TURF BOOKING

PROJECT THESIS

SUBMITTED

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AWH ENGINEERING COLLEGE

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OF

Master Of Computer Applications

BY

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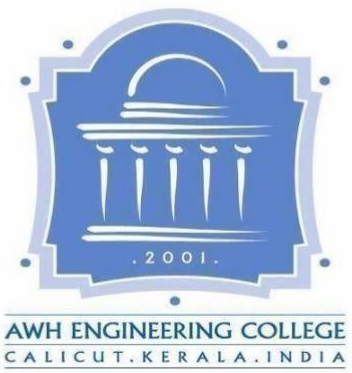
DEPARTMENT OF COMPUTER APPLICATIONS



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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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SANIGA M K

ABSTRACT

Turf playgrounds offers a vibrant and secure environment for football. Recognizing thewidespread 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.

CONTENTS

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. Managers are different for 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 respective location, 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

Module	Task	Hours for completion	Expected date of completion	Actual date of completion
Admin	Login	3 hours	26/09/2023	26/09/2023
	Manage manager	5 hours	30/09/2023	30/09/2023
	View turf details and slots	5 hours	03/09/2023	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	2 hours	10/10/2023	10/10/2023
Manager	Registration	4 hours	10/10/2023	10/10/2023
	Login	3 hours	14/10/2023	14/10/2023
	Add turfs and slots	3 hours	15/10/2023	15/10/2023
	View payment and feedback	2 hours	15/10/2023	15/10/2023

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	2 hours	07/11/2023	07/11/2023
	Design	2 hours	07/11/2023	07/11/2023
User	Registration	3 hours	14/11/2023	14/11/2023
	Login	3 hours	14/11/2023	14/11/2023
	View turf and slots	2 hours	21/11/2023	21/11/2023
	Book turf	3 hours	21/11/2023	21/11/2023
	Payment and bill	3 hours	27/11/2023	27/11/2023
	Post feedback	2 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 will be responsible for managing the Manager. Admin will 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 will 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 will be able to view and handle booking, view the payments done by the users and also the feedback. Manager will also able to view the profile and update it.

User will 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 will be able to search and view turf on the platform, convenient turf, view bookings and their details. They will be able to send payments securely and view the bills, will be able to post feedback related to the turf and view them. They will 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 users 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 it does not use any other 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 :MySOL

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:

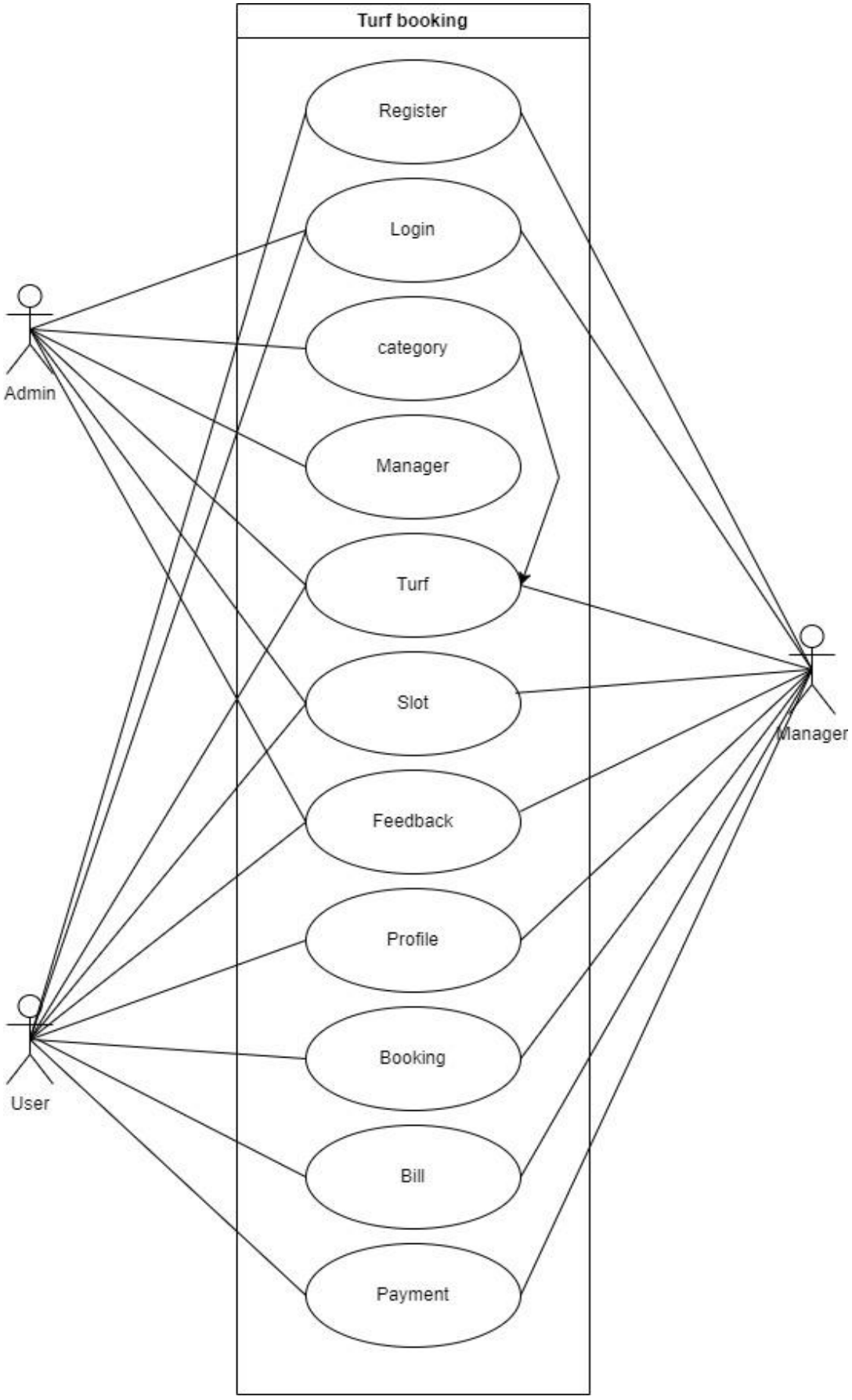
Field	**Datatype**	**Description**
slot_id	int(11)	Primary Key
turf_id	int(11)	Foreign Key
Start_time	varchar(45)	Not null
End_time	varchar(45)	Not null
Status	varchar(45)	Not null
price	Varchar(45)	Not null

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:

