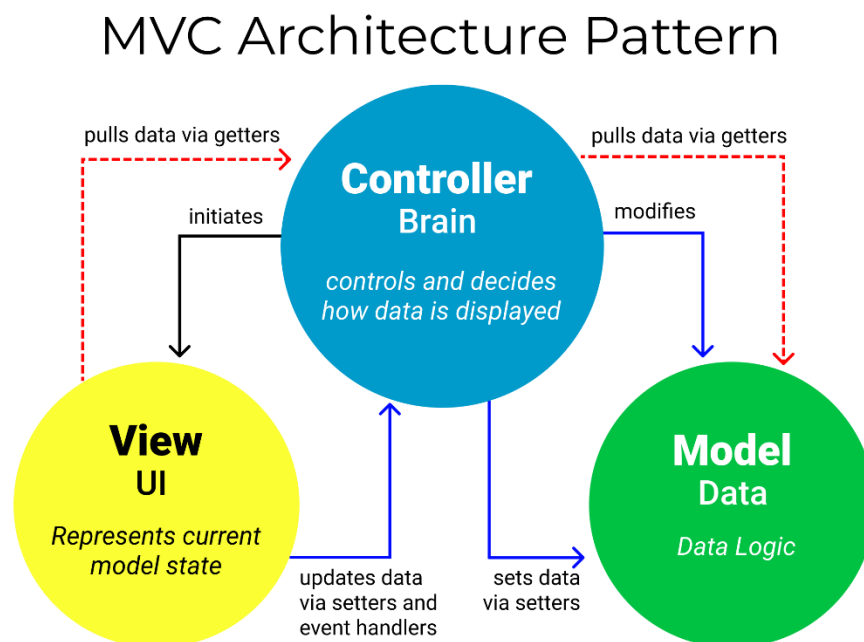


figure 15: MVC architecture

3. Equipment and tools

3.1. Development environments

❖ PhpMyAdmin



phpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web. phpMyAdmin supports a wide range of operations on MySQL and MariaDB. Frequently used operations (managing databases, tables, columns, relations, indexes, users, permissions, etc.) can be performed via the user interface, while you still have the ability to directly execute any SQL statement.

❖ Visual studio code



Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).

❖ Laragon



Laragon is a portable, isolated, fast & powerful universal development environment for PHP, Node.js, Python, Java, Go, Ruby. It is fast, lightweight, easy-to-use and easy-to-extend. Also is great for building and managing modern web applications. It is focused on performance-designed around stability, simplicity, flexibility and freedom.

3.2. Programming languages

❖ PHP

❖ HTML

❖ CSS

❖ Bootstrap

❖ JavaScript

4. The interfaces of the application

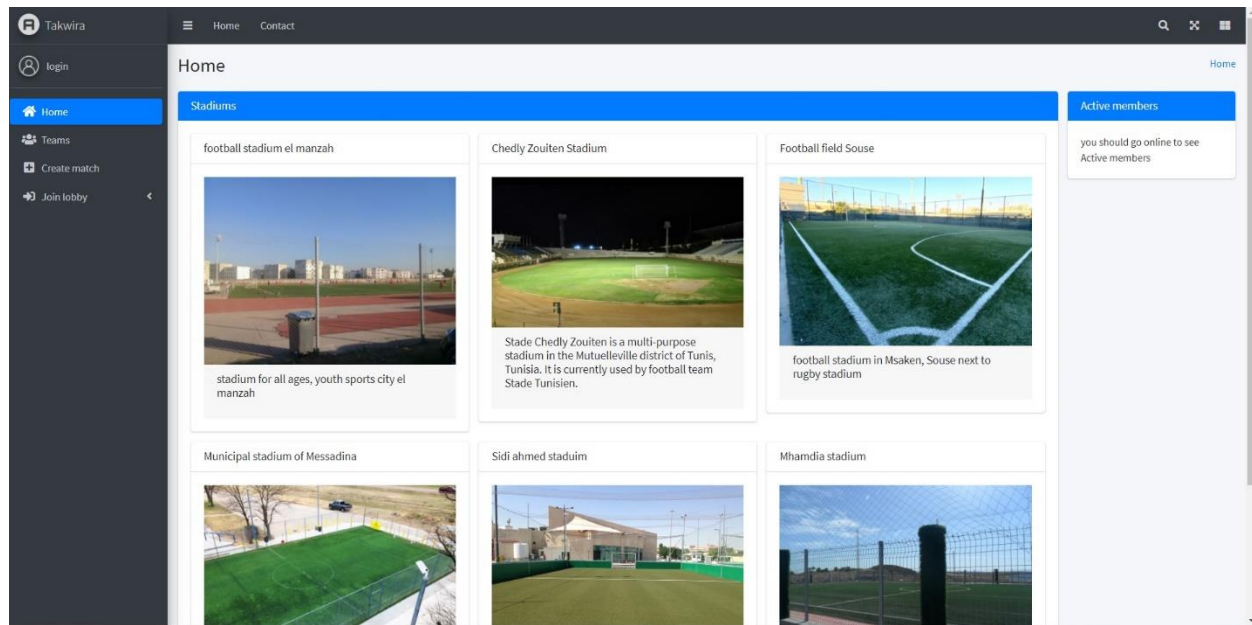


figure 16: Main menu interface (index)

