TURF BOOKING

PROJECT THESIS

SUBMITTED

TO

AWH ENGINEERING COLLEGE

KUTTIKKATTOOR, KOZHIKODE

IN PARTIAL FULFILMENT

OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE

OF

Master Of Computer Applications

BY

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KOZHIKODE

CERTIFICATE

*This is to certify that this thesis entitled **"TURF BOOKING"** submitted herewith is an authentic record of the thesis work done by **SANIGA MK (AWH22MCA-2034)** under our guidance in partial fulfillment of the requirements for the award of **Master of ComputerApplications** from APJ Abdul Kalam Technological University during the academic year 2023.*

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Head of the department	Project guide

External Examiner	**Internal Examiner**

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SANIGA M K

ABSTRACT

Turf playgrounds offers a vibrant and secure environment for football. Recognizing the widespread popularity of their turf facilities for practice and training, this project address a common challenge difficulty in the process of booking slots due to timing conflicts and prior reservations. It is centered on the creation of comprehensive system for the effective management and booking of turf playground. The main aim of the project is to enhance the accessibility and ease of booking turf playgrounds, serving the needs of football teams by providing a convenient and efficient platform, the turf booking website seeks to promote the use of turf facilities ensuring that people can enjoy their favorite sports activities hassle-free.

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INTRODUCTION

1.INTRODUCTION

Turf playground are used to play football. People enjoy playing on the turf, it has vibrant environment and very safe to play. Many school teams and clubs prefer turf playground for practice and training purpose. Sometime it becomes difficult to book turf playground because of timing issue or the slot getting booked previously. This sports ground booking website is proposed for booking the turf in an easy and efficient way. It has three modules namely, Admin, Manager and User. Admin can login and can add category, view the turf details and feedback, payment. The managers are different Turf playground locations. Managers will get register, they can login, they can add the turf details about turf and add payment regarding turf slot booking, view the request for turf booking for the respectivelocation, can accept booking, generate bill and view the feedback. Users can check the availability of the turf, select slots and book the turf, fill personal details, can pay by providing bank details or card details and they can add the feedback.

SYSTEM ANALYSIS

2.SYSTEM ANALYSIS

2.1 Existing system

The current system for booking turf playgrounds relies on manual processes, such as phone calls or in-person visits, which often lead to timing conflicts and difficulties in securing desired slots. The absence of a centralized platform makes it challenging for football teams to efficiently manage their practice and training schedules. Additionally, the lack of real-time availability information can result in missed opportunities for booking.

The existing system has several disadvantages:

- The manual system increases the likelihood of timing conflicts, making it difficult for football teams to secure desired slots for practice and training.
- Reliance on phone calls and in-person visits leads to inefficiencies and delays in the booking process.

2.2 Proposed system

The proposed system involves the creation of a comprehensive turf booking website. This platform aims to address the common challenge of difficulty in booking slots due to timing conflicts and prior reservations. It is designed to enhance accessibility and ease of booking for football teams, providing a convenient and efficient solution for managing turf playground reservations. The system seeks to promote the use of turf facilities, offering a hassle-free experience for individuals to enjoy their football activities.

The proposed system has several advantages:

- The online system eliminates the need for manual processes like phone calls or in-person visits, offering a convenient and efficient booking experience.
- The platform ensures secure access to vibrant turf facilities, contributing to a safe and controlled environment for football activities

2.3 Module Description

This project has 3 modules:

Admin:

- Login
- Add category
- View turf details
- View slots
- View feedback
- View payment

Manager:

- Register
- Login
- Update profile
- Add turf details
- Add slots
- Edit turf
- Manage booking
- Manage slots
- View payment
- Generate bill
- View feedback

User (football players):

- Register
- Login
- Profile edit
- View turf details
- View Slots
- Book Turf
- View approved booking & pay
- Add payments
- Add feedback

2.4 Sprint

Sprint 1

Module	Task	Hours for completion	Expected date of completion	Actual date of completion
Admin/Manager /User	Login	3 hours	26/09/2023	26/09/2023
Admin	Manage manager	5 hours	30/09/2023	30/09/2023
	View turf details and slots	5 hours	03/10/2023	03/10/2023
	View payments and feedback	2 hours	07/10/2023	07/10/2023
	Validation	2 hours	07/10/2023	07/10/2023
	Template	3 hours	10/10/2023	10/10/2023
Manager	Registration	4 hours	10/10/2023	10/10/2023
	Add turfs and slots	3 hours	15/10/2023	15/10/2023
	View payment and feedback	3 hours	15/10/2023	15/10/2023

Sprint 2

Module	Task	Hours for completion	Expected date of completion	Actual date of completion
Manager	Manage booking	4 hours	17/10/2023	17/10/2023
	Validation	2 hours	31/10/2023	31/10/2023
	Template	3 hours	07/11/2023	07/11/2023
User	Registration	3 hours	14/11/2023	14/11/2023
	View turf and slots	2 hours	21/11/2023	21/11/2023
	Book turf	4 hours	21/11/2023	21/11/2023
	Payment and bill	4 hours	27/11/2023	27/11/2023
	Post feedback	4 hours	27/11/2023	27/11/2023
	Validation and Template	4 hours	28/11/2023	28/11/2023

2.5 User Stories

Turf booking is a web application which consist of 3 modules as Admin, Manager and User. Admin should be responsible for managing the Manager. Admin should be able to add the category and view the turf details and slots . Admin is also able to view payment and feedback given by the users.

Manager should be able to register for the turf booking platform, in-order to use its services and features. Manager is responsible to manage the turf and slot, that is to add and update turf and slots. Manager should be able to view and handle booking, view the payments done by the users and also the feedback. Manager should also able to view the profile and update it.

User should be able to register for the platform by providing personal information and then log in to account using email and password and can change password for security purposes. User should be able to search and view turf on the platform, convenient turf, view bookings and their details. They should be able to send payments securely and view the bills, should be able to post feedback related to the turf and view them. They should also be able to view and update their profile.

FEASIBILITY STUDY

3.FEASIBILITY STUDY

System study is the best of system proposed according to work ability, impact on the organization ability to meet user needs, and effective use of resources. The prime focus of the feasibility study is evaluating the practicability of the proposed system keeping in mind a number of factors.

3.1 Economical Feasibility

The system being developed is economic with respect to user’s point of view. The cost of development is very less, all the requirements such as hardware and software requirements etc, are easily accessible. So, it is economically feasible.

3.2 Technical Feasibility

The technical requirements for the system is economic and there is no need for additional hardware. The system utilizes modern technology within its requirements, making it technically feasible.

3.3 Operational Feasibility

Operational feasibility is determined by how well the system meets requirements. Since the system is user-friendly and minimizes manual work, it is considered operationally feasible. The user-friendly nature of the system reduces the workload for all entities involved.

3.4 Software Feasibility

The application is developed high software environment, this also supported by many other environments with minimum changes.. The system is fully feasible to be executed on different operating systems and browsers.

SOFTWARE ENGINEERING PARADIGM

4.SOFTWARE ENGINEERING PARADIGM

The software engineering paradigm which is also referred to as a software process model or Software Development Life Cycle (SDLC) model is the development strategy that encompasses the process, methods and tools.

4.1 Agile model

Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product. Agile Methods break the product into small incremental builds. These builds are provided in iterations. Each iteration typically lasts from about one to three weeks. At the end of the iteration, a working product is displayed to the customer and important stakeholders. Agile Methods break the product into small incremental builds. These builds are provided in iterations. Each iteration typically lasts from about one to three weeks.

At the end of the iteration, a working product is displayed to the customer and important stakeholders. Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements.

4.2 Scrum

Scrum is an agile framework for managing knowledge work, with an emphasis on software development. It is designed for teams of three to nine members, who break their work into actions that can be completed within time boxed iterations, called "sprints", no longer than one month and most commonly two weeks, then track progress and re-plan in 15-minute stand-up meetings, called daily scrums.

Scrum is an iterative and incremental framework for managing product development. It defines "a flexible, holistic product development strategy where a development team works as a unit to reach a common goal", challenges assumptions of the "traditional, sequential approach to product development, and enables teams to self organize by encouraging physical co-location or close online collaboration of all team members, as well as daily face-to-face communication among all team members and disciplines involved.

SYSTEM REQUIREMENT SPECIFICATION

5.SYSTEM REQUIREMENTS SPECIFICATION

5.1 Software Requirements

- Operating system : Windows 8 or above
- Frontend : HTML,CSS
- Backend : Python
- Language used : Python
- IDE : PyCharm
- Framework : Django
- Database : MySQL Server

5.2 Hardware Requirements

- A device with an internet connection
- Processor : i3 or above
- RAM : 4GB or Above
- HDD : 500GB or Above

SYSTEM DESIGN

6.SYSTEM DESIGN

System design is the first in the development phase for many engineered product or system. It may define the process of applying various techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

6.1. Database Design

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database.

Normalization

It is a process of converting a relation to a standard form. The processis used to handle the problems that can arise due to data redundancy .

Normal Forms: These are the rules for structuring relations that eliminate anomalies.

1. First Normal Form (1NF)

A relation is said to be in first normal form if the values in the relation are atomic for every attribute in the relation.

2. Second Normal Form (2NF)

A relation is said to be in second Normal form is it is in first normal form and itshould satisfy any one of the following rules.

- Primary key is a not a composite primary key
- No non key attributes are present
- Every non key attribute is fully functionally dependent on full set of primary keys.

3.Third normal Form(3NF)

A relation is said to be in third normal form if there exist no transitive dependencies.