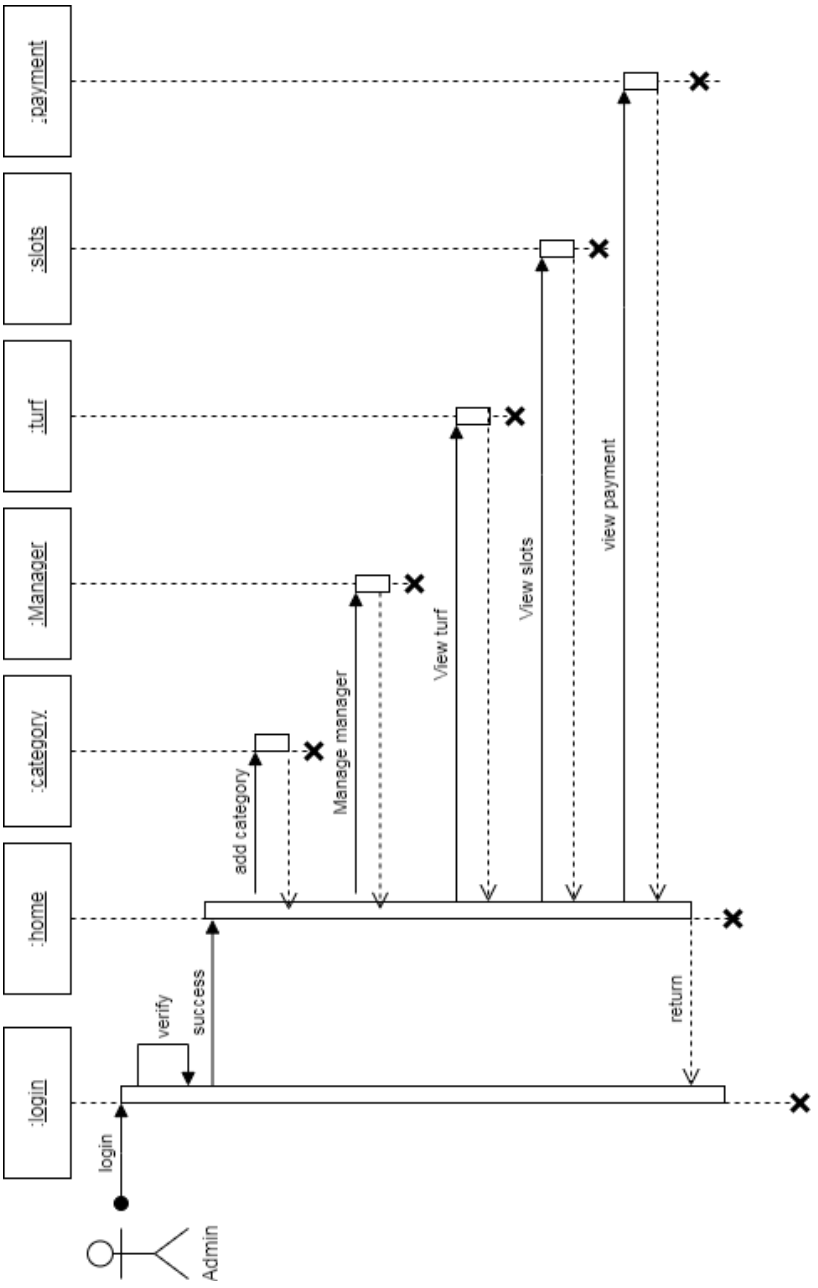
- Can register
- Can login
- Can add turf details
- Can add slots
- Can manage booking
- Can view payment
- Can update profit
- Can view feedback

User:

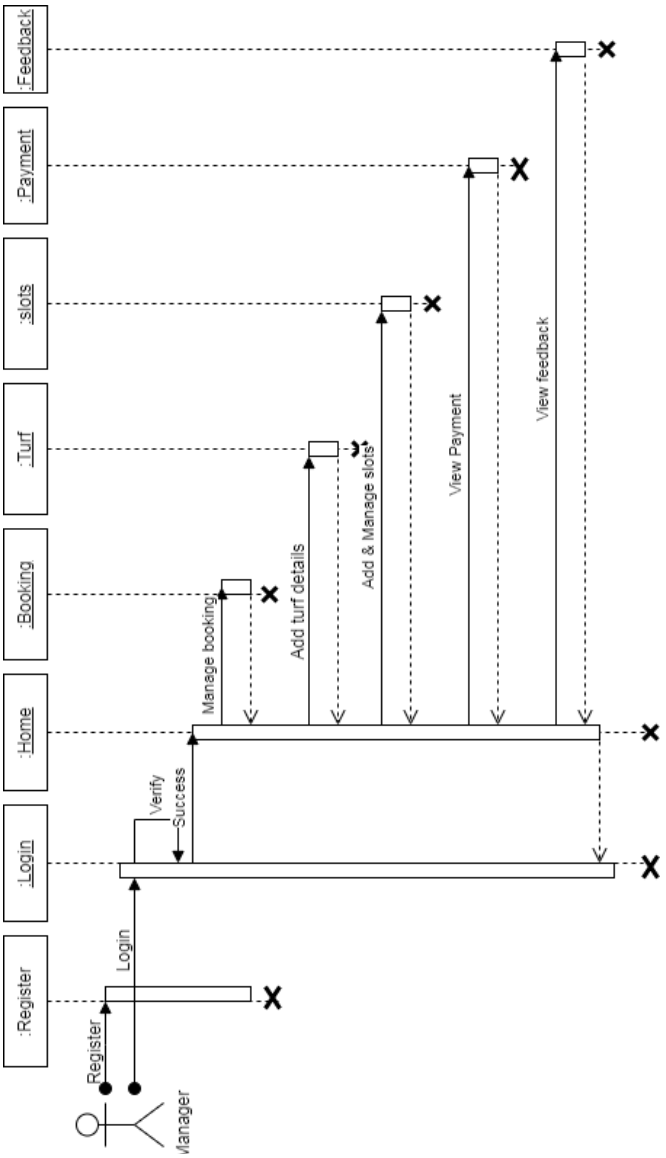
- Can register
- Can login
- Can update profile
- Can view turf details
- Can View slots
- Can booking
- Can add payment
- Can add feedback