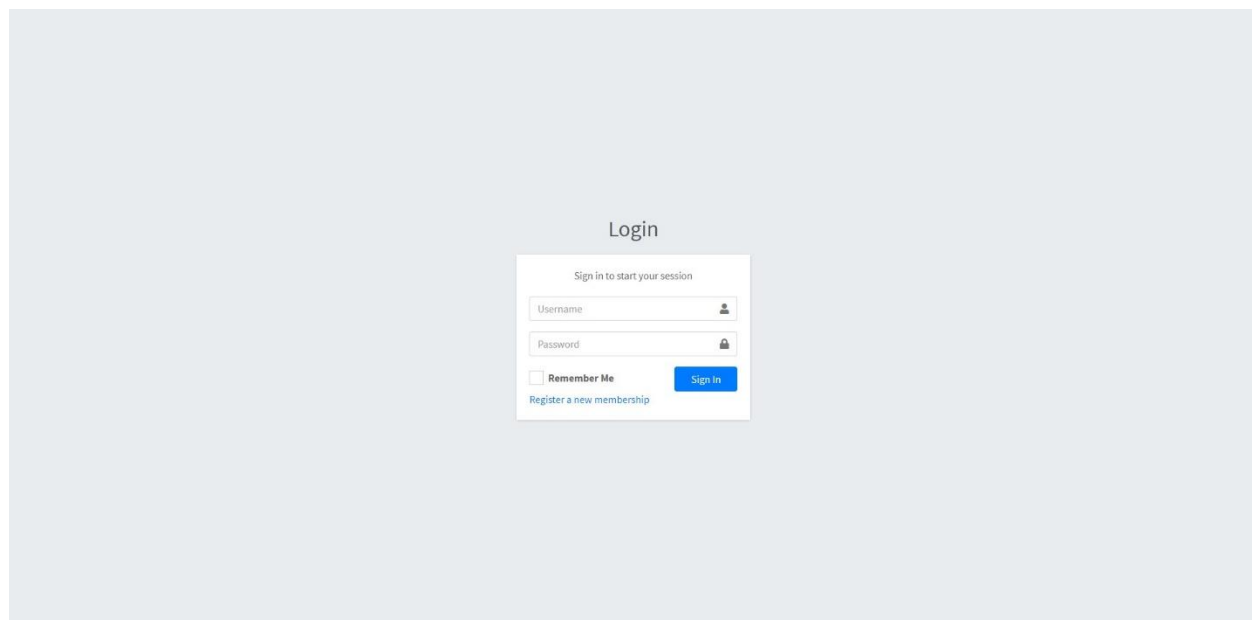


figure 17: Player's login interface

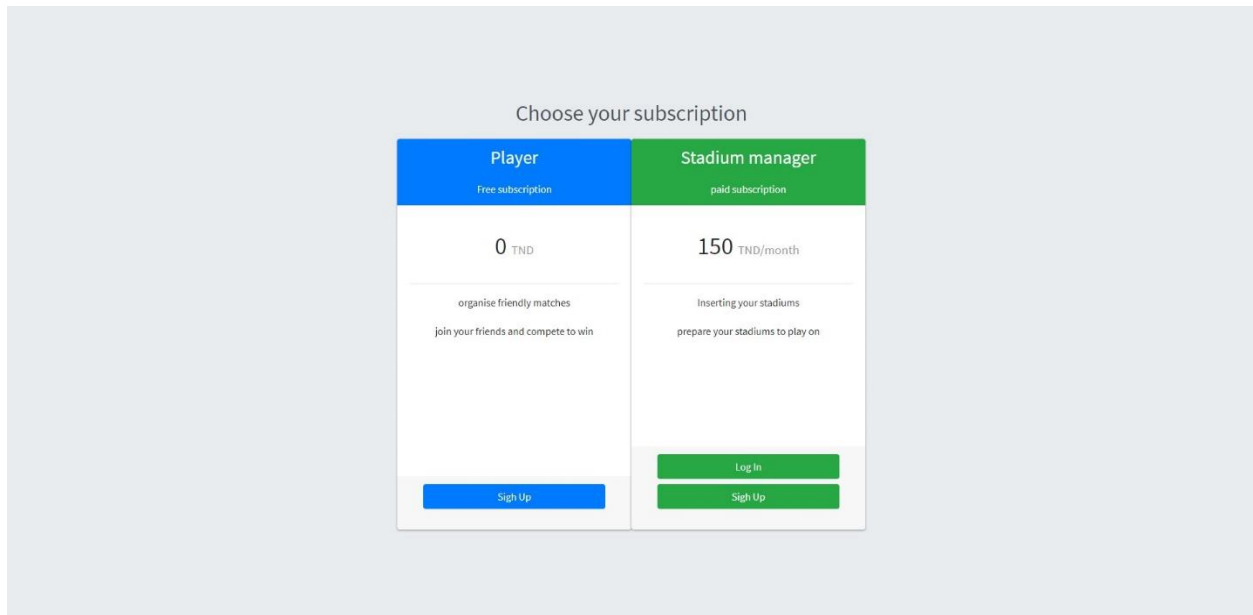


figure 18: Authentication

The image shows a 'Register' screen with the title 'Register a new membership'. It contains a form with the following fields: First name, Last name, User name, Email, and Password. Each field has a small icon to its right. Below the fields is a checkbox labeled 'I agree to the terms' and a blue 'Register' button. At the bottom, there is a link that says 'I already have a membership'.

Register

Register a new membership

First name

Last name

User name

Email

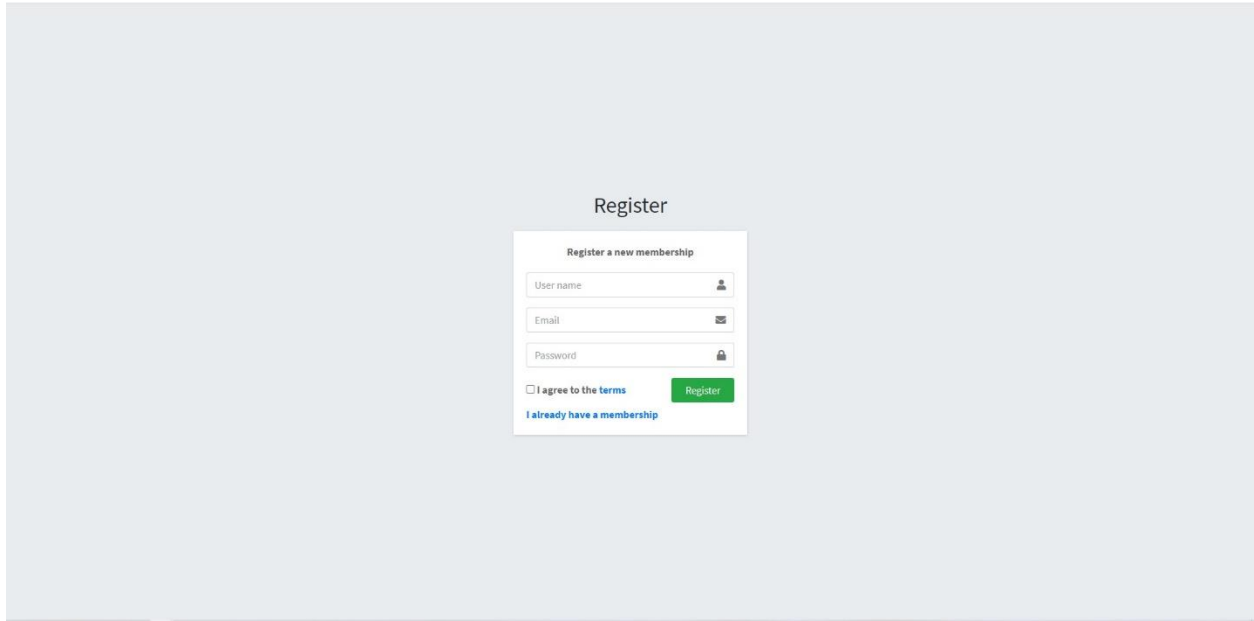
Password

☐ I agree to the terms

Register

[I already have a membership](#)

figure 19: Player's register interface



The image shows a web interface for registering a new membership. The title "Register" is centered at the top. Below it, a subtitle "Register a new membership" is displayed. The form contains three input fields: "User name" with a person icon, "Email" with an envelope icon, and "Password" with a lock icon. Below the "Password" field, there is a checkbox labeled "I agree to the terms" and a link "I already have a membership". A green "Register" button is positioned to the right of the checkbox.

Register

Register a new membership

User name

Email

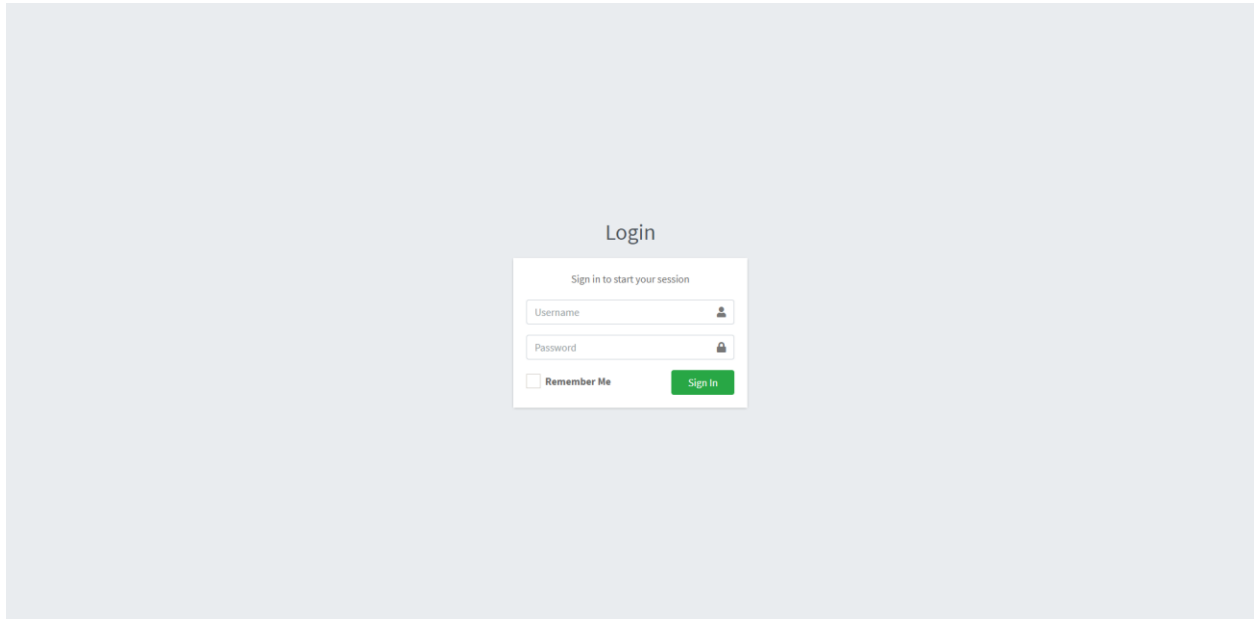
Password

☐ I agree to the terms

[I already have a membership](#)

Register

figure 20: Stadium owner register interface



The image shows a web interface for logging in. The title "Login" is centered at the top. Below it, a subtitle "Sign in to start your session" is displayed. The form contains two input fields: "Username" with a person icon and "Password" with a lock icon. Below the "Password" field, there is a checkbox labeled "Remember Me". A green "Sign in" button is positioned to the right of the checkbox.