6.2 Tables

login

Field	**Datatype**	**Description**
login_id	int(11)	Primary Key
email	varchar(45)	Not Null
password	varchar(45)	Not Null
type	varchar(45)	Not Null
U_id	int(11)	Not Null

Manager

Field	**Data type**	**Description**
Manager_id	int(11)	Primary Key
Name	varchar(45)	Not null
email	varchar(45)	Not null
contact	varchar(45)	Not null
location	varchar(45)	Not null
Company_name	varchar(45)	Not null
Liscence_no	varchar(45)	Not null
proof	varchar(45)	Not null
Password	varchar(45)	Not null
status	varchar(45)	Not null

Feedback

Feedback_id	Int(11)	Primarykey
Turf_id	Int(11)	Foreign key
User_id	Int(11)	Foreign key
feedback	Varchar(45)	Not null

User

Field	Datatype	Description
User_id	int(11)	Primary Key
Name	varchar(45)	Not Null
age	varchar(45)	Not Null
House_name	varchar(45)	Not Null
Post	varchar(45)	Not Null
Pin	varchar(45)	Not Null
District	varchar(45)	Not Null
Phn_no	varchar(45)	Not Null
Password	varchar(45)	Not Null
email	Varchar(45)	Not Null

Payment

Field	Datatype	Description
Pay_id	int(11)	Primary Key
User_id	Int(11)	Foreign key
Slot_id	int(11)	Foreign Key
Card_holder_Name	varchar(45)	Not Null
date	date(45)	Not Null
amount	varchar(45)	Not Null
cvv	varchar(45)	Not Null

Category

Field	Datatype	Description
Category_id	int(11)	Primary Key
Category	varchar(45)	Not null

Booking

Field	Datatype	Description
Booking_id	int(11)	Primary Key
User_id	int(11)	Foreign Key
Slot_is	int(11)	Foreign Key
date	date	Not null
status	varchar(45)	Not null

Turf

Field	Datatype	Description
Turf_id	int(11)	Primary Key
turfname	varchar(45)	Not null
location	varchar(45)	Not null
email	varchar(45)	Not null
image	Varchar(45)	Not null
Category_id	Int(11)	Foreign key
Manager_id	Int(11)	Foreign key

Slots

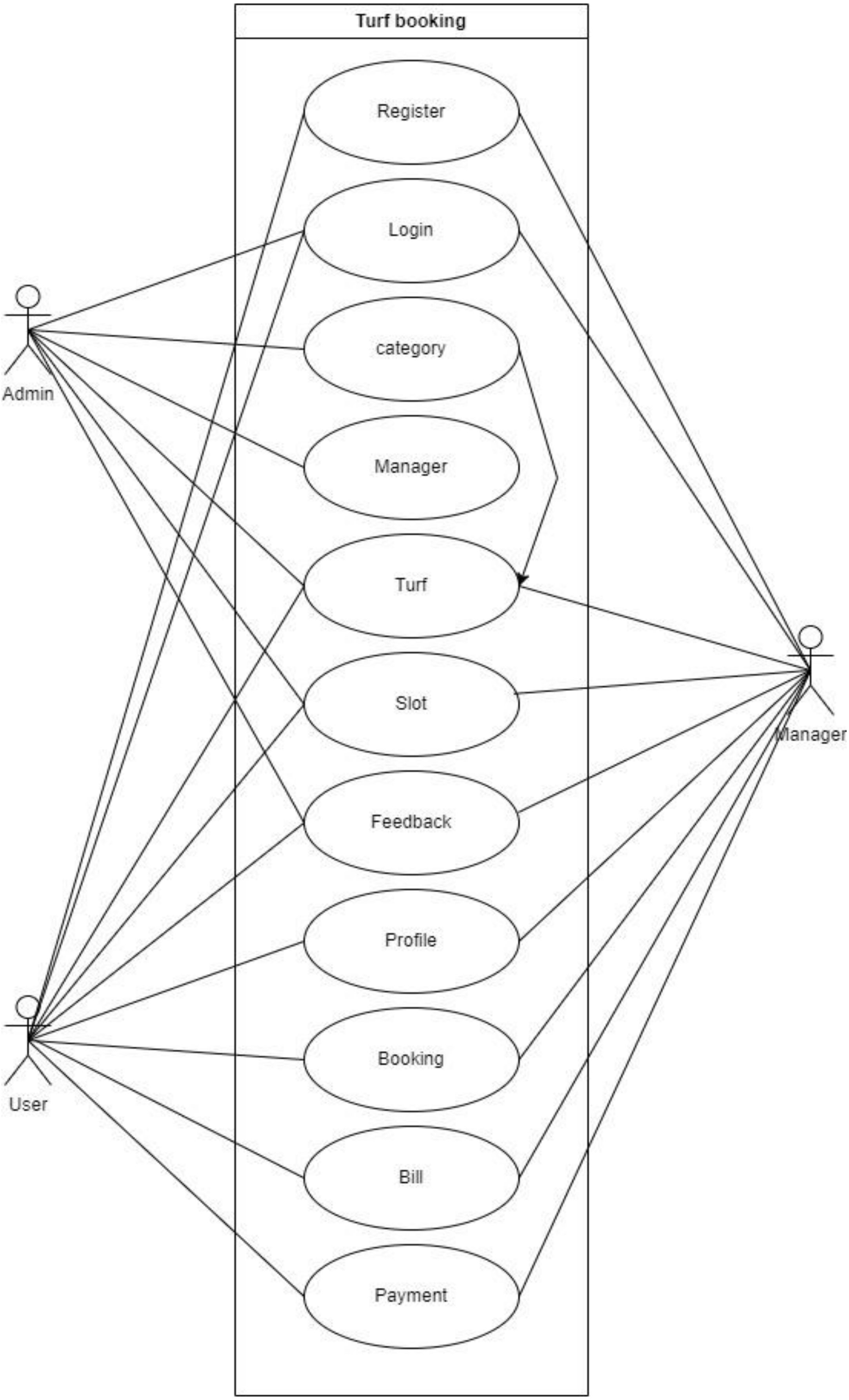
Field	Datatype	Description
slot_id	int(11)	Primary Key
turf_id	int(11)	Foreign Key
Start_time	varchar(45)	Not null
End_time	varchar(45)	Not null
Status	varchar(45)	Not null
price	Varchar(45)	Not null

6.3 UML Designs

The Unified Modelling Language (UML) is a standard language for specifying, visualising, constructing, and documenting the artefacts of the software systems, as well as for business modelling and other non-software systems. The UML represents a collection of best engineering practices that have proven successful in the modelling of large and complex systems. The UML is a very important part of developing object-oriented software and the software development process. The UML uses mostly graphical notations to express the design of software projects. Using the UML helps project teams communicate, explore potential designs, and validate the architectural design of the software.

A sequence diagram is a type of UML diagram that visualizes the interactions and message exchanges between different objects or components in a system over a specific period of time. It shows the flow of control and the order of message invocations, allowing you to understand the dynamic behavior of the system. Sequence diagrams are commonly used to model the behavior of a single use case or a specific scenario. A use case diagram is a type of UML diagram that represents the functionality of a system from the user's perspective.

6.4 Use case diagram



6.5 Scenario

Admin:

- Can Login
- Can add category
- Can view turf
- Can view slots
- Can View payment
- Can view feedback
- Can Manage manager

Manager:

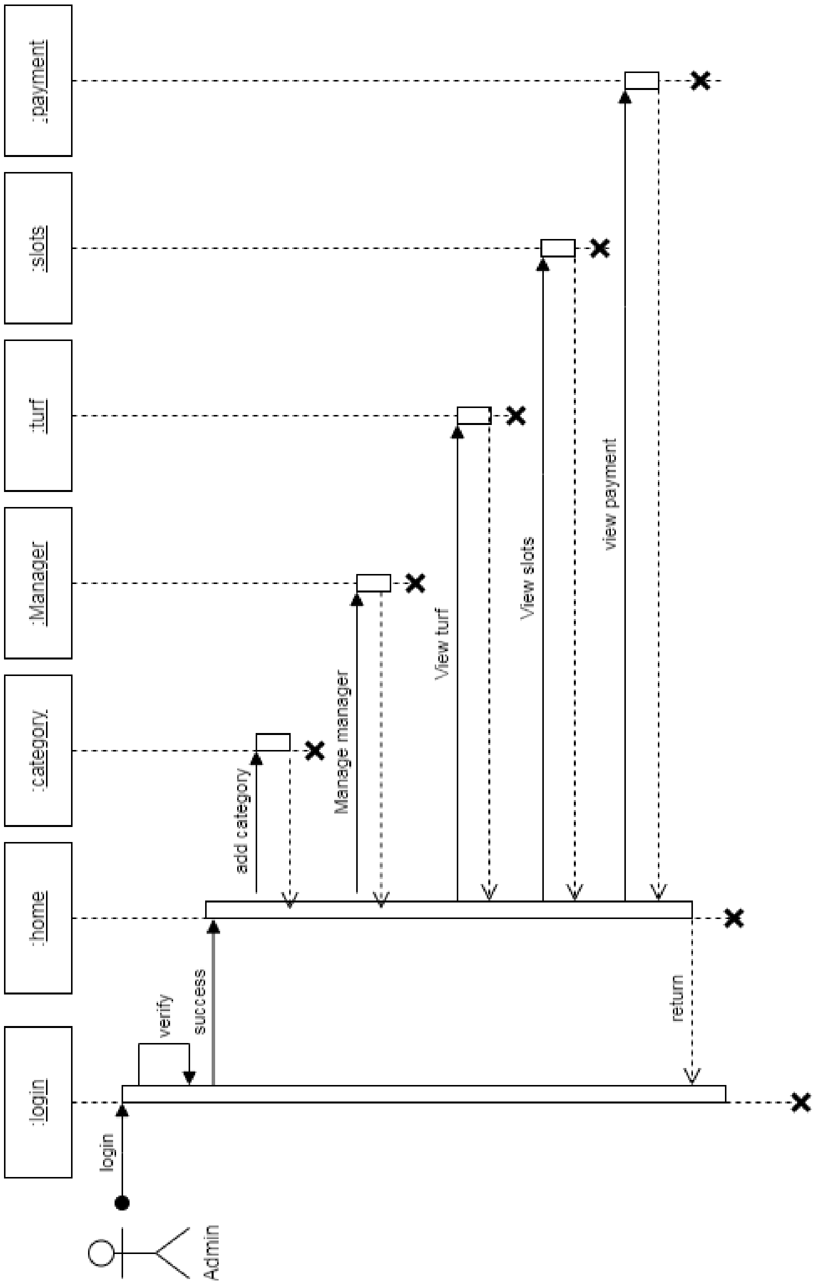
- Can register
- Can login
- Can add turf details
- Can add slots
- Can manage booking
- Can view payment
- Can update profit
- Can view feedback