6.6 Sequence Diagram

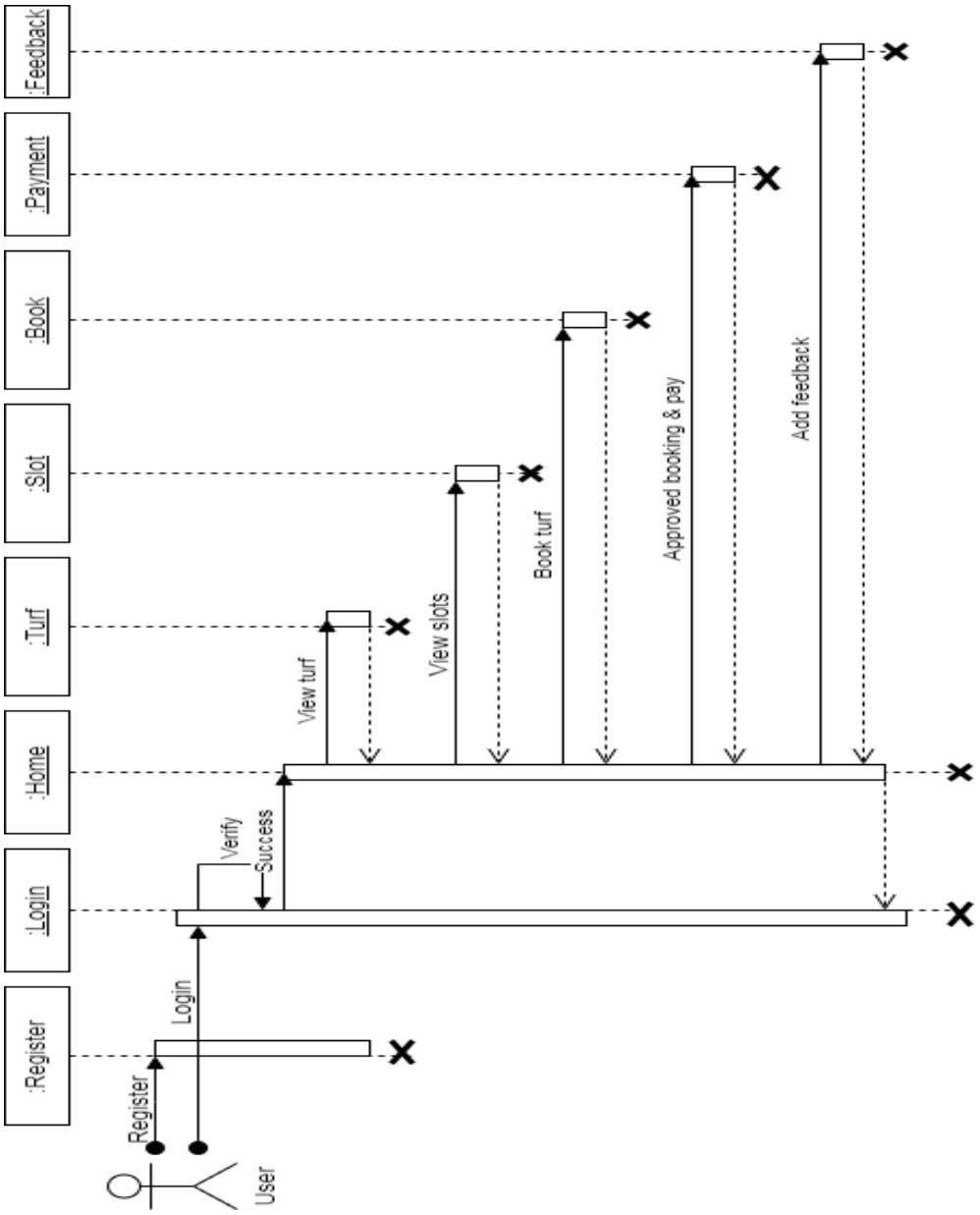
Admin



Manager


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

User


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

SYSTEM DEVELOPMENT

7.SYSTEM DEVELOPMENT

System development is series of operations to manipulate data to produce output from computer system. The principal 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..

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.

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.

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 we can make the turf booking website even better. Users might be able to book regularly, send messages, and give feedback easily and also add more ways to pay, like using digital wallets. Managers could get tools to see booking patterns, and maybe there could be a handy mobile app for quick bookings. Knowing the current wheather could also help users plan better for their bookings. These changes would make the website more useful and enjoyable for everyone.

CONCLUSION

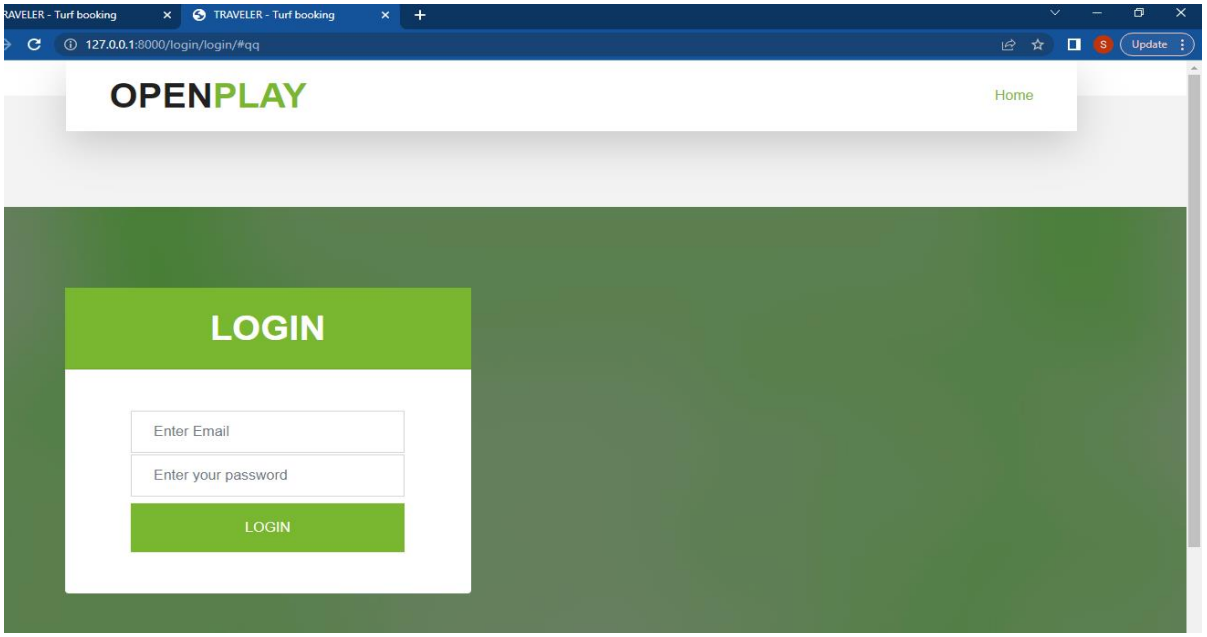
11.CONCLUSION

The proposed 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.