Login

Sign in to start your session

Username

Password

☐ Remember Me

Sign in

figure 21: Stadium owner login interface

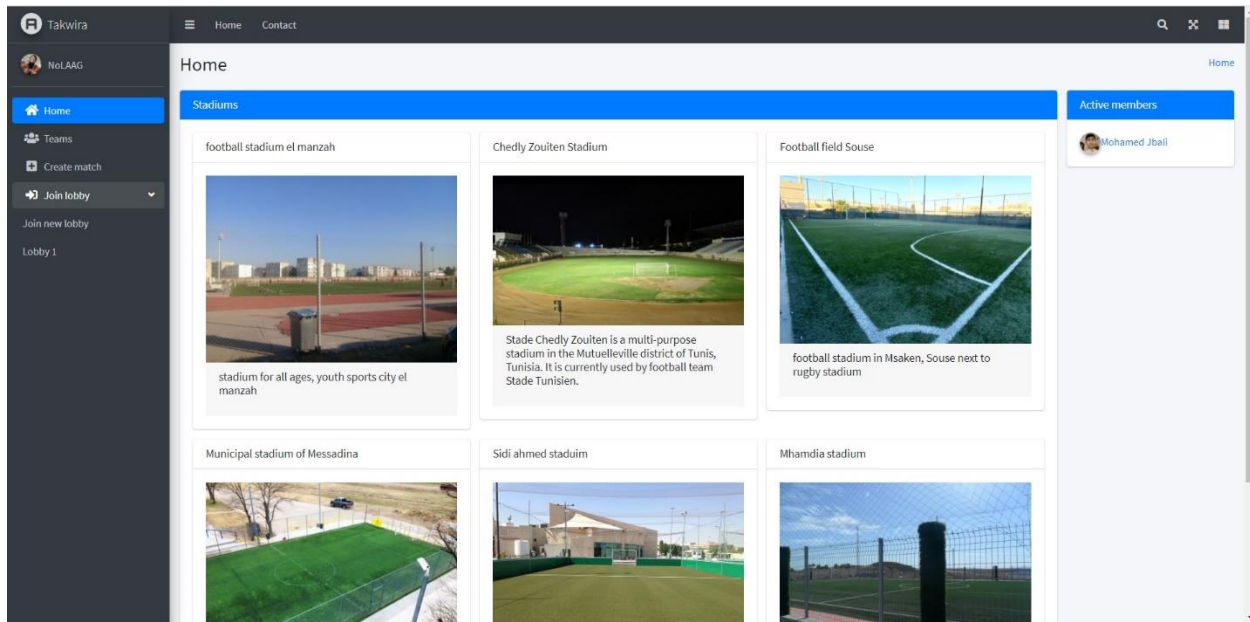


figure 22: The main menu interface after authenticating

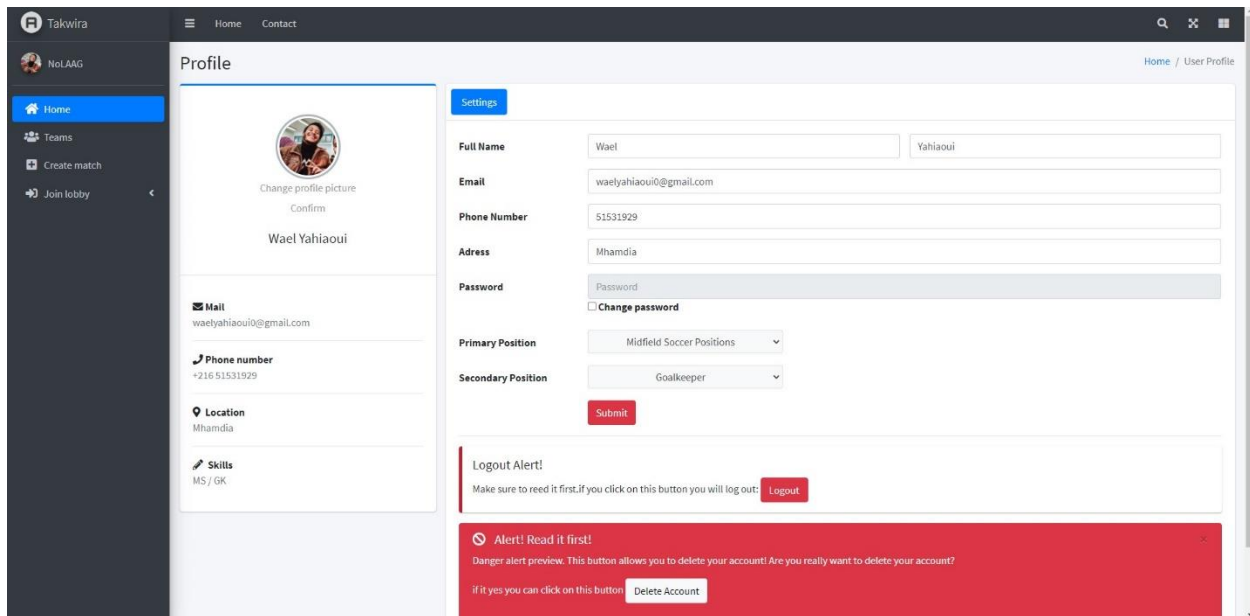


figure 23: Player's profile settings

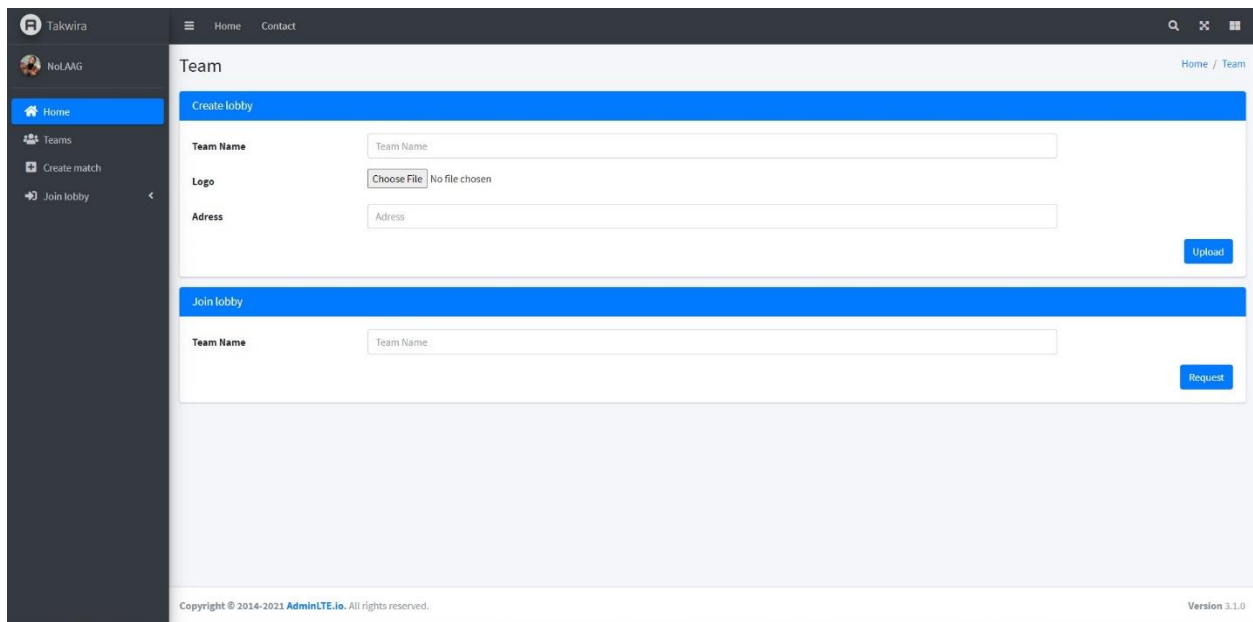


figure 24: Team interface (Create team/Join team)