User:

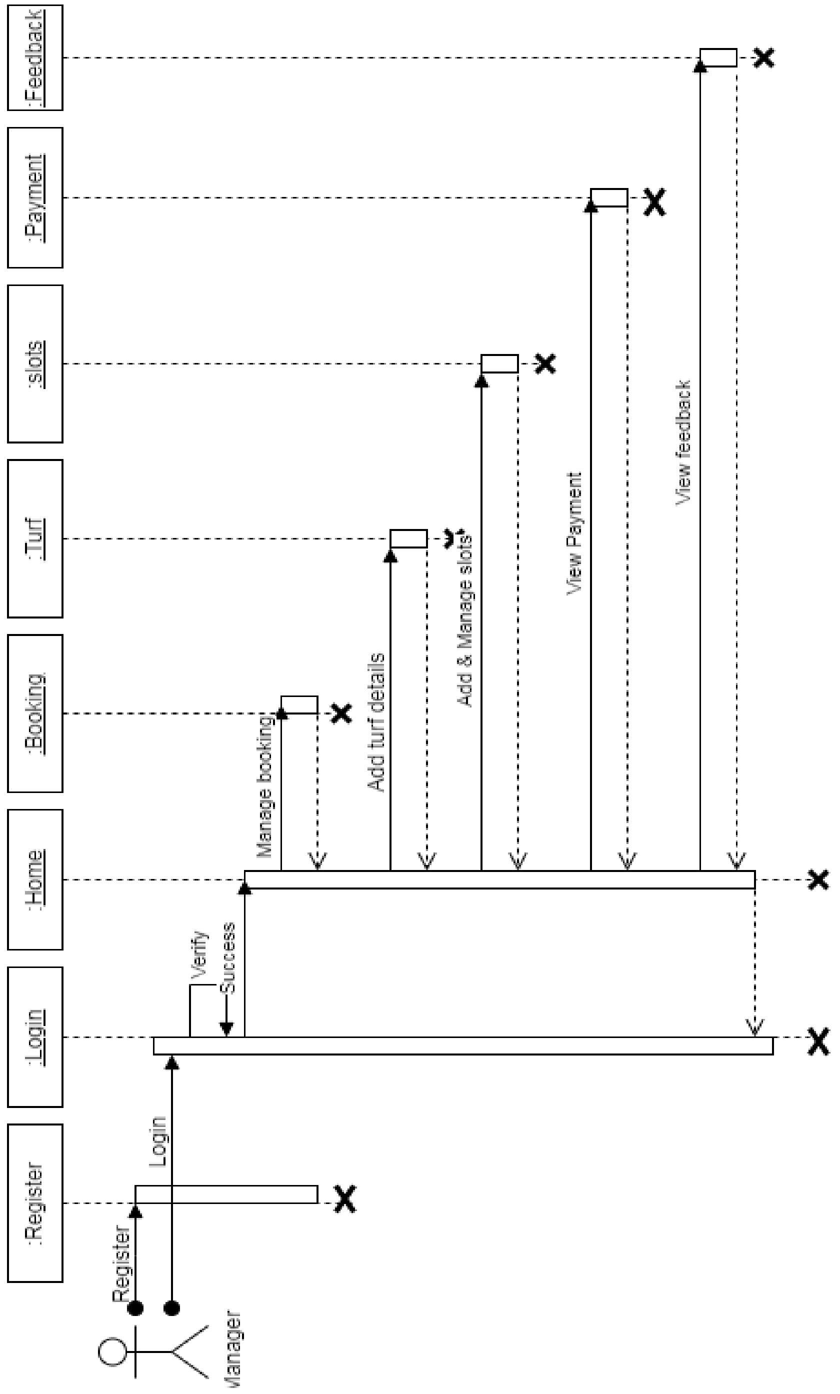
- Can register
- Can login
- Can update profile
- Can view turf details
- Can View slots
- Can booking
- Can add payment
- Can add feedback

6.6 Sequence Diagram

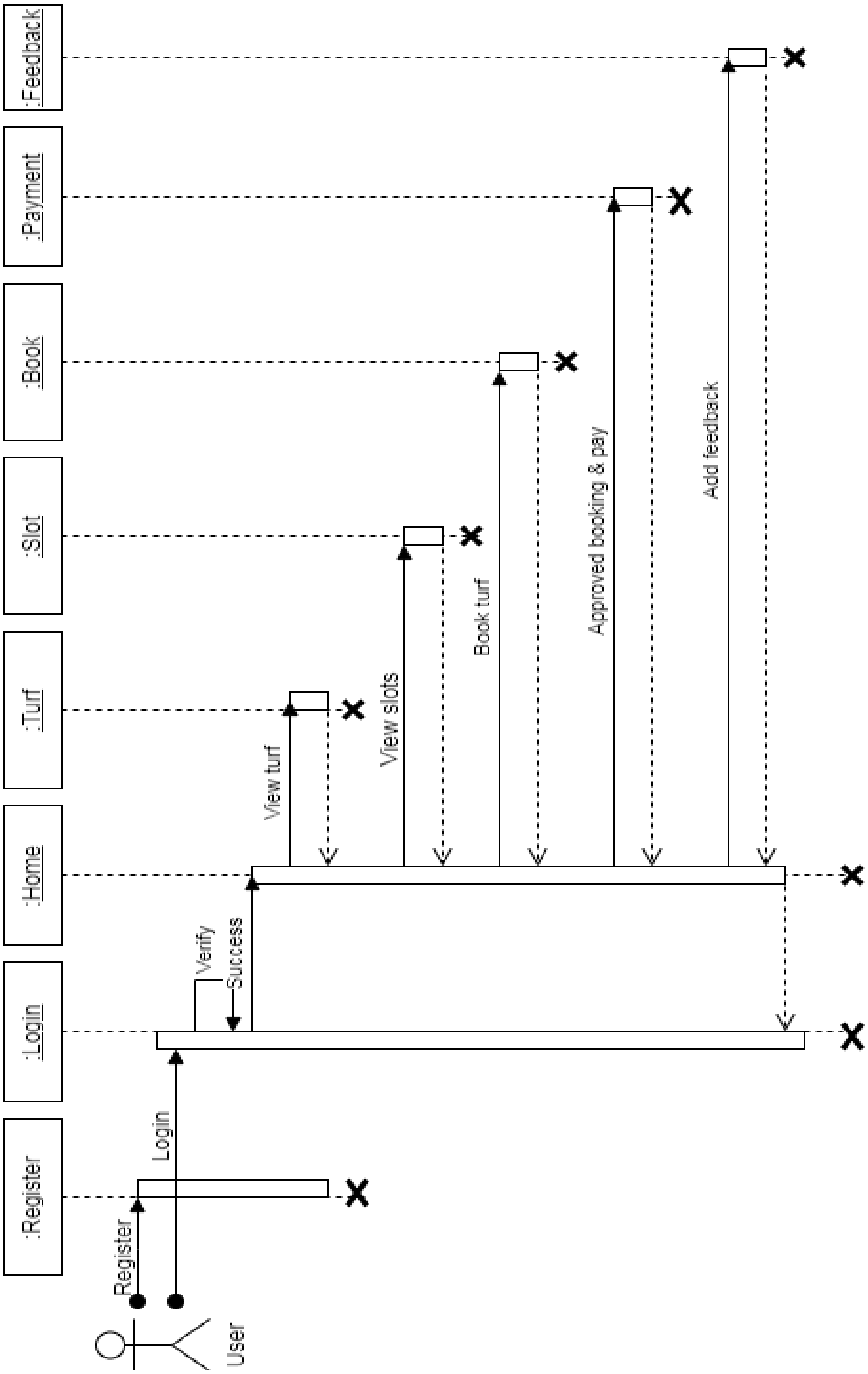
Admin



Manager


:Register
:Login
:Home
:Booking
:Turf
:slots
:Payment
:Feedback
Manager
Register
Login
Verify
Success
Manage booking
Add turf details
Add & Manage slots
View Payment
View feedback

User


:Register
:Login
:Home
:Turf
:Slot
:Book
:Payment
:Feedback
User
Register
Login
Verify
Success
View turf
View slots
Book turf
Approved booking & pay
Add feedback

SYSTEM DEVELOPMENT

7.SYSTEM DEVELOPMENT

System development is series of operations to manipulate data to produce output from computer system. The principle activities performed during the development phase can be divided into two major related sequences.