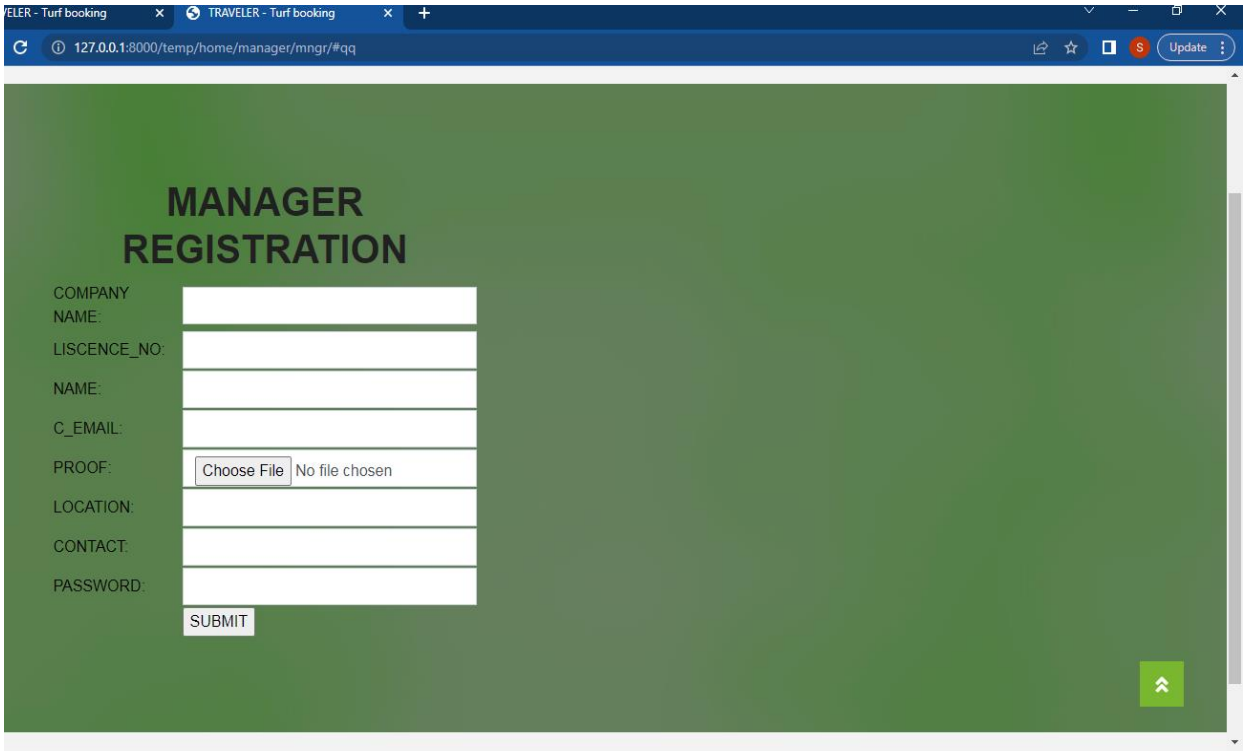
APPENDIX

12.APPENDIX

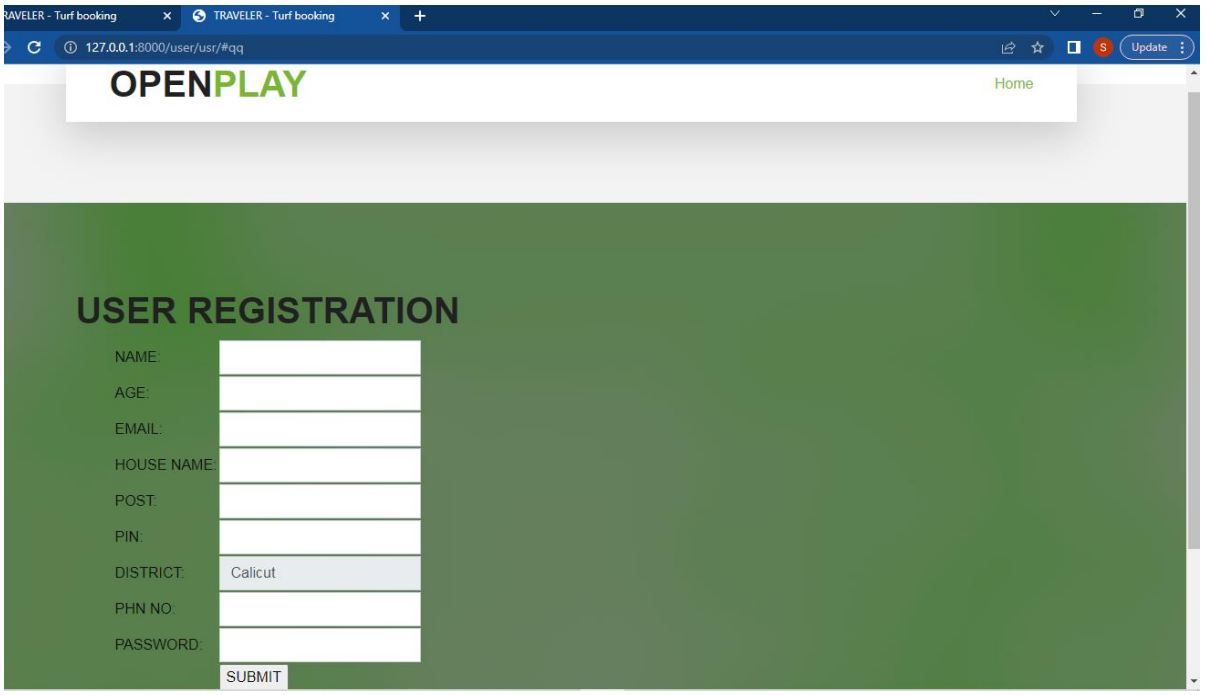
Login page



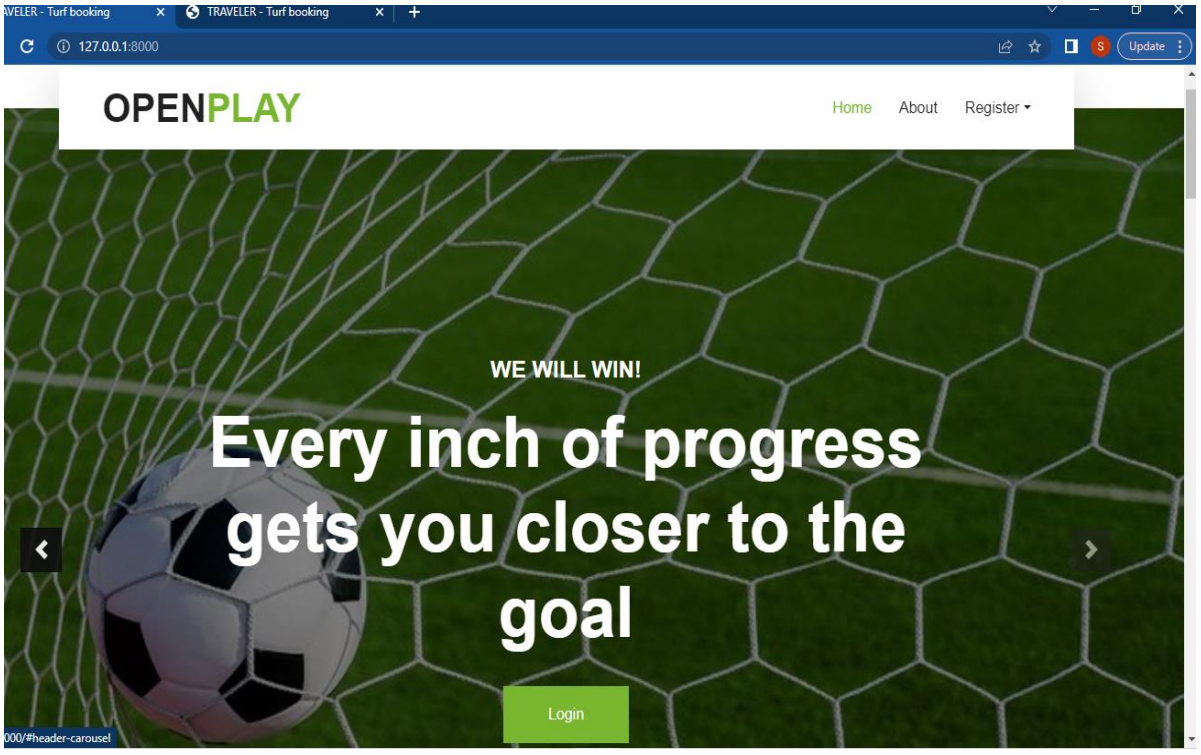
Manager registration