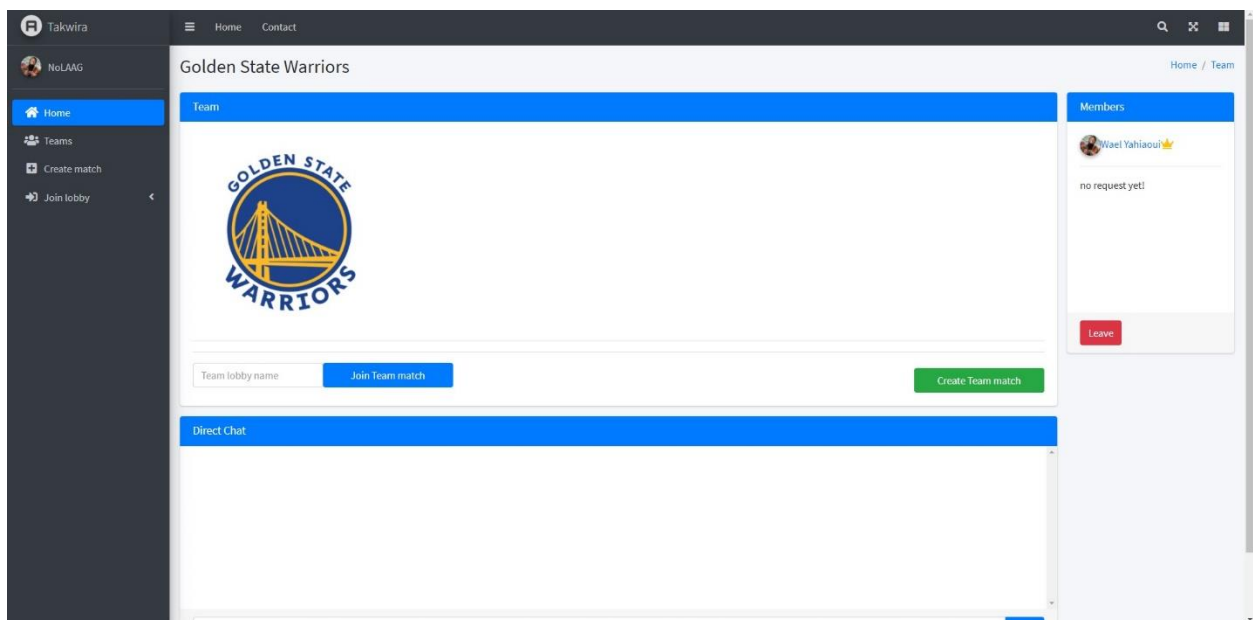


figure 25: Team interface

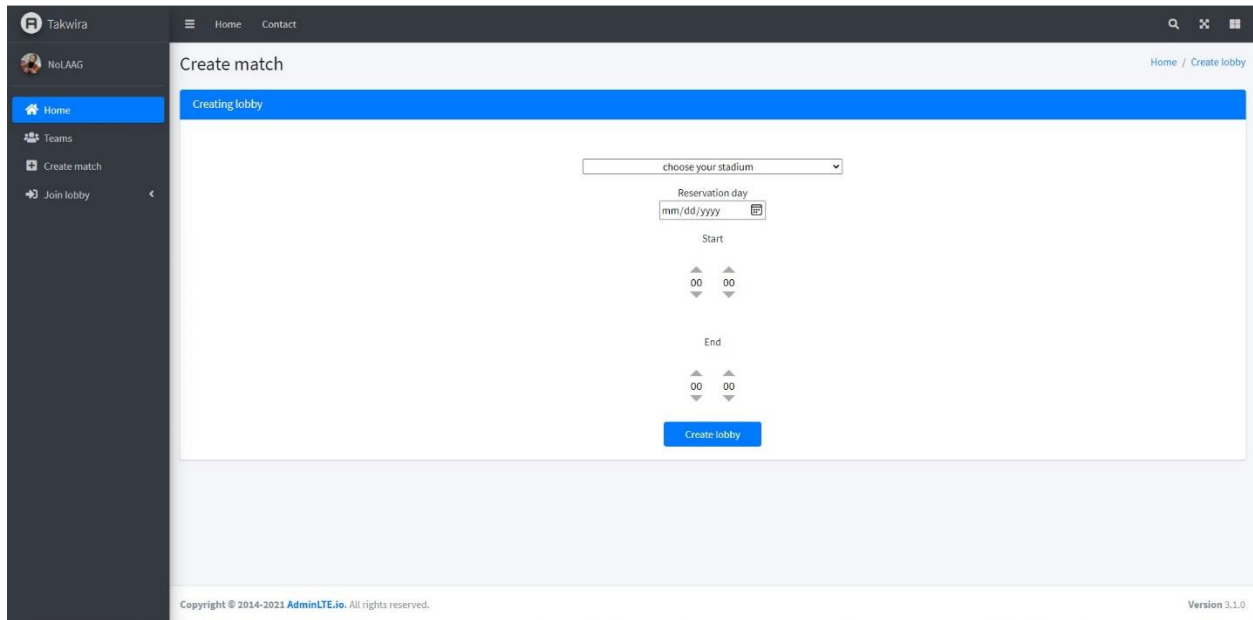


figure 26: Team interface (reservation interface)