7.1 Coding

The purpose of code is to facilitate the identification and retrieval of items of information. A code is an ordered collection of symbols designed to provide unique identification of entity or an attribute.

PYTHON

Python is a multi-paradigm programming language. Object- oriented programming and structured programming are fully supported, and many of its features support functional programming and aspect-oriented. Python uses dynamic typing, and a combination of reference counting and a cycle detecting garbage collector for memory management. It also features dynamic name resolution (late binding), which binds method and variable names during program execution.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML.

HTML

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It is often assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Libraries

Python's large standard library, commonly cited as one of its greatest strengths, provides tools suited too many tasks.. It includes modules for connecting to relational databases, manipulating regular expressions, and unit testing.

Django

Django is a Python-based free and open-source web framework that follows the model template-view (MVT) architectural pattern. Django's primary goal is to ease the creation of complex, database-driven websites. The framework emphasizes reusability and "pluggability" of components, less code, low coupling, rapid development, and the principle of don't repeat yourself.

MYSQL

MySQL is an open-source relational database management system (RDBMS). MySQL is offered under two different editions: the open source MySQL Community Server and the proprietary Enterprise Server. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications-which may run either on the same computer or on another computer across a network (including the Internet).

SYSTEM TESTING AND IMPLEMENTATION

8.SYSTEM TESTING AND IMPLEMENTATION

Testing is the vital to the success of the system. It makes a logical assumption that if all the parts of the system are correct, the goal will be successfully achieved in this project. It is the stage of implementation, which ensures that system works accurately and effectively before the live operation commences..

8.1 Types of Testing

Unit testing

Unit testing is a software testing technique that focuses on testing individual units or components of a software system in isolation. The purpose of unit testing is to ensure that each unit functions correctly and produces the expected outputs when provided with specific inputs.

Black box testing

Black box testing is a software testing technique where the tester examines and tests the software without having knowledge of its internal structure, implementation details, or code.

White box testing

White box testing is a software testing technique that focuses on examining and validating the internal structure, design, and code of the software. Testers have access to the internal components, implementation details, and source code, allowing them to assess the internal logic and behavior of the software.

8.2 Implementation

Implementation is the stage of project, when theoretical design is turned in to a working system. The most crucial stage is achieving a successful system and confidence that the new system will be work effectively. It involves careful planning, investigation of the manual system and to new system. Implementation means converting a new or revised system design into an operational one. The implementation includes all those activities that take place to convert from the old system to the new one.

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SYSTEM MAINTENANCE

9.SYSTEM MAINTENANCE

Maintenance is making adaptation of the software for external changes (requirements changes or enhancements) and internal changes (fixing bugs). When changes are made during the maintenance phase all preceding steps of the model must be revisited.

There are 3 types of maintenance:

- Corrective (Fixing bugs/errors)
- Adaptive (Updates due to environment changes)
- Perfective (Enhancements, requirements changes)

Maintenance is enigma of the system development. The definition of the software maintenance can be given describing four activities that are undertaken after the program is released for use.The maintenance activity occurs since it is unreasonable to assume that software testing will uncover all in a large system. The second activity that contributes the definition of maintenance occurs since rapid changes are encountered in every aspects of computing. The third activity involves recommendation for new capabilities, modification to the existing functions and general enhancements when the software is used. The fourth maintenance activity occurs when software is changed to improve future maintainability or reliability.

FUTURE ENHANCEMENT

10.FUTURE ENHANCEMENT

In the future users might be able to book regularly, send messages, and also add more ways to pay easily, like using digital wallets. This web application can be converted into a mobile app for quick bookings and users can also make digital payments. Discount/offers can be given to regular users after understanding the booking patterns. Knowing the current weather could also help users plan better for their bookings.

CONCLUSION

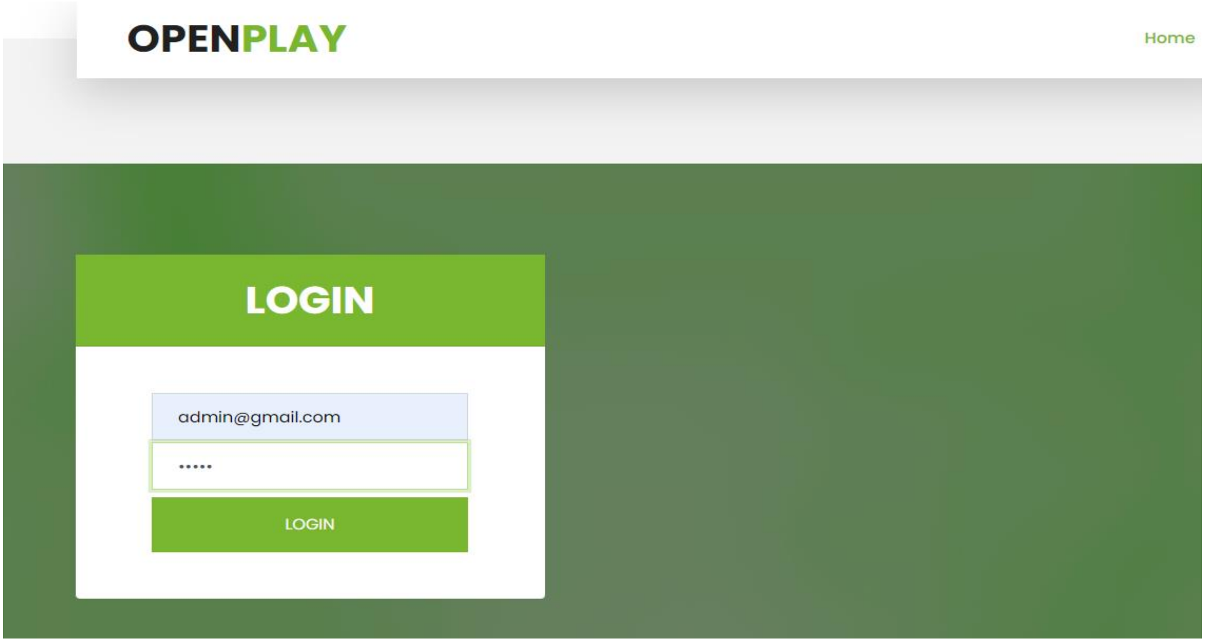
11.CONCLUSION

The project entitles “Turf Booking “web application provides users with a convenient platform to book turf slots, enabling efficient management by allowing managers to review and confirm bookings. With the added feature of online payments, the system enhances user experience and streamlines the booking process. Overall, the project aims to improve accessibility and convenience for both users and managers involved in turf bookings.

