SERVER CREATION USING AWS EC2

Major project report submitted in partial fulfilment of the requirement for the degree of Bachelor of Technology

in

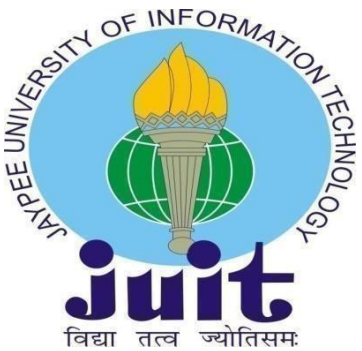
Computer Science and Engineering/Information Technology

By

Shreya Srivastava (191389)

UNDER THE SUPERVISION OF

Dr. Diksha Hooda



Department of Computer Science & Engineering and Information Technology

Jaypee University of Information Technology, Waknaghat,173234, Himachal Pradesh, INDIA

DECLARATION

I hereby declare that the work presented in this report entitled **"Server Creation using AWS EC2"** in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology** in **Computer Science and Engineering/Information Technology** submitted in the department of Computer Science & Engineering and Information Technology, Jaypee University of Information Technology, Waknaghat is an authentic record of my own work carried out over a period from March 2023 to May 2023 under the supervision of **Dr. Diksha Hooda**, Assistant Professor(Senior Grade).

I also authenticate that I have carried out the above mentioned project work under the proficiency stream Cloud Computing.

The matter embodied in the report has not been submitted for the award of any other degree or diploma.

Submitted by:

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Table of Content

TOPIC	Page no.
DECLARATION	i
PLAGIARISM CERTIFICATE	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENT	iv
LIST OF ABBREVIATIONS	v
LIST OF FIGURES	v
LIST OF TABLES	vi
ABSTRACT	vii
CHAPTER-1 INTRODUCTION	1
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Objective	2
1.4 Report Organisation	2
CHAPTER-2 LITERATURE SURVEY	3
CHAPTER-3 SYSTEM DESIGN AND DEVELOPMENT	9
CHAPTER-4 EXPERIMENT AND RESULT ANALYSIS	15
CHAPTER-5 CONCLUSIONS	38
REFERENCES	40

List of Abbreviations

OMS – Operation Management System

VOC – voice of customer

SRS – Software Requirement Specification

SMS – Short Messaging Service

SSL – Secure Sockets Layer

List of Figures

Fig.3.1 Prototyping-Based Methodology

Fig. 4.1 Data Flow Diagram of User

Fig.4.2 Data Flow Diagram of Admin

Fig.4.3 Use case diagram of user

Fig.4.4 Use case diagram of Admin

Fig. 4.5 Class Diagram

Fig. 4.6 Sequence Diagram of Admin

Fig. 4.7 Sequence Diagram of User

Fig. 4.8 Activity Diagram of User

Fig. 4.9 Activity Diagram of Admin

Fig. 4.10 Component Diagram of User

Fig. 4.11 Component Diagram of Admin

Fig.4.12 ER Diagram of User

Fig. 4.13 ER Diagram of Admin

Fig. 4.14 MVC Architecture

Fig.4.15 M-Ticket Booking Portal

Fig.4.16 M-Ticket user registration page

Fig. 4.17 Ticket details Page

Fig. 4.18 Ticket summary Page

Fig. 4.19 Payment details

Fig. 4.20 Route details
Fig.4.21 Train Ticket Booking
Fig.4.22 Bus passenger database
Fig.4.23 Train passenger database
Fig. 4.24 Admin Database
Fig.4.25 Admin Login Page
Fig.4.26 User Login page
Fig.4.27 Registration page

List of Tables

Table 2.1 Literature Survey

ABSTRACT

An online ticket system is a piece of software that allows users to buy, reserve, or book tickets online. It offers a practical and effective replacement for conventional ticketing systems, which required customers to physically visit ticketing shops or booths.