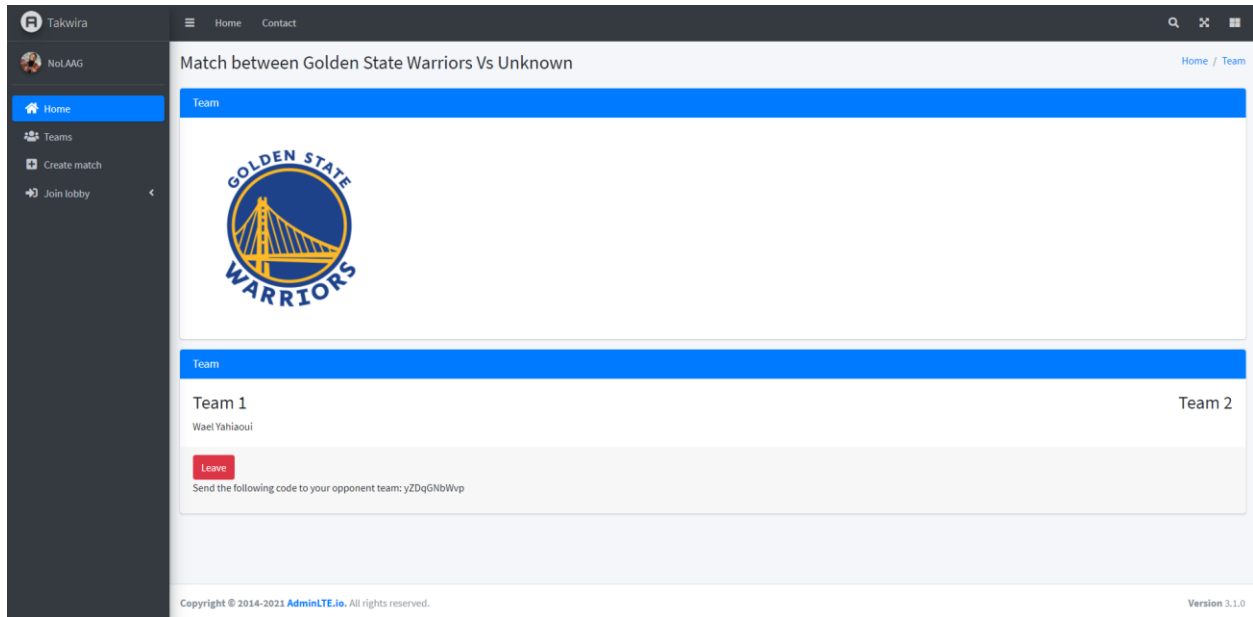


figure 27: Teams match interface

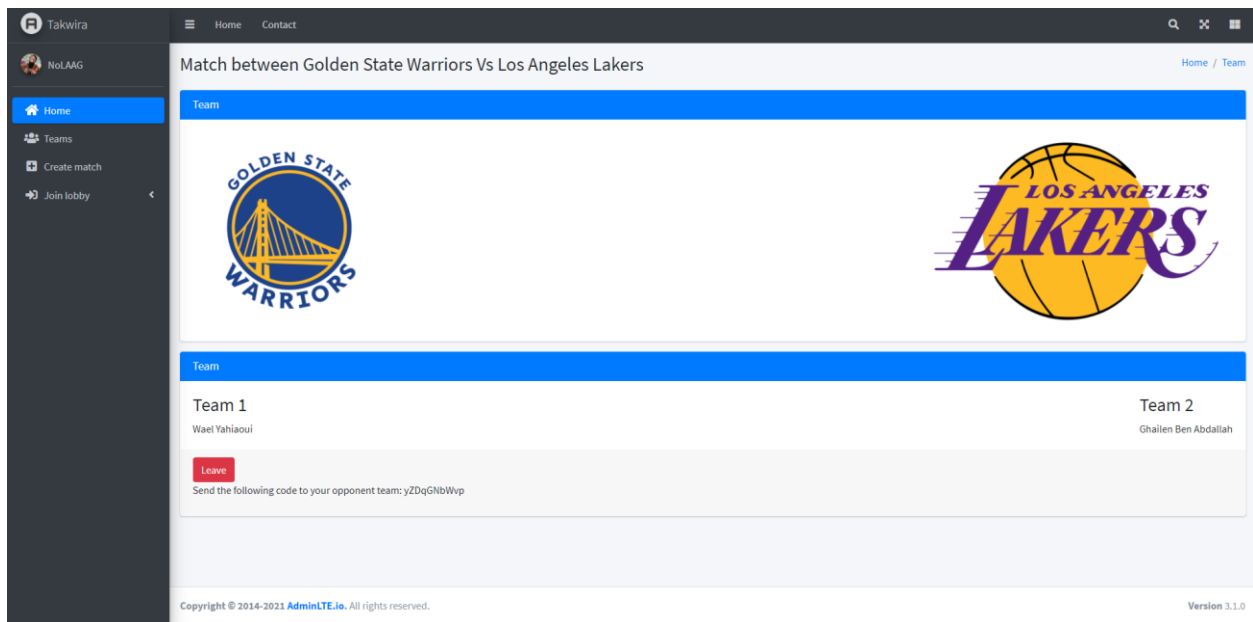


figure 28: Teams match interface .2

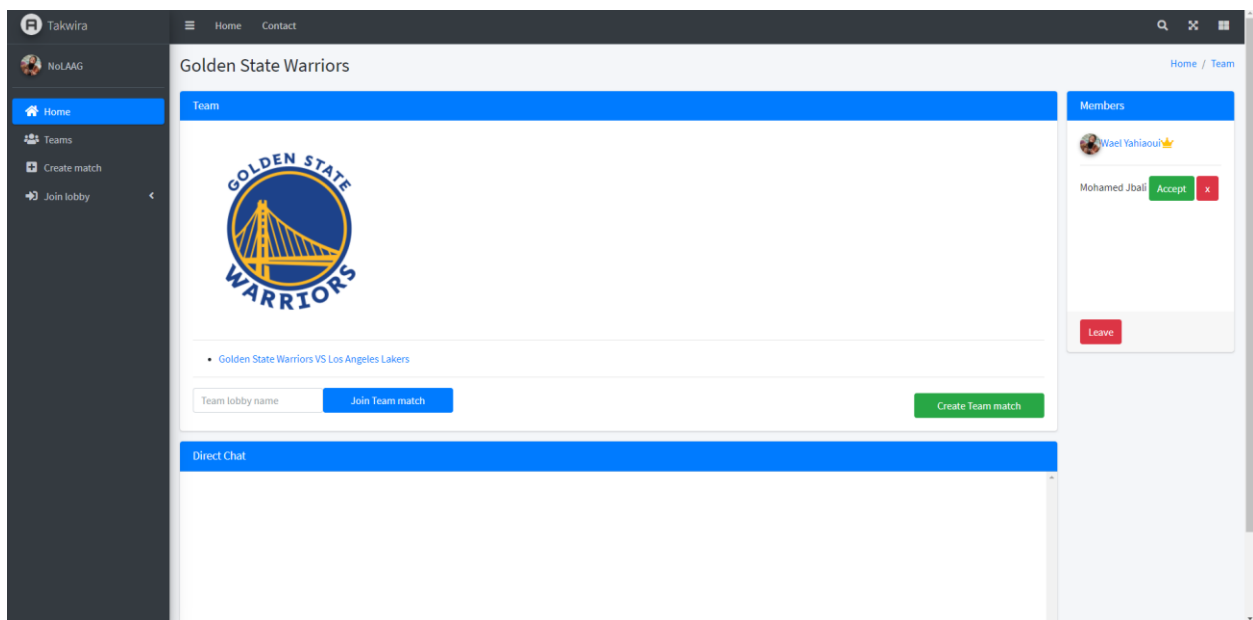


figure 29: Team interface (join request)