APPENDIX

12.APPENDIX

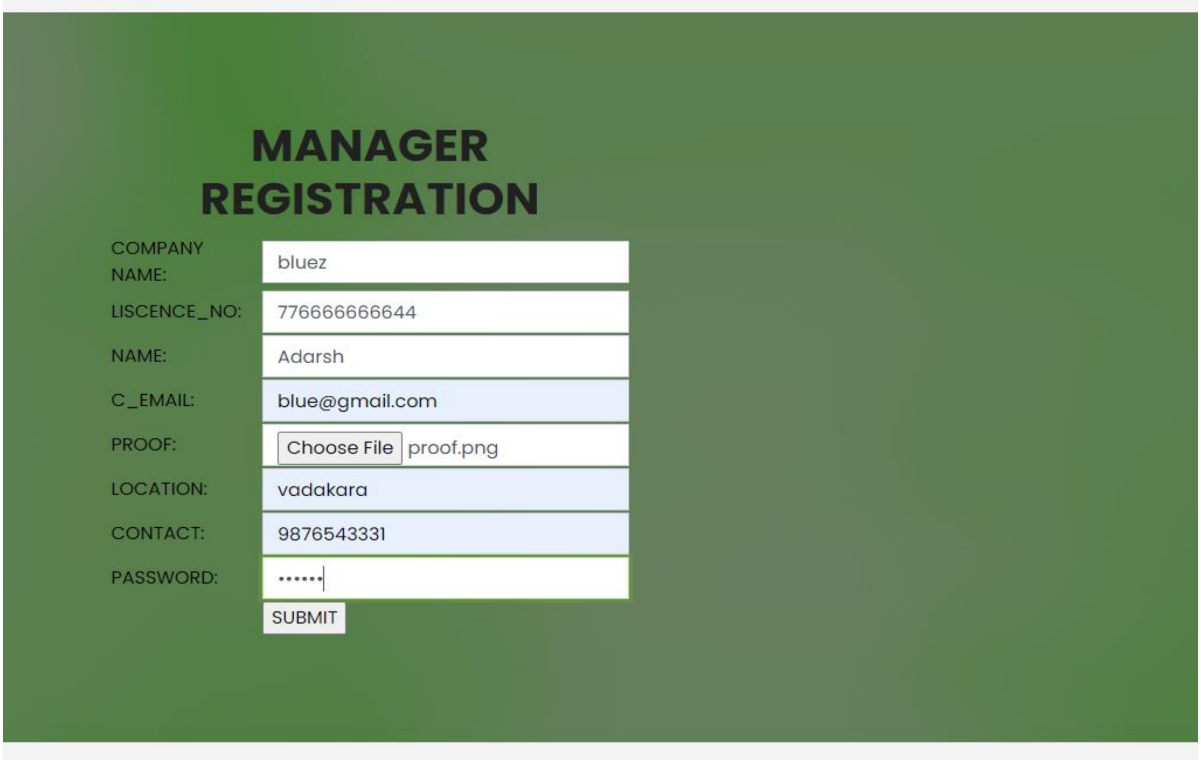
Login page



admin@gmail.com

•••••

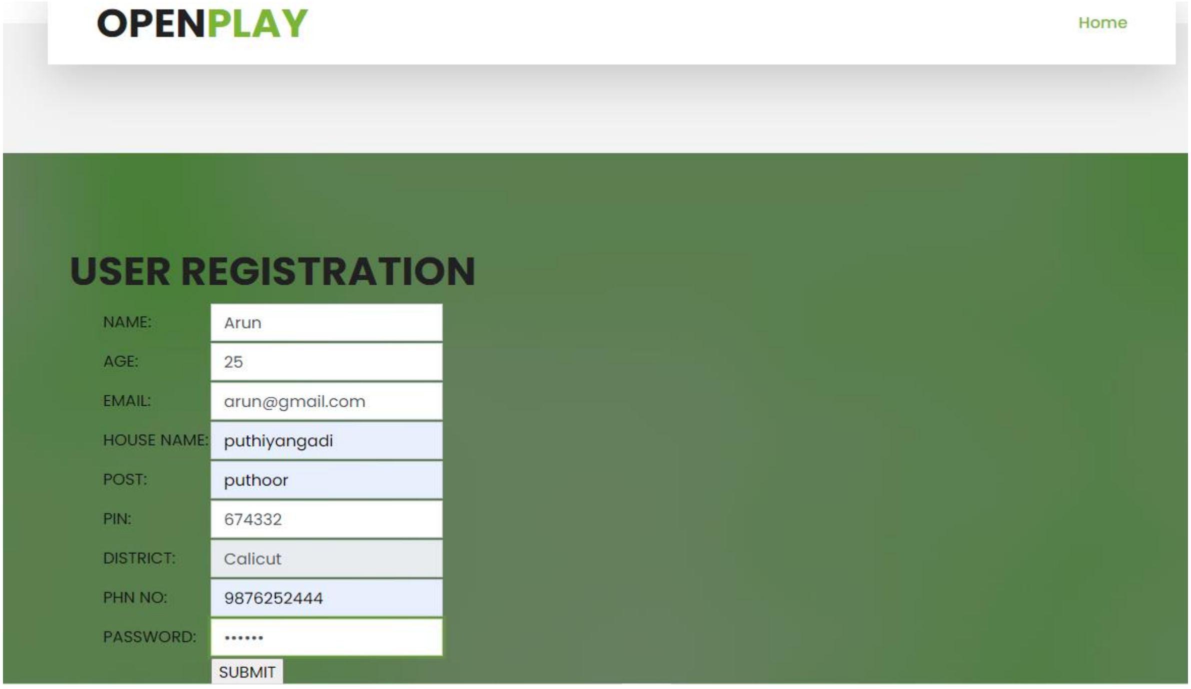
Manager registration



MANAGER REGISTRATION

COMPANY NAME:	bluez
LISCENCE_NO:	776666666644
NAME:	Adarsh
C_EMAIL:	blue@gmail.com
PROOF:	Choose File proof.png
LOCATION:	vadakara
CONTACT:	9876543331
PASSWORD:	••••••

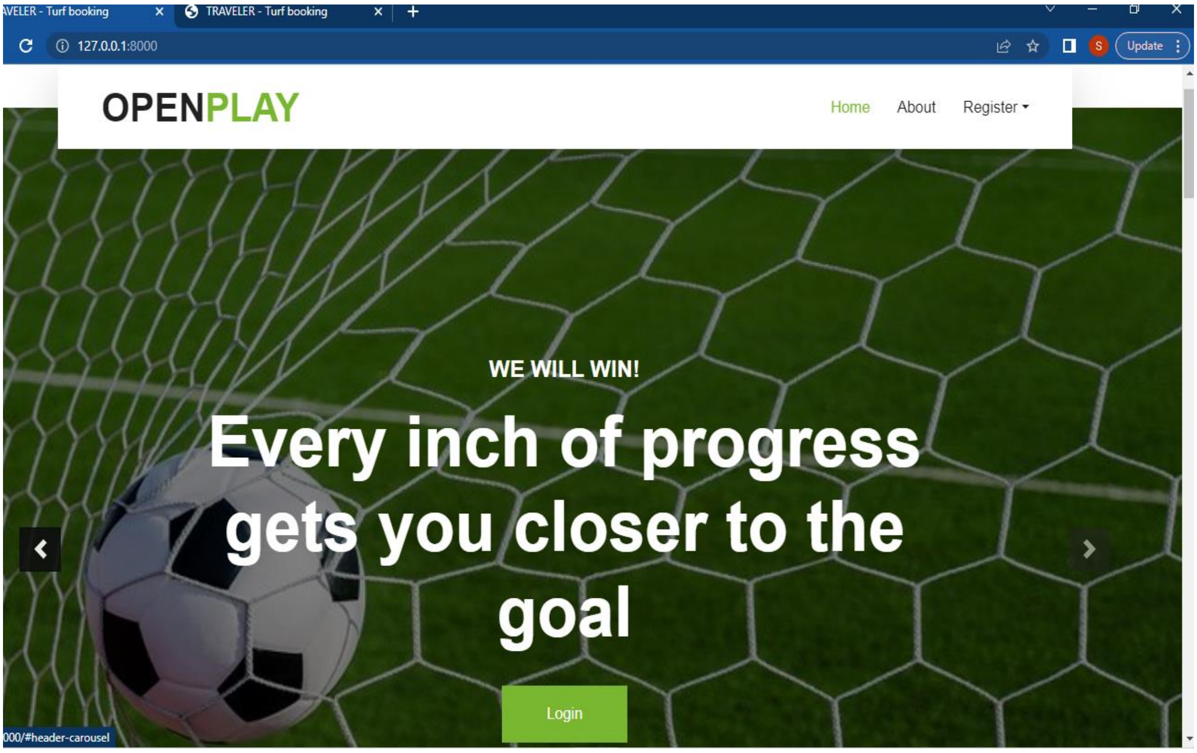
User registration



USER REGISTRATION

NAME: Arun
AGE: 25
EMAIL: arun@gmail.com
HOUSE NAME: puthiyangadi
POST: puthoor
PIN: 674332
DISTRICT: Calicut
PHN NO: 9876252444
PASSWORD: ••••••

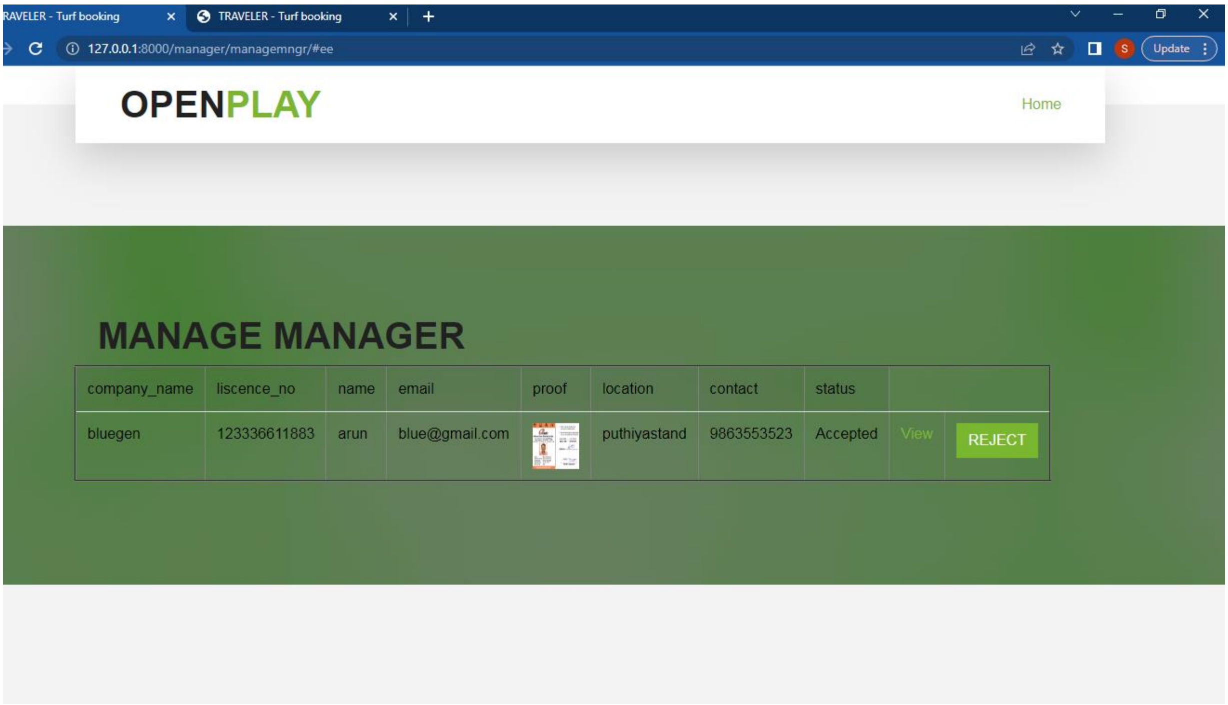
Home page



WE WILL WIN!