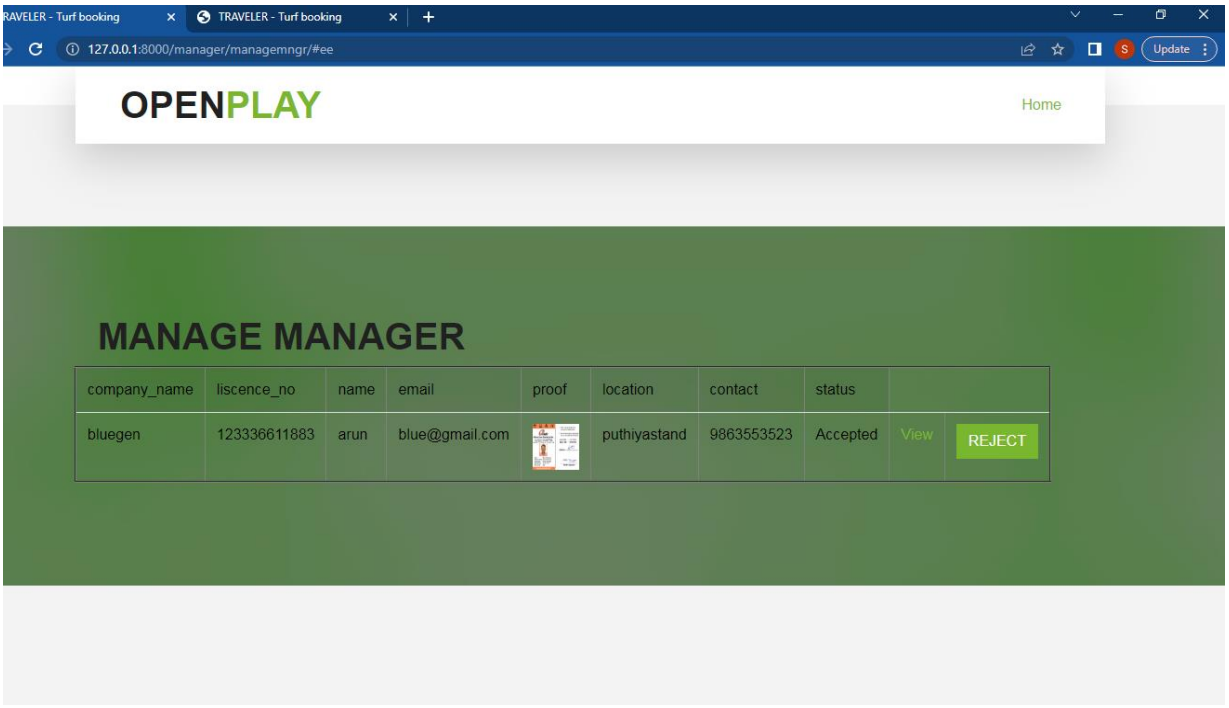
User registration



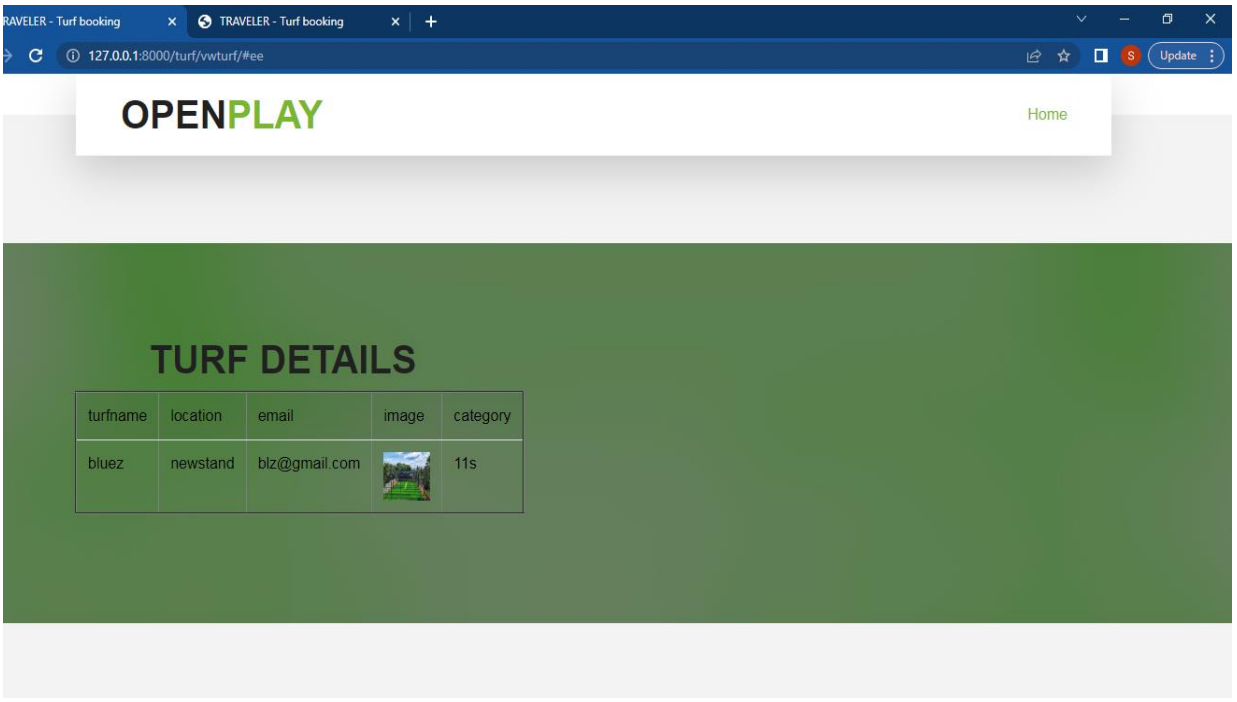
Home page



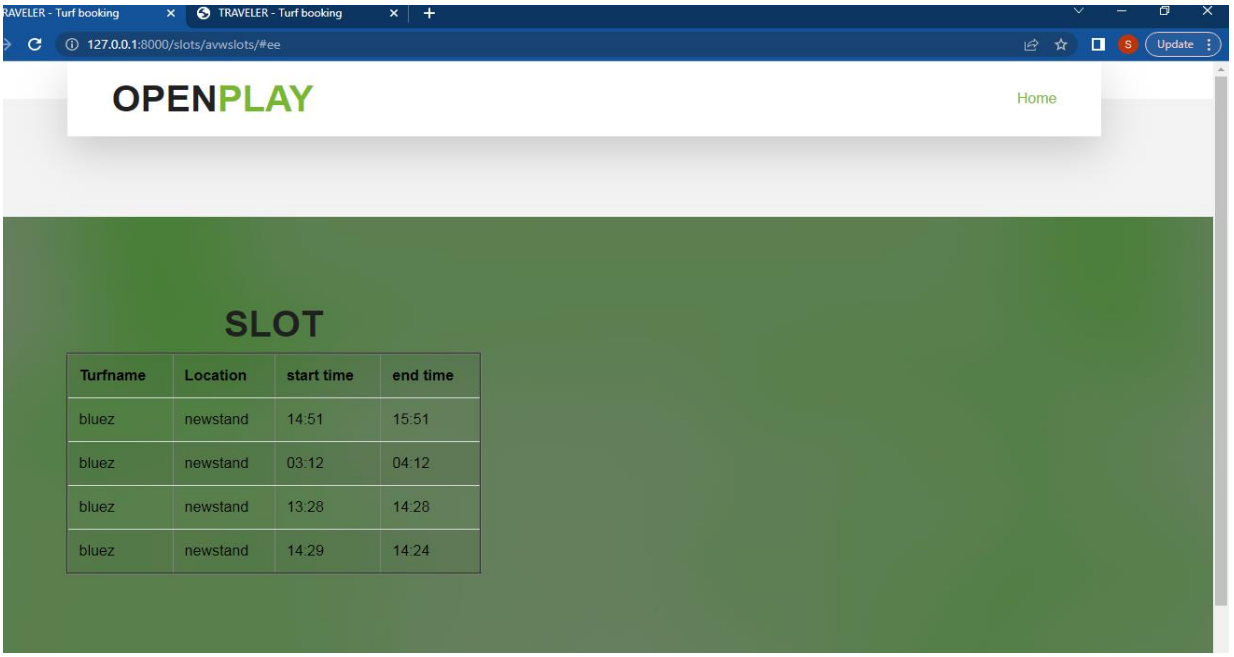
Admin manage manager



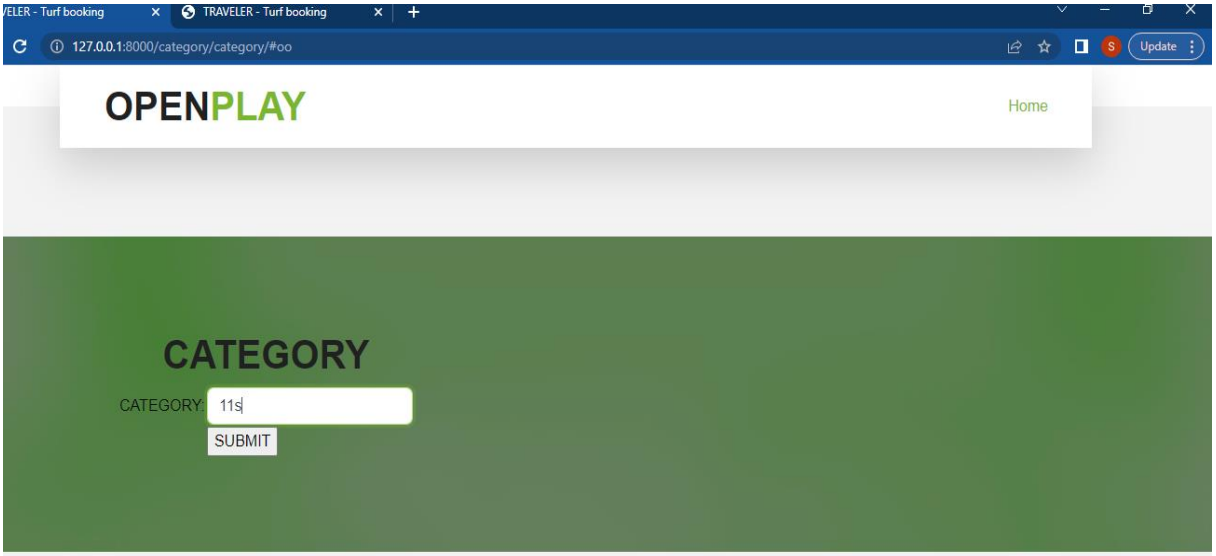