Customers can access tickets through the online ticketing system from any location with an internet connection. They may quickly check the availability of seats and pay using credit/debit cards, internet banking, e-wallets, and mobile money, among other options. By offering a secure payment platform, the system also guarantees the confidentiality and security of its users.

Customers have the ability to select their chosen delivery method using the online ticketing system as well. They can access their tickets straight from their account, by email, or via text message. This lessens paper waste and encourages environmental protection.

The online ticketing system is advantageous to both customers and businesses as well as event planners. First of all, it does away with the requirement for actual ticketing shops, cutting costs associated with overhead and enabling businesses to concentrate on other parts of their services. The second benefit is that it gives businesses useful data insights through ticket sales analytics and customer profiling, enabling them to recognise customer preferences and trends, improve pricing tactics, and deliver customised promotions.

Additionally, the online ticketing system makes it simpler for event planners to manage ticket inventories, track sales, and generate reports. Event planners may track ticket sales in real-time and modify their marketing plans as necessary.

In conclusion, businesses and customers can benefit from an online ticketing system's convenience, effectiveness, cost savings, and useful data insights. For any company that provides ticketed services, it is a worthwhile investment.

Chapter 1: INTRODUCTION

1.1 Introduction

Information about signals, points, track circuits, route setting, and other signaling elements are gathered by the system. from a variety of stations that interlock in real time. Additionally, it gathers information from the train's originating stations regarding its identification. In order to enable the remote operation of points, etc., the system must provide data input to a few locations of relay interlocking. for the central control office at CSTM to control train movements at these stations.

The market is currently experiencing a rise in demand for train tickets, as evidenced by the ongoing construction of railway infrastructure, the expanding total mileage, the rapid construction of high-speed rail, the expanding number of train trips, the travel rush during the Spring Festival, and other times of high demand when tickets are still in short supply. The maturation of the traditional internet facilitates the growth of mobile internet and provides numerous fundamental conditions for its development.

At present available as of now has a great deal of module programming and train tickets, however the capabilities depend on the type of a program module, for example, 360 program burglarize ticket modules, with regards to versatile client, as of late sent off the 12306-train cell phone client, yet just has the capability of typical to purchase a ticket, in the part of portable client haven't ransack capability. As a result, it is crucial to develop a ticket- stealing mobile app for purchasing train tickets so that mobile phone users can purchase train tickets at any time and from any location.

It is conducive to creating a healthy and good environment for purchasing railway tickets, establishing an efficient and convenient ticket purchasing order and These days, advanced cells, tablet PCs and other cell phones are turning out to be increasingly more famous on the lookout, which makes versatile Web progressively become the closest media for individuals. People can use it to

carry out a wide range of innovative business endeavors and enjoy network information services at any time and from any location.

1.2 Problem Statement

The “QUEUE” while purchasing train tickets is now the largest issue in the present ticketing system. In the rapidly evolving technological world of today, we are still standing in queues form to purchase CVM coupons or smart cards, or to purchase train tickets. When we forget our cards or have to wait in queue, it can be more annoying and time-consuming. We are squandering paper when we should be saving it for today’s needs. The UTS app, an existing software for purchasing tickets for suburban trains has an excessively drawn-out and difficult registration process. Only if one is a specific distance away from the railway track or station is it possible to book a ticket. This means that it is not possible to book a ticket once on the platform, which is problematic if you need to leave right away. Numerous users have reported their dissatisfaction with the app’s GPS capabilities, which they claim have prevented them from buying tickets.

1.3 Objective

With the ceaseless advancement of portable Web innovation, the utilization of the customary Web has been not able to address the issues of individuals to purchase train tickets on the web, individuals more desire to have the option to purchase train tickets whenever and anyplace through this web application.

1.4 Report Organisation

Chapter 1 contains the introduction details of the project.

Chapter 2 discusses the literature review of this project.

Chapter 3 contains system design and development details.

Chapter 4 provides experiment and result analysis details. Chapter 5 explains the conclusion of this project.