Every inch of progress gets you closer to the goal

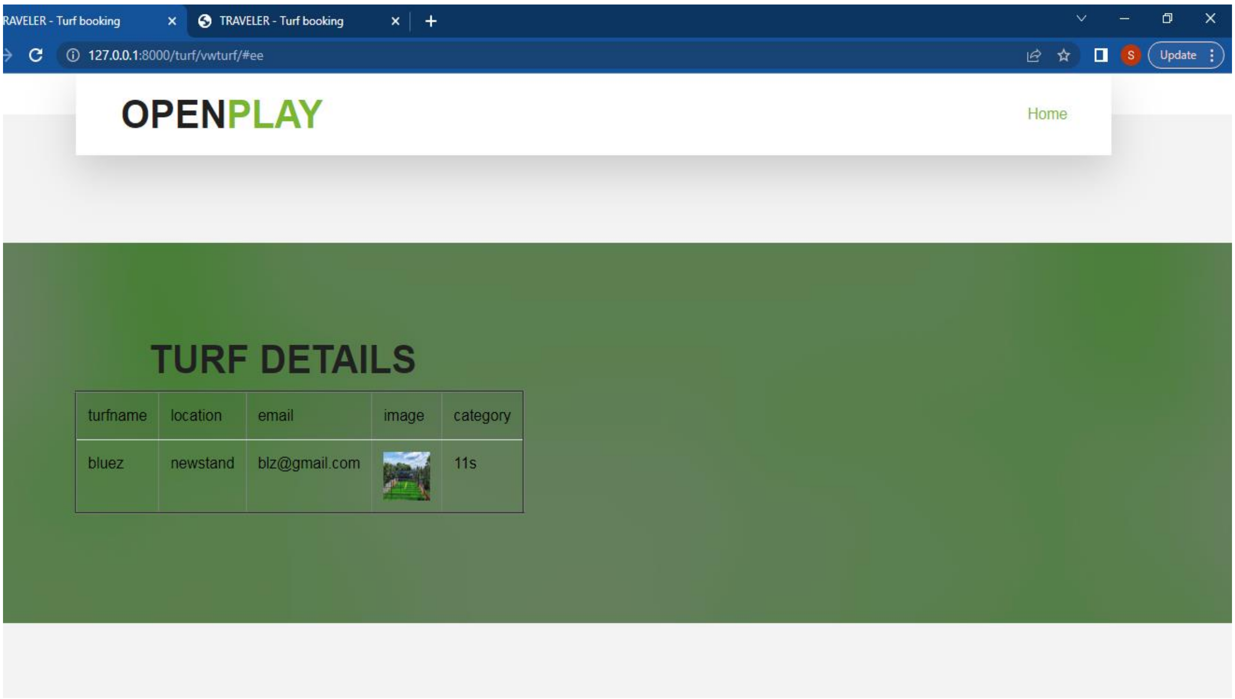
Admin manage manager



MANAGE MANAGER

company_name	liscence_no	name	email	proof	location	contact	status		
bluegen	123336611883	arun	blue@gmail.com		puthiyastand	9863553523	Accepted	View	REJECT

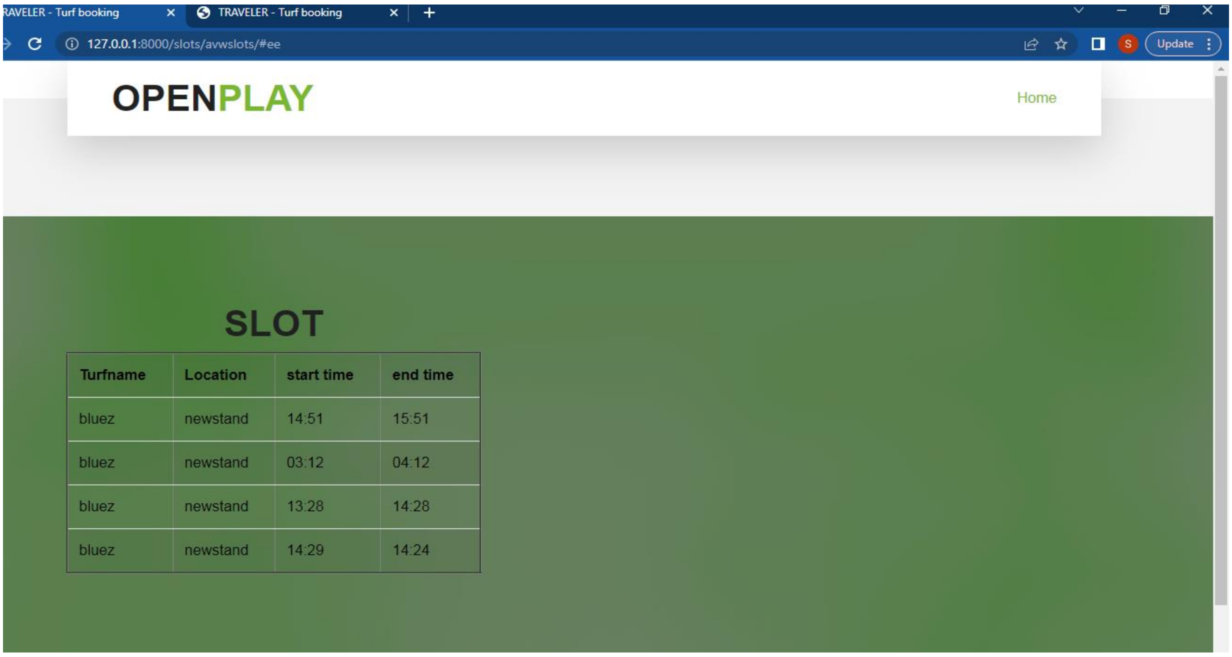
Admin view turf



TURF DETAILS

turfname	location	email	image	category
bluez	newstand	blz@gmail.com		11s

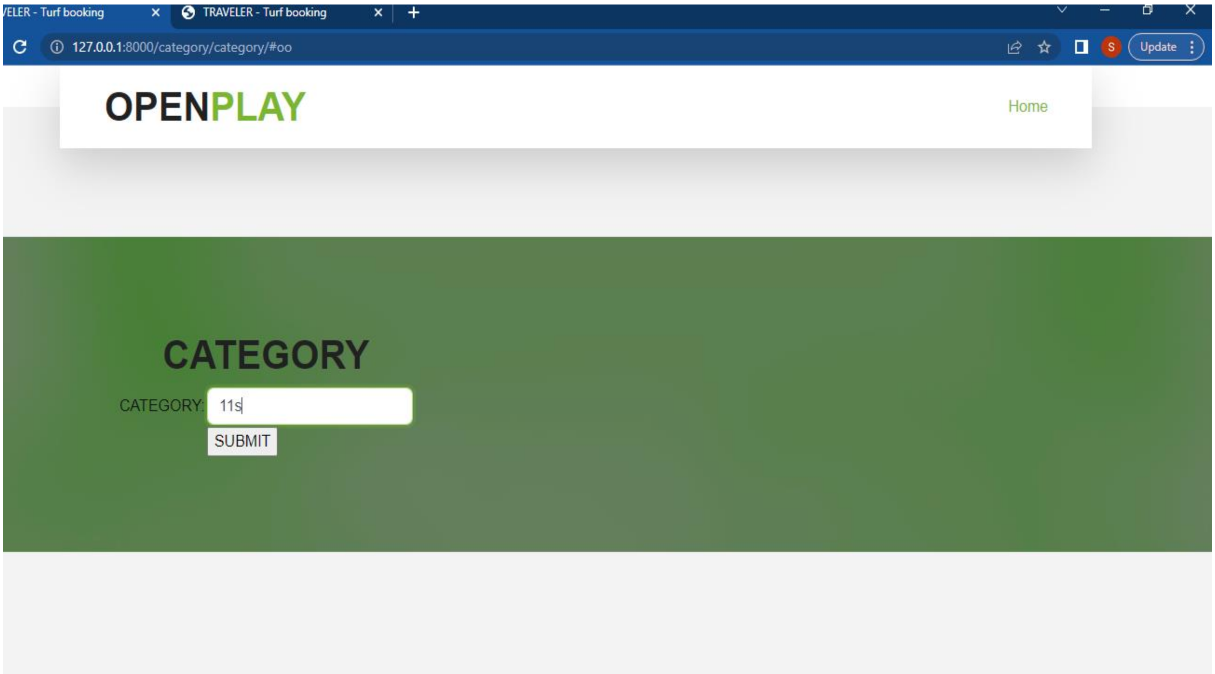
Admin view slots



SLOT

Turfname	Location	start time	end time
bluez	newstand	14:51	15:51
bluez	newstand	03:12	04:12
bluez	newstand	13:28	14:28
bluez	newstand	14:29	14:24