Admin view turf



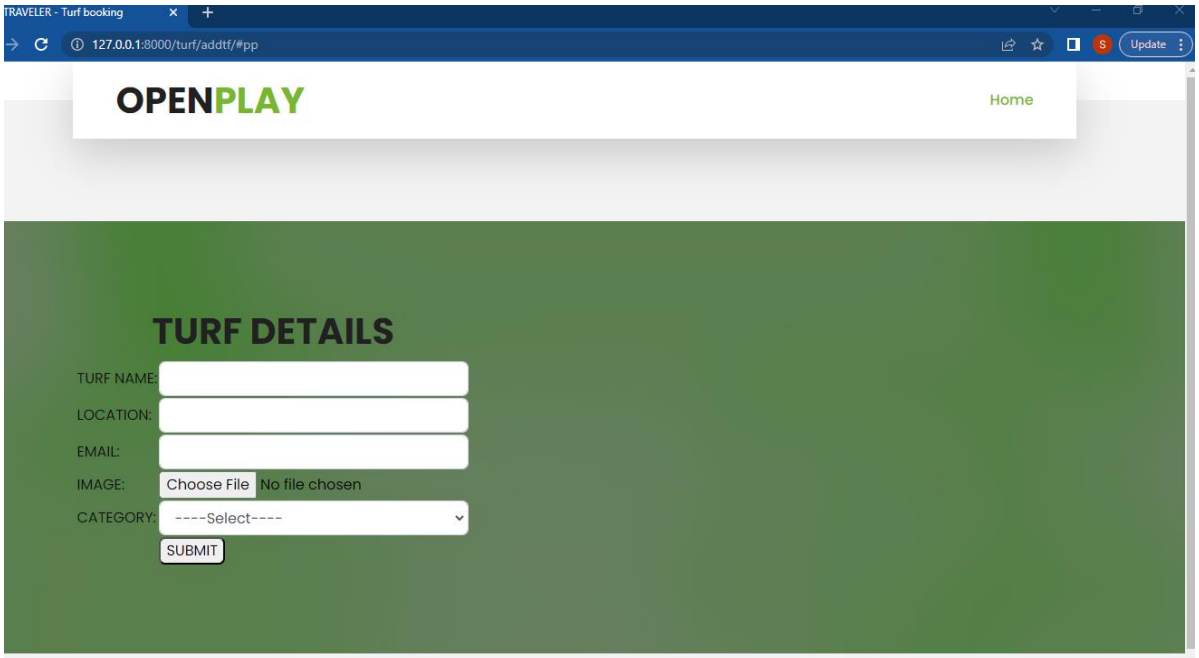
Admin view slots



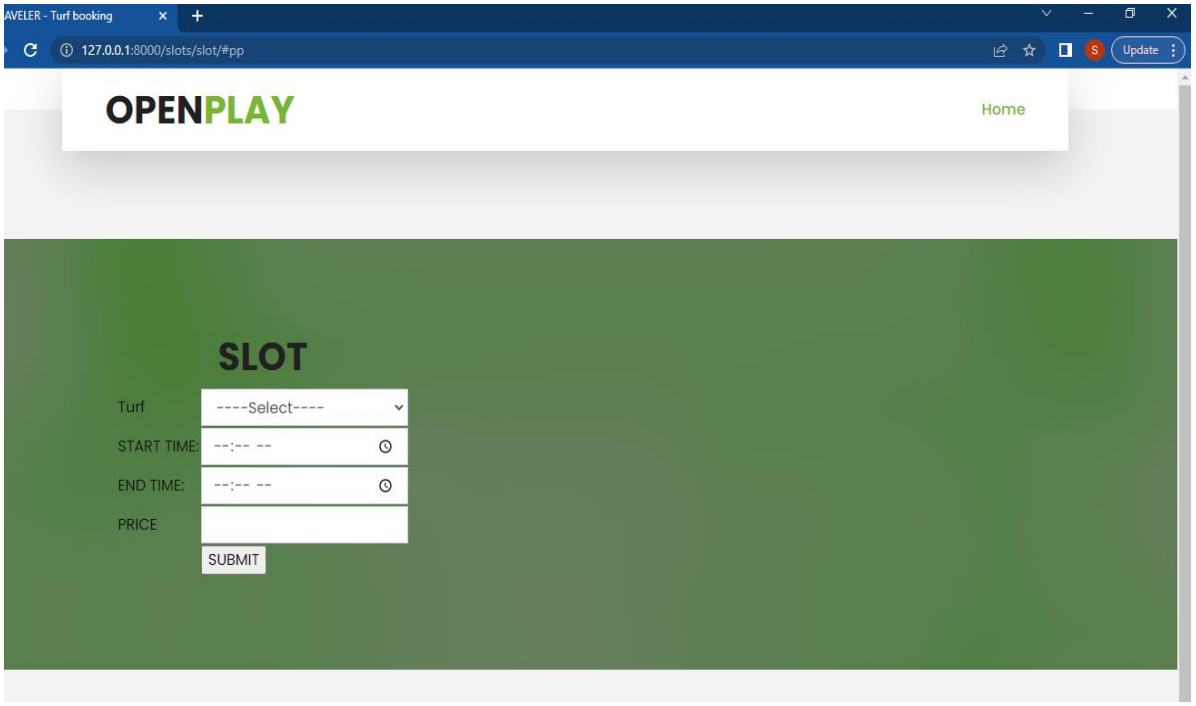
Admin add categories



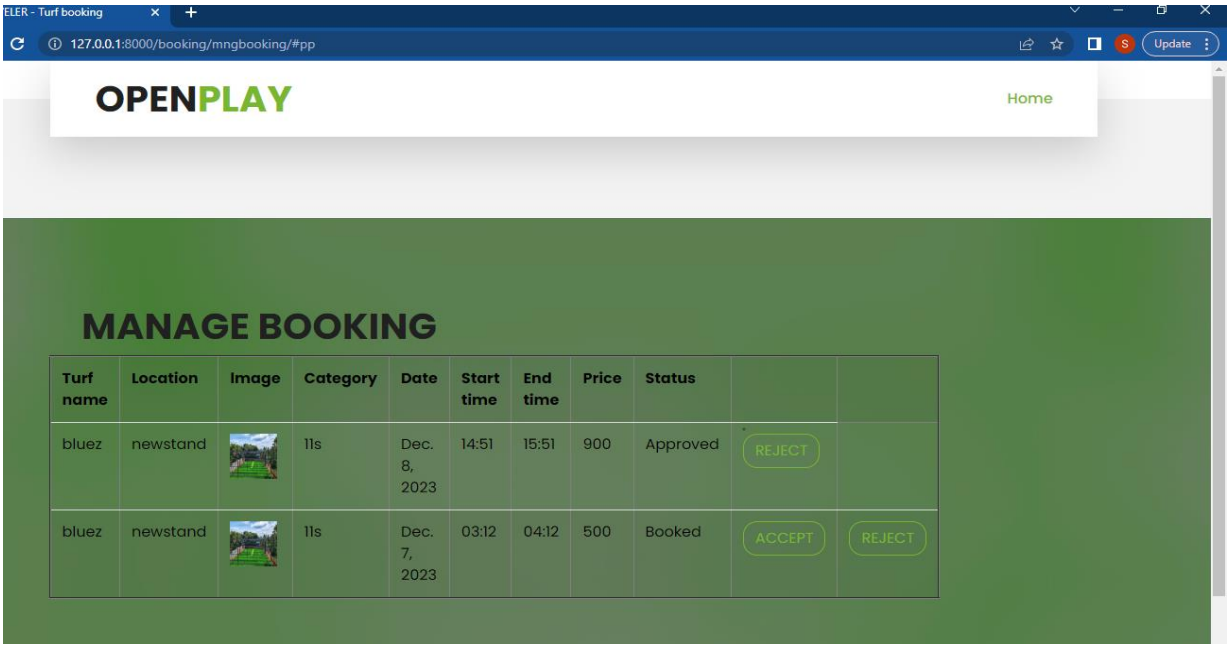
Manager add turf



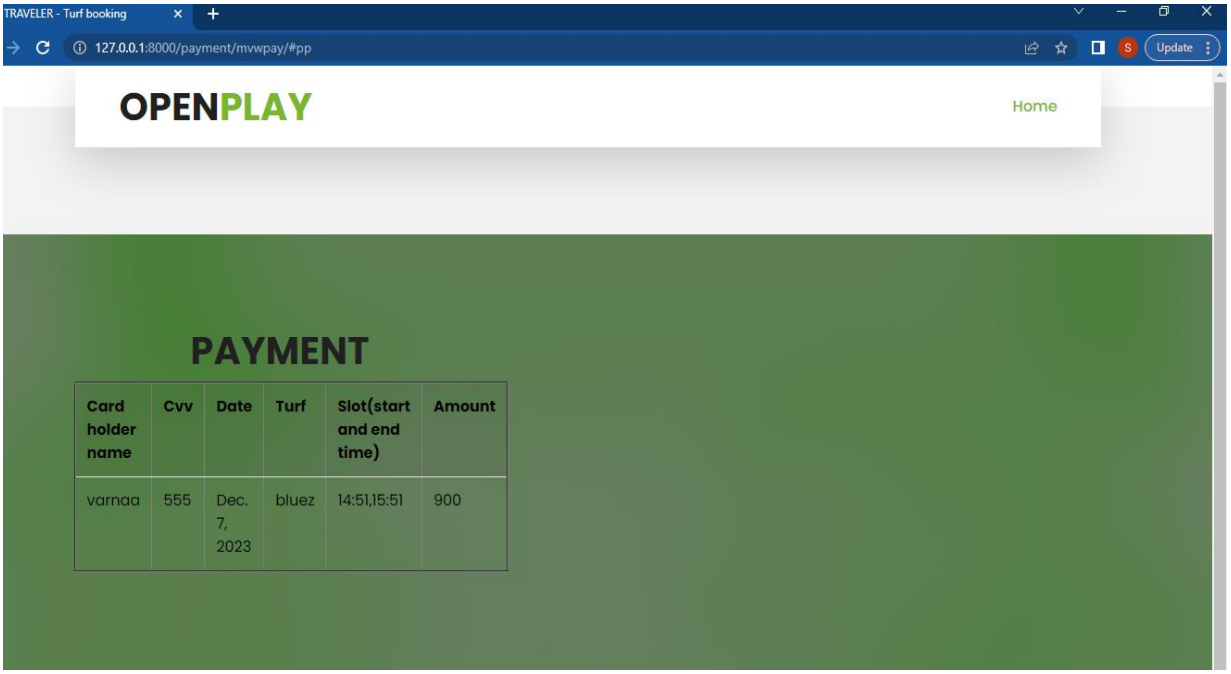
Manager add slots



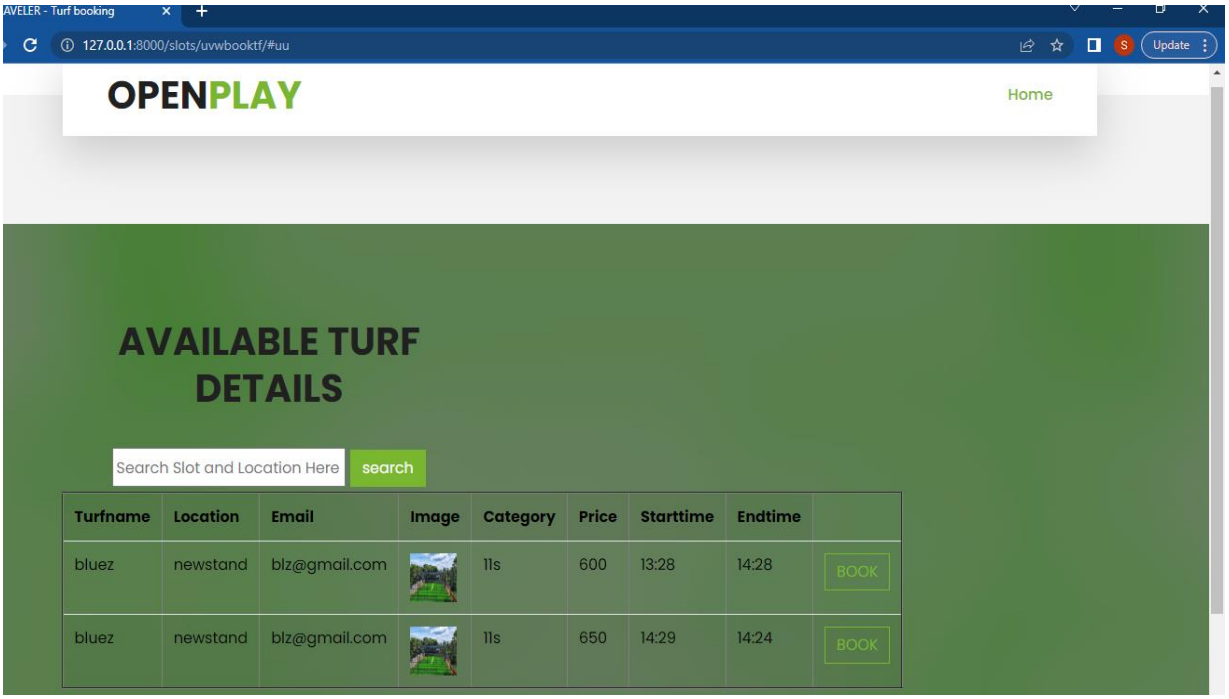
Manager view booking



Manager view payments



User view turfs and slots



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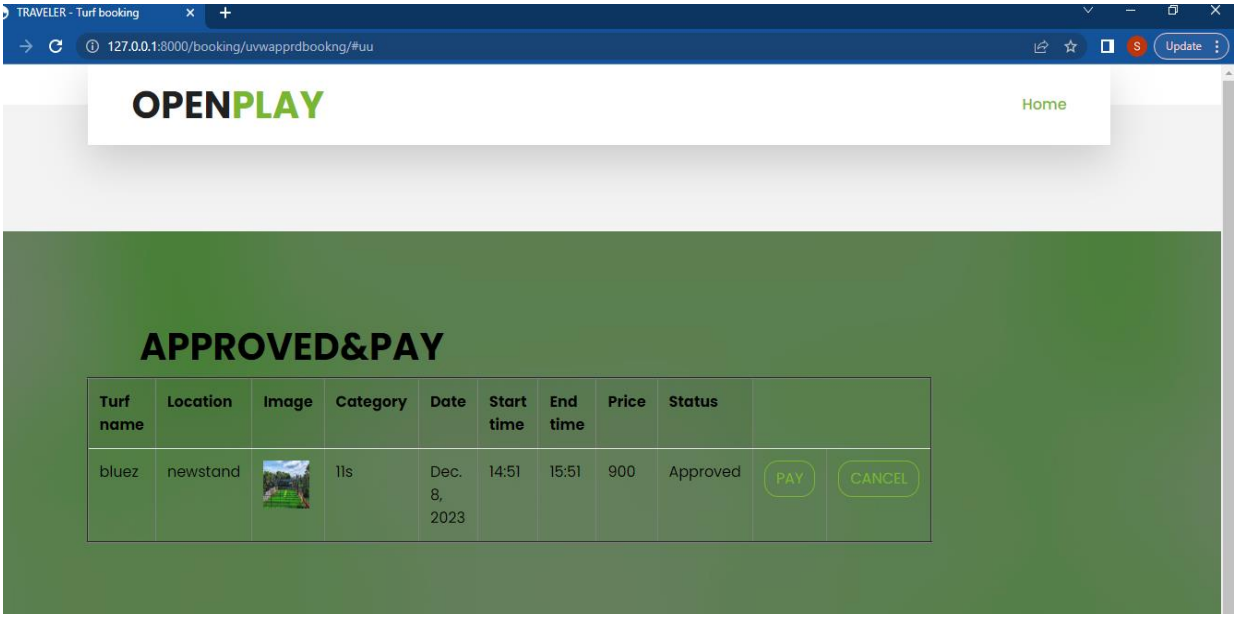
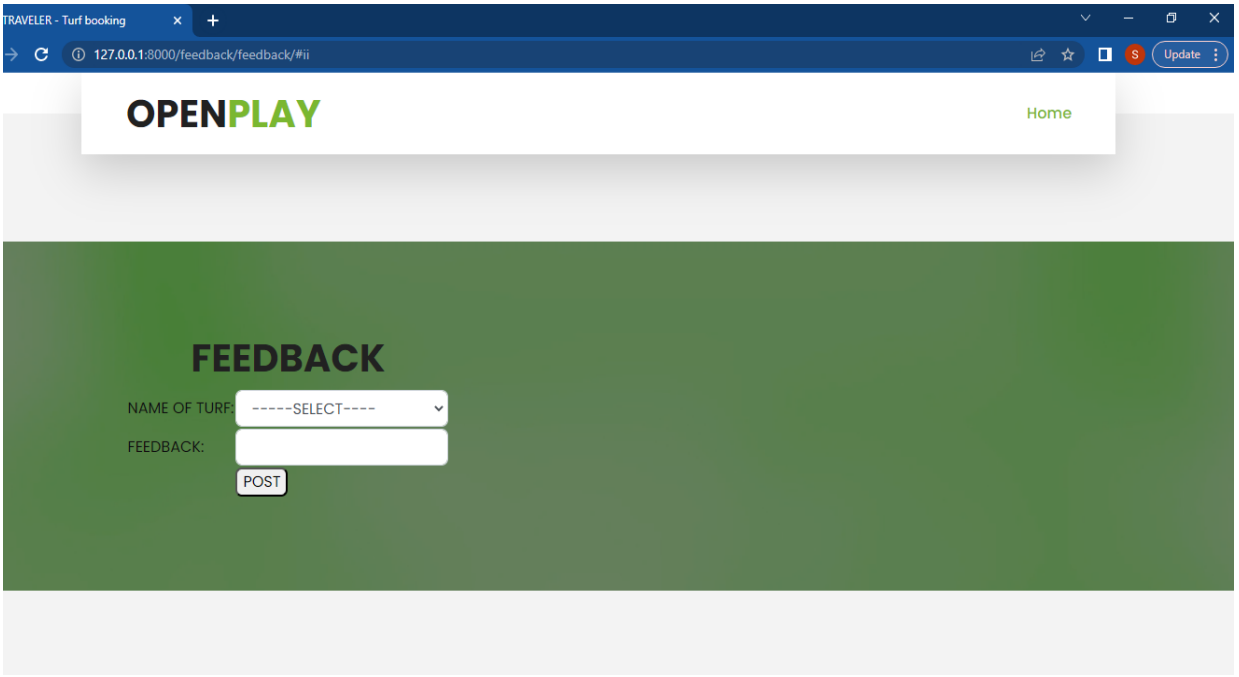


User post feedback



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