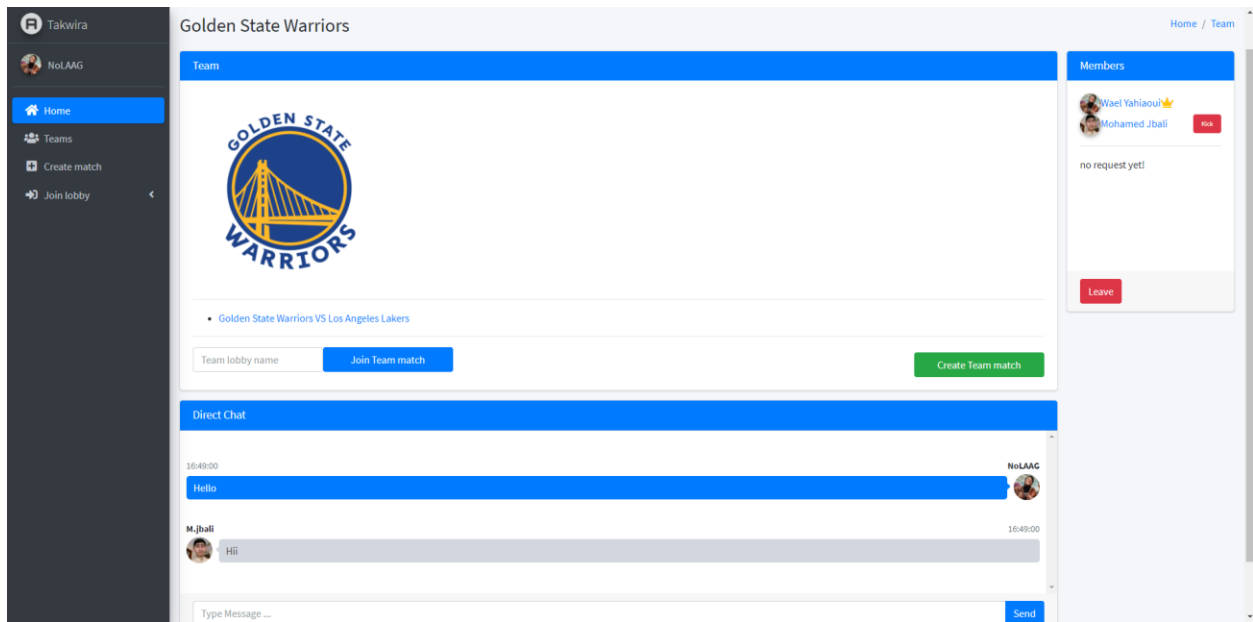


figure 30: Team interface (join request) .2

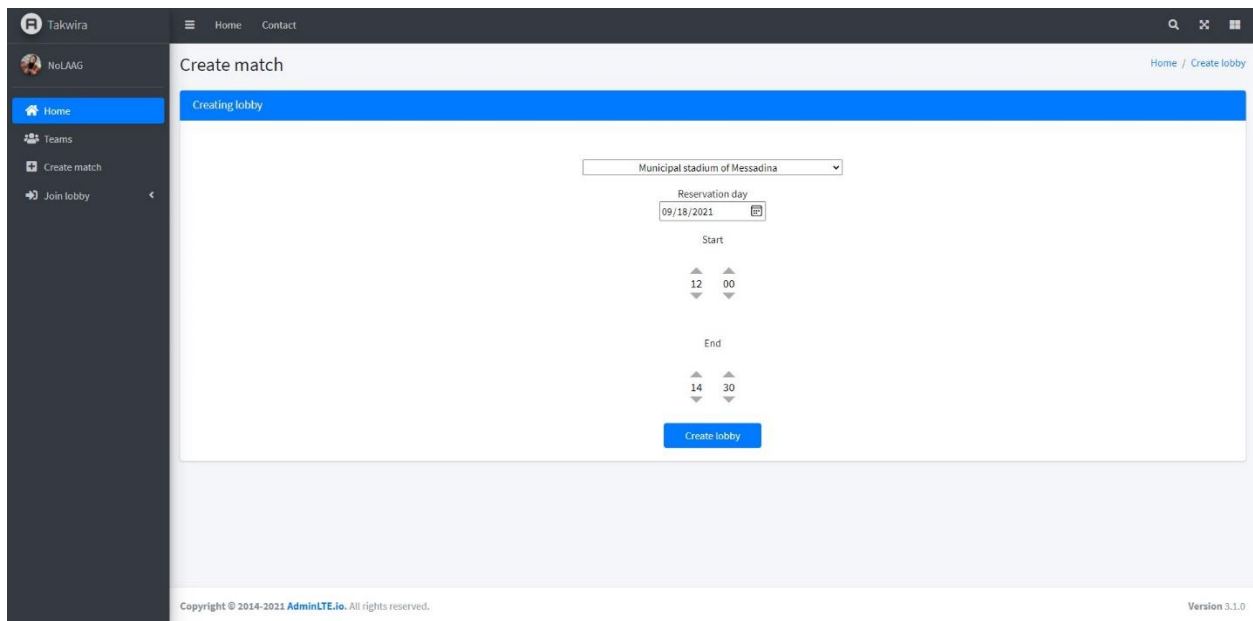


figure 31: Player create reservation interface

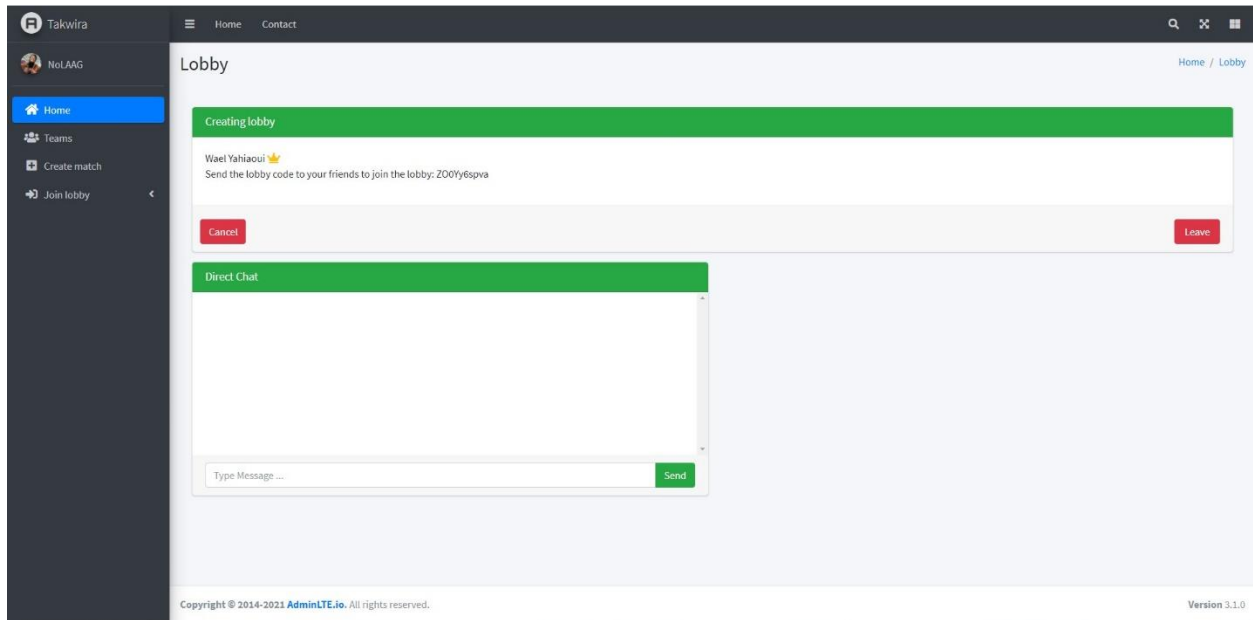


figure 32: Reservation interface

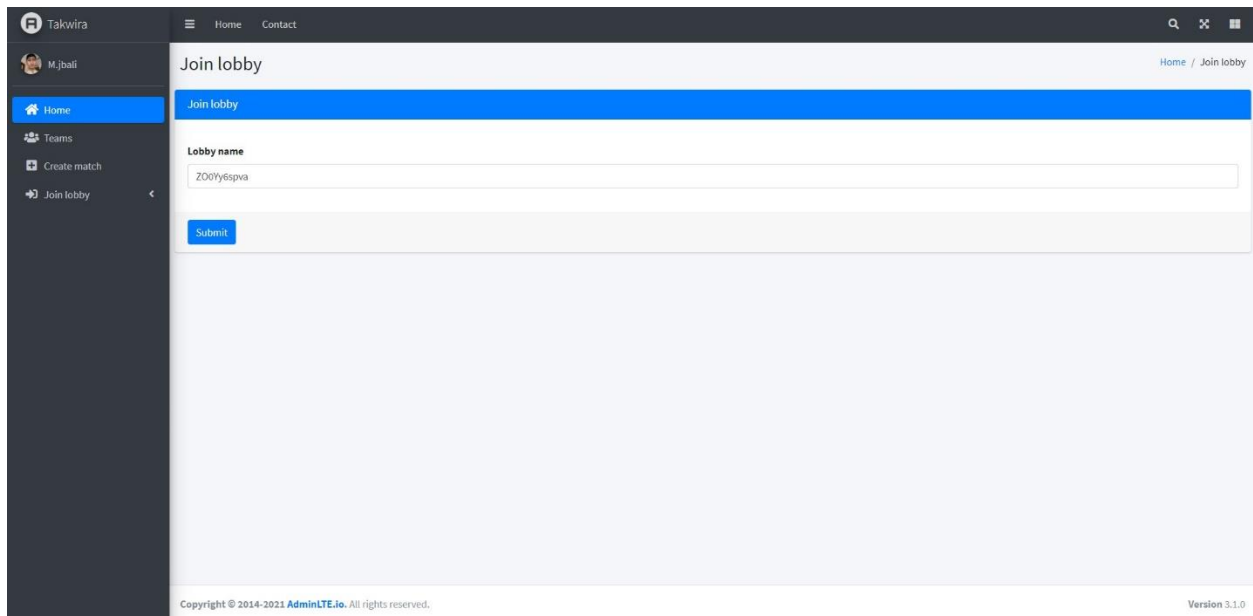


figure 33: Player reservation interface (join reservation)