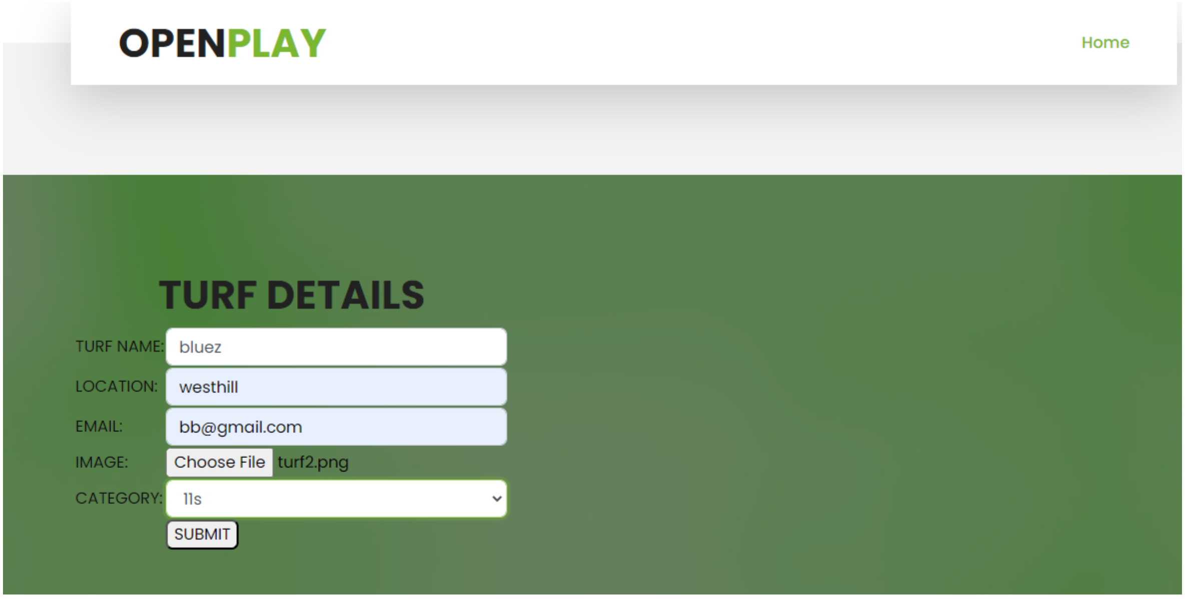
Admin add categories



CATEGORY

CATEGORY: 11s

Manager add turf



TURF DETAILS

TURF NAME: bluez

LOCATION: westhill

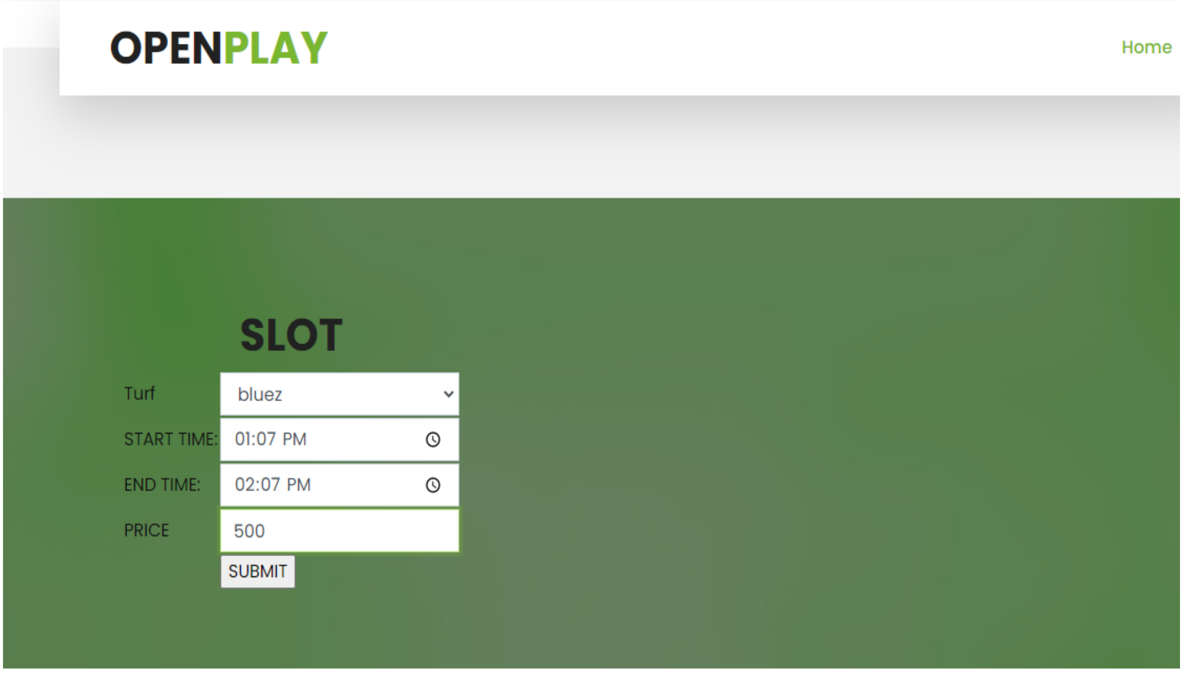
EMAIL: bb@gmail.com

IMAGE: Choose File turf2.png

CATEGORY: 11s

SUBMIT

Manager add slots



SLOT

Turf bluez

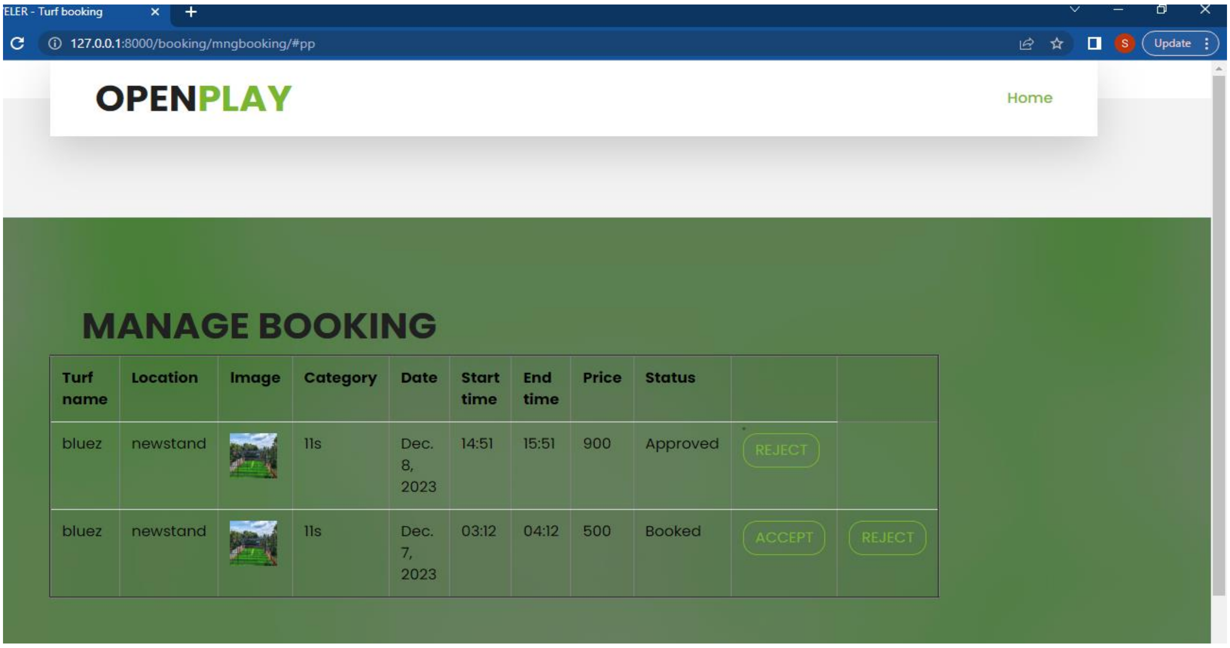
START TIME: 01:07 PM

END TIME: 02:07 PM

PRICE 500

SUBMIT

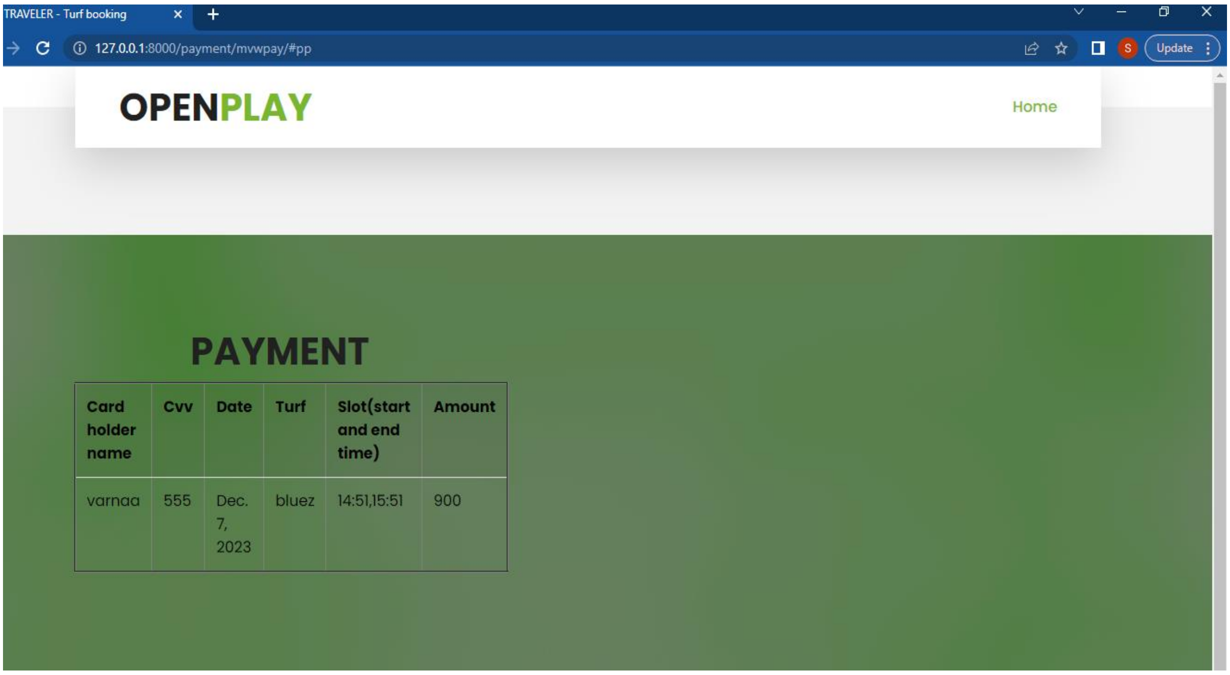
Manager view booking



MANAGE BOOKING

Turf name	Location	Image	Category	Date	Start time	End time	Price	Status		
bluez	newstand		11s	Dec. 8, 2023	14:51	15:51	900	Approved	REJECT	
bluez	newstand		11s	Dec. 7, 2023	03:12	04:12	500	Booked	ACCEPT	REJECT