Chapter 2: LITERATURE REVIEW

Research on the design and implementation of online ticket system based on microservice architecture

A case study of an online ticket system created using microservice architecture is presented in the research paper titled "Research on the design and implementation of online ticket system based on microservice architecture" by Huang, Zhang, and Jin [1], which was published in the 2019 IEEE 3rd Information Technology, Networking, Electronic, and Automation Control Conference (ITNEC). The study was carried out in the Chinese market, and the researcher's gathered information by conducting surveys and speaking with professionals in the field. The authors also implemented the suggested microservice-based ticket system using a variety of software development tools and platforms, including Docker, Spring Boot, and Redis.

The study by Huang, Zhang, and Jin entitled "Research on the design and implementation of online ticket system based on microservice architecture" offers helpful information about the application of microservice architecture for creating online ticket systems, but it also has certain drawbacks. First off, the study was limited to the Chinese market, so its conclusions might not hold true elsewhere. Second, the study's validity and reliability may be impacted by the paper's omission of information about the size of the sample employed in the surveys and interviews. Thirdly, it is difficult to assess the efficacy of the suggested strategy because the study did not compare the performance of the microservice-based ticket system with that of other ticketing systems. Last but not least, the study did not provide a thorough examination of the possibilities.

Design and Implementation of Online Ticket System Based on Web

The construction of an online ticket system utilising web technology is described in the paper "Design and Implementation of Online Ticket System Based on Web" by Ma, Zhang, and Zhang [2], which was presented at the 2018 15th IEEE International Conference on Networking, Sensing, and Control (ICNSC). Using HTML, CSS, JavaScript, and PHP, the writers created a prototype ticket system. The study covered both front-end and back-end development, and MySQL was used as the database management system. User satisfaction surveys, load testing, and stress testing were used to evaluate the system's performance.

The design and implementation of an online ticket system based on the web are explored in the research paper "Design and Implementation of Online Ticket System Based on Web" by Ma, Zhang, and Zhang, which was presented at the 2018 15th IEEE International Conference on Networking, Sensing and Control (ICNSC). Although the study offers insightful information, there are several research limitations. First off, the study only looked at a test version of an online ticketing system; it ignored its scalability and resilience. Second, it is difficult to assess the effectiveness of the suggested solution because the authors did not compare the performance of the web-based ticket system with that of alternative ticketing systems. Thirdly, the study's validity may be impacted by the authors' failure to disclose the user satisfaction survey's sample size.

Design and implementation of online ticket booking system

Design and Implementation of Online Ticket Booking System" was the title of the research paper Shaikh et al. [3] presented at the 2017 International Conference on Electrical, Electronics, Communication, Computer, and Optimisation Techniques (ICEECCOT). Their research focuses on creating a prototype online ticket booking system using PHP, HTML, CSS, JavaScript, and MySQL. The system's functionality, usability, and security were tested by

the writers. They also conducted a poll to obtain user input in order to evaluate the effectiveness of the system.

The study has limitations, despite the fact that Shaikh et al.'s research article "Design and Implementation of Online Ticket Booking System" offers insights into the design and implementation of an online ticket booking system. First, the study only looked at a system prototype and neglected to take the system's scalability and reliability into account. Second, it is difficult to judge how well the suggested fix will work because the authors did not compare the system's performance to that of other current systems for purchasing tickets. Third, while the study could be helpful to practitioners thinking about using this strategy, it did not give a thorough review of the potential risks and difficulties connected with deploying an online ticket purchasing system.

Design and implementation of online railway ticket reservation system using PHP and MySQL

A case study on the development of an online railway ticket reservation system is covered in the article "Design and Implementation of an Online Railway Ticket Reservation System Using PHP and MySQL" by Jagtap, Mane, and Bhoir [7]. Using the Apache web server, XAMPP, and Bootstrap tools, the authors designed and developed a prototype of the system using PHP and MySQL technologies.

The study used a variety of testing approaches, including unit testing, integration testing, system testing, and acceptance testing, to assess the system's functionality, usability, and security. Additionally, the authors conducted a survey to get user input on how well the system worked.

There were some restrictions in