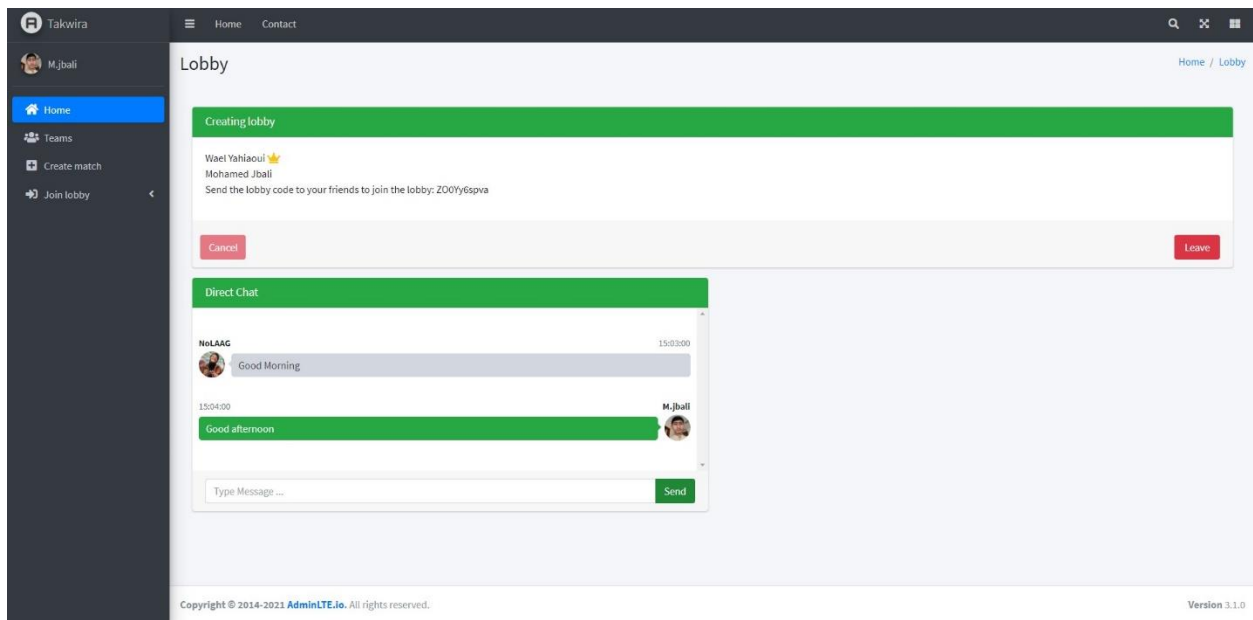


figure 34: Reservation interface .2

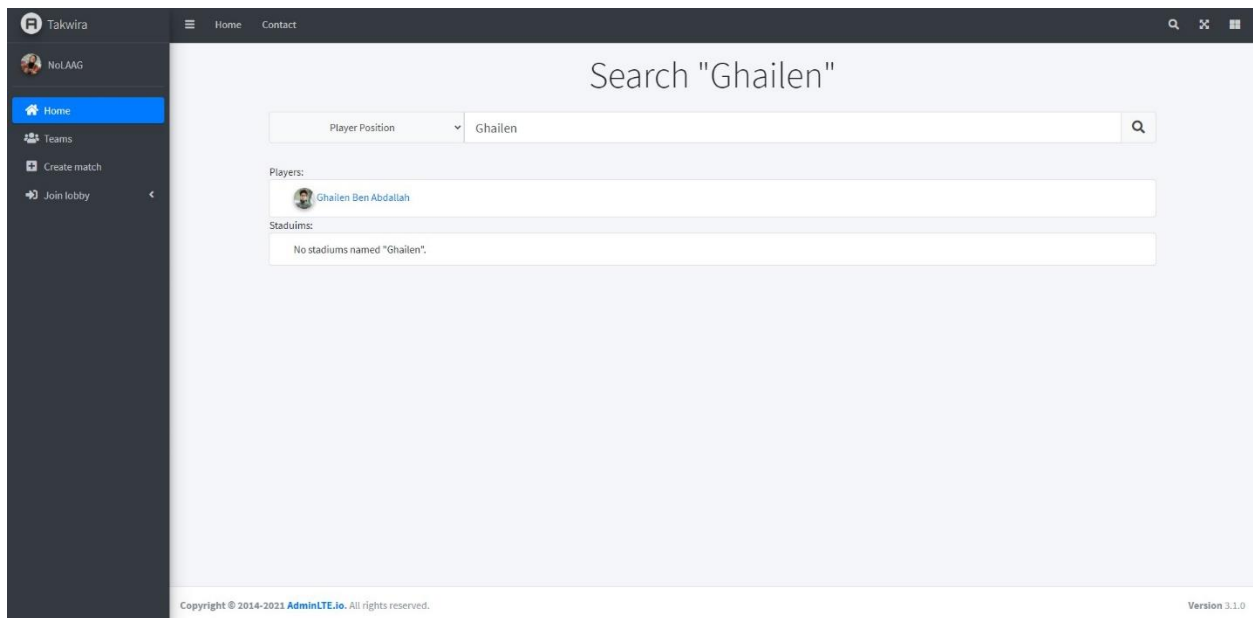


figure 35: Search interface

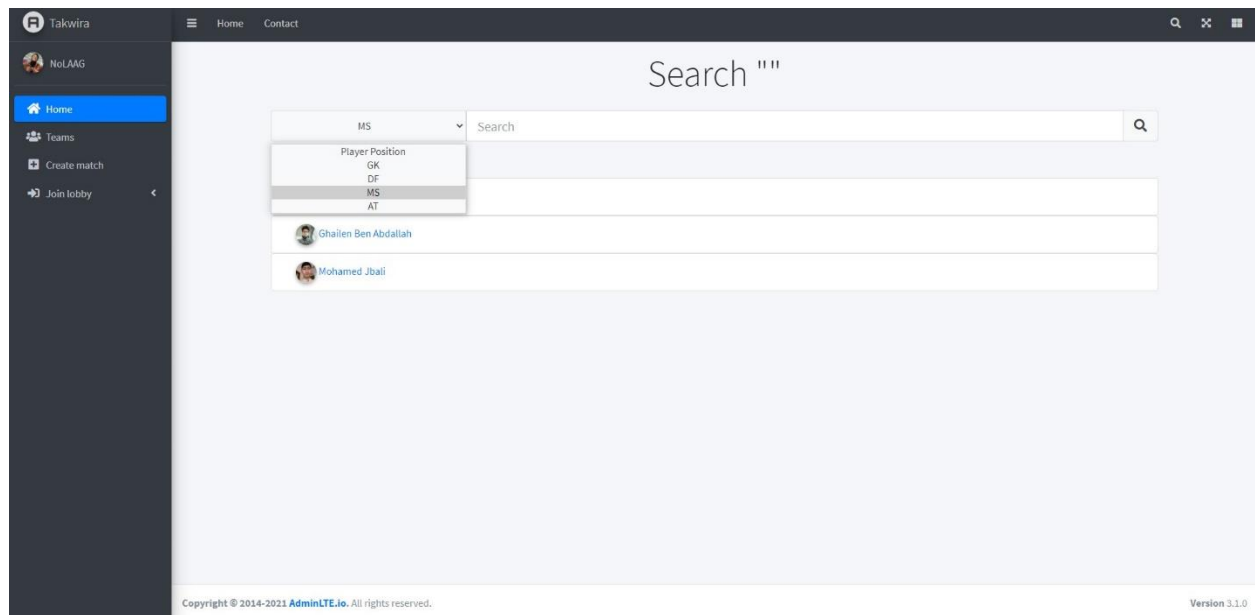


figure 36: Search interface (search by position)

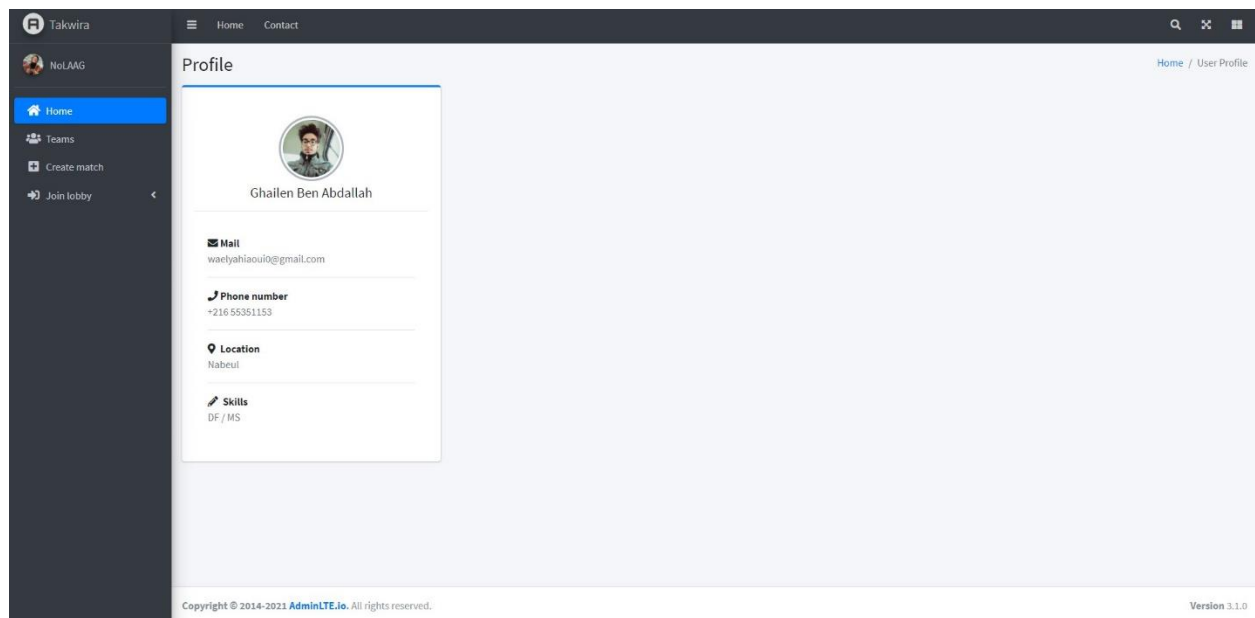


figure 37: Profile interface (visit profiles)

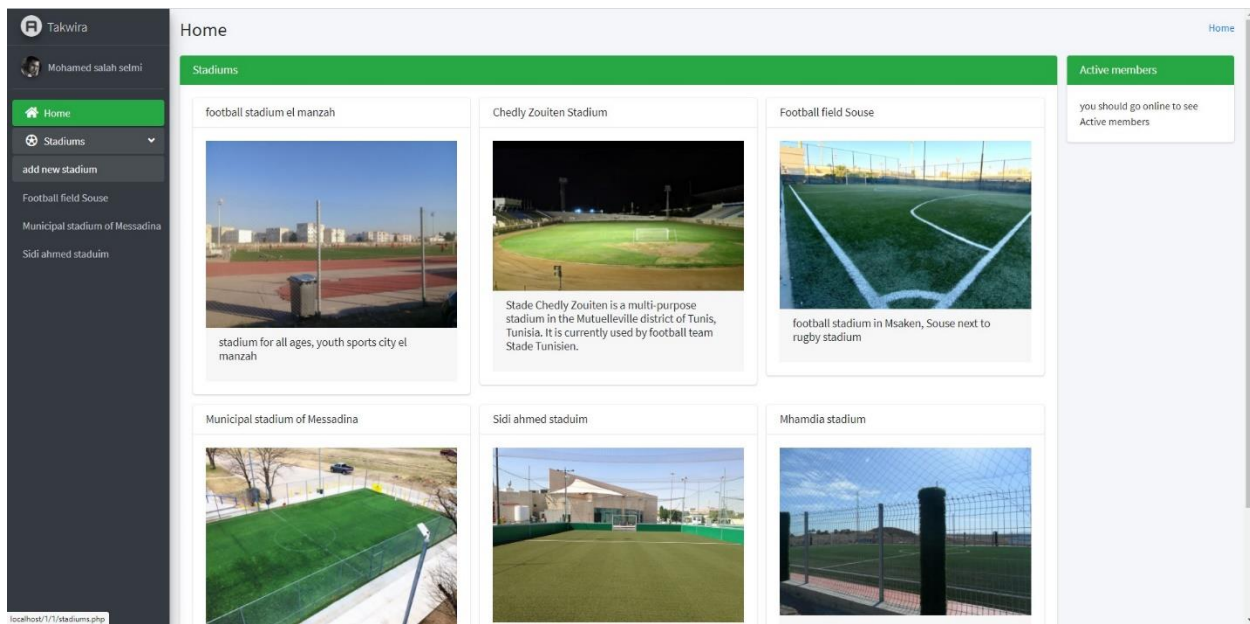


figure 38: Stadium owner after authenticate

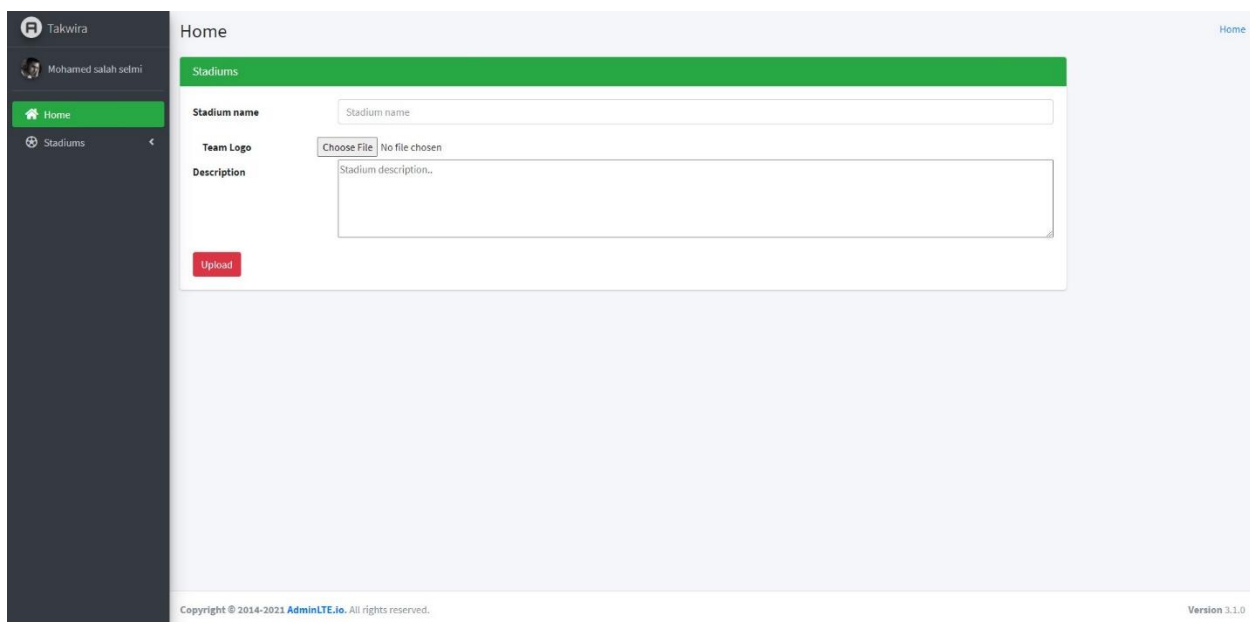


figure 39: Add stadium interface

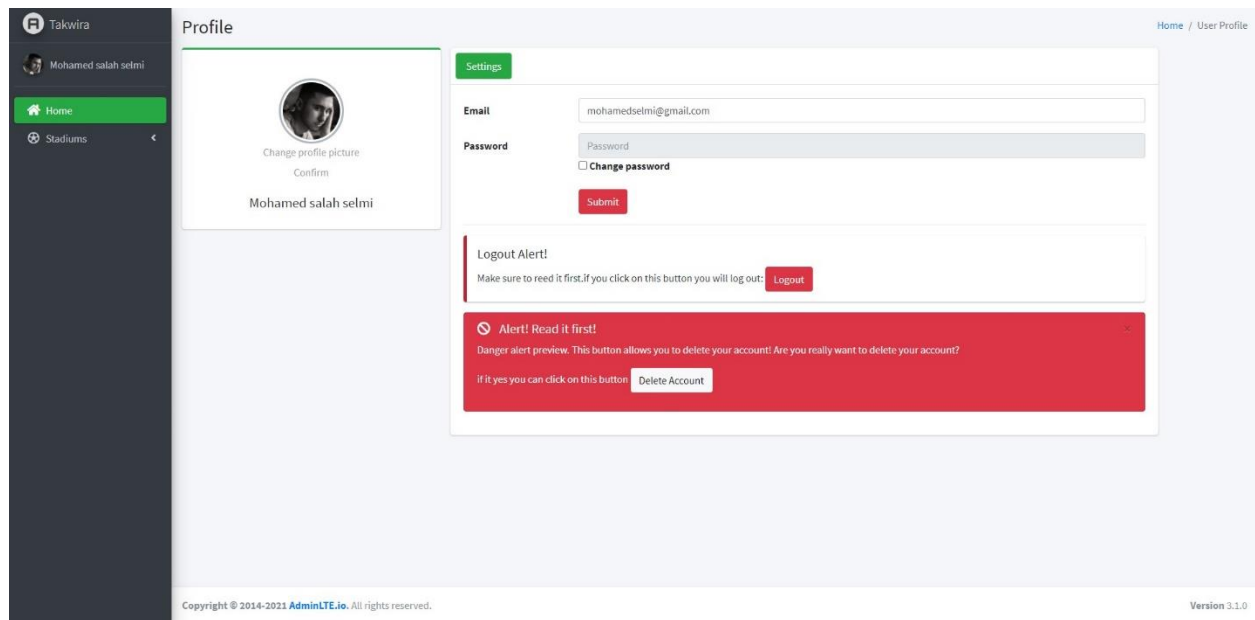


figure 40: Stadium owner profile interface

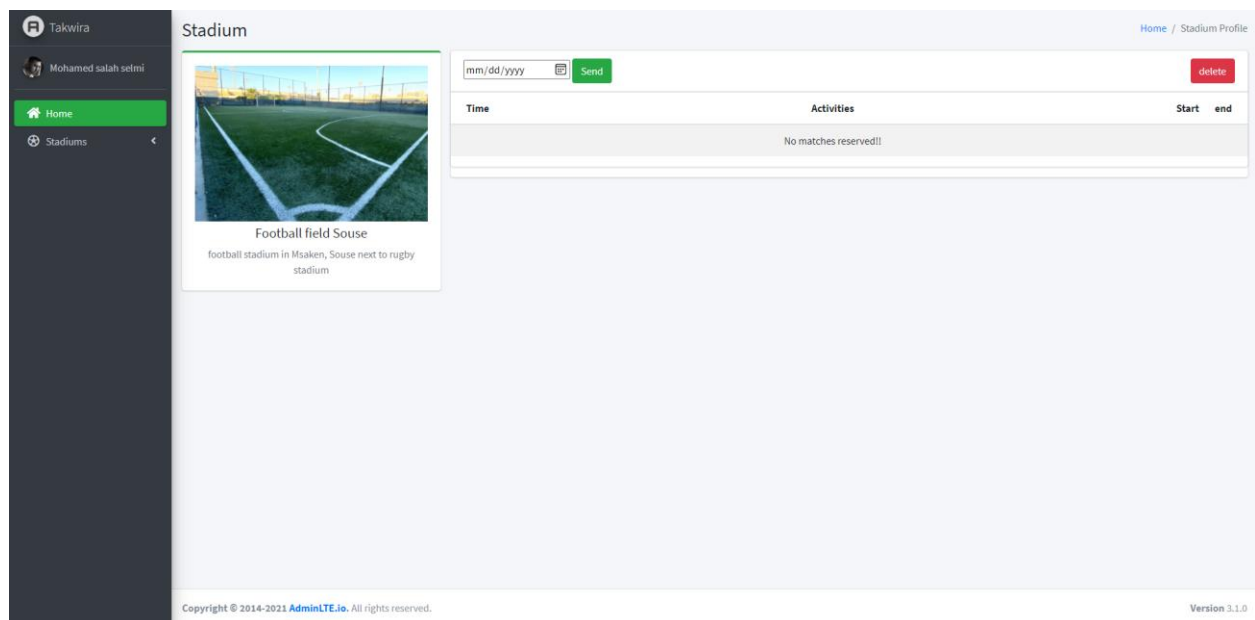


figure 41: Stadium profile interface

General conclusion

During this internship I was able to put into practice my theoretical knowledge acquired during my training. I had the opportunity to perform several tasks which made up an overall internship assignment. Online booking and specially when we talk about football is so useful and help people save time. This project consists of the design and development of an online booking stadiums system. This system allows players or fans to enjoy playing their favorite game and stadium owners to find easy way to work. My job is to create this application in order to facilitate the work, which will also make the interaction between the different actors simpler and easier. My application must ensure ease of navigation and handwriting comprehension and provide.

Finally, it is important to note that several improvements and evolutions remain possible, the project can be improved, and this, by adding some modules or interfaces to better adapt it to the needs of the user and so that it is always reliable and at the level of the progress achieved by the company. As perspectives, I propose:

- Adding friends and Private communications
- Adding Events or competition interface for teams to compete against each other's
- Adding matchup history and player stats

Bibliography

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