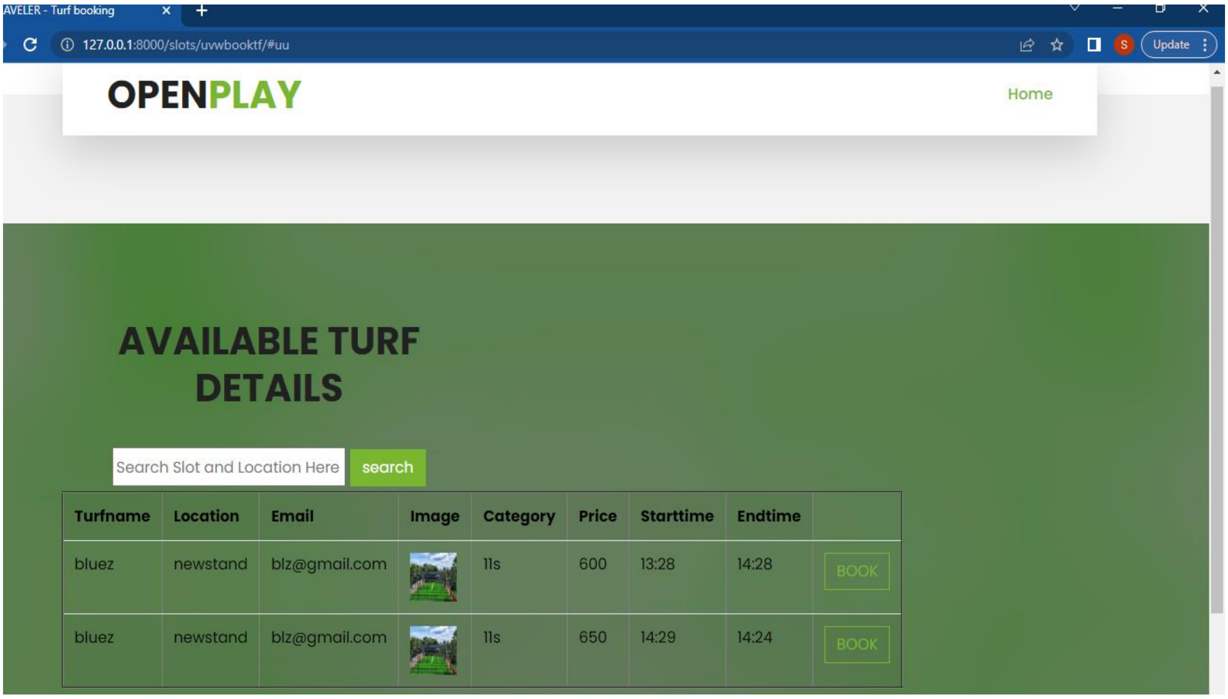
Manager view payments



PAYMENT

Card holder name	Cvv	Date	Turf	Slot(start and end time)	Amount
varnaa	555	Dec. 7, 2023	bluez	14:51,15:51	900

User view turfs and slots



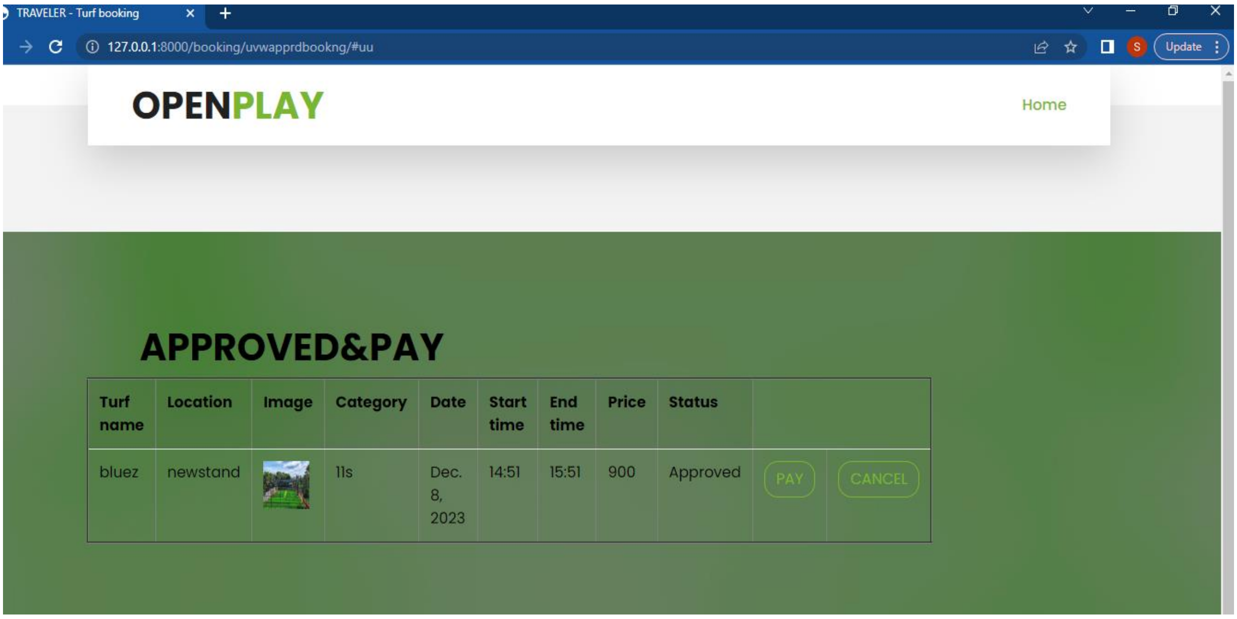
AVELER - Turf booking
127.0.0.1:8000/slots/uvwbooktf/#uu
Update
OPENPLAY
Home

AVAILABLE TURF DETAILS

Search Slot and Location Here
search

Turfname	Location	Email	Image	Category	Price	Starttime	Endtime	
bluez	newstand	blz@gmail.com		11s	600	13:28	14:28	BOOK
bluez	newstand	blz@gmail.com		11s	650	14:29	14:24	BOOK

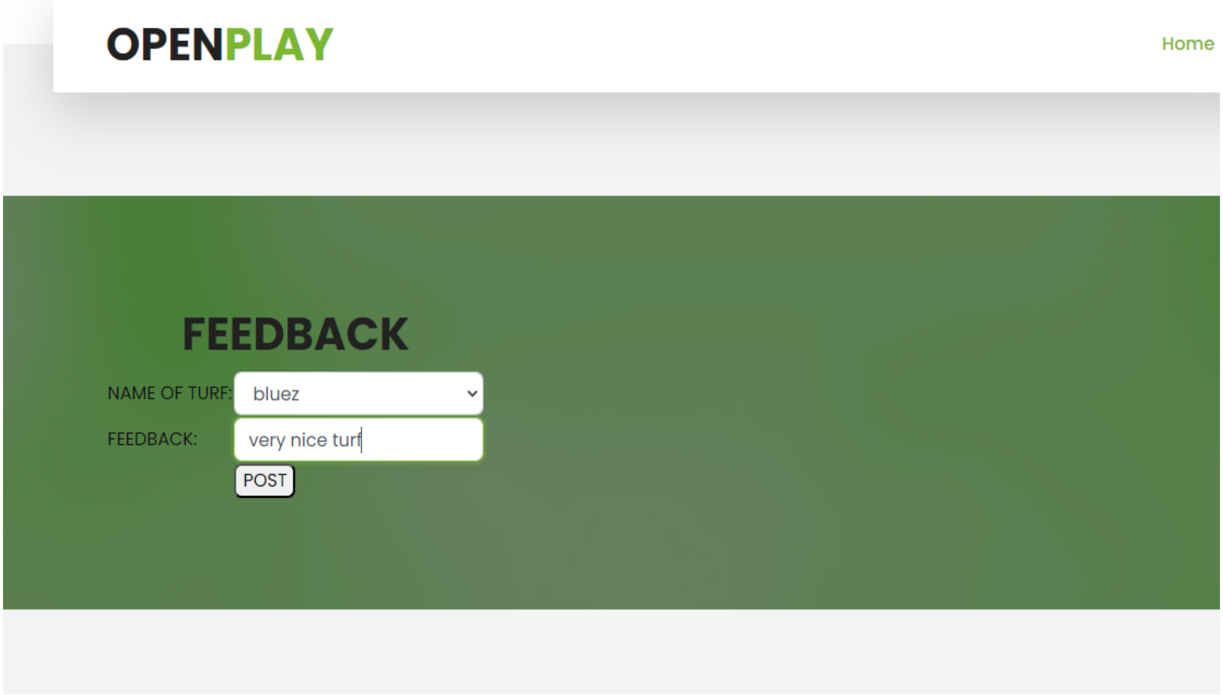
User view approved booking



APPROVED&PAY

Turf name	Location	Image	Category	Date	Start time	End time	Price	Status		
bluez	newstand		11s	Dec. 8, 2023	14:51	15:51	900	Approved	PAY	CANCEL

User post feedback



FEEDBACK

NAME OF TURF: bluez

FEEDBACK: very nice turf

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13.BIBLIOGRAPHY

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[3] Mastering Django, Gnw Independent Publishing, 1st edition, Nigel George, 2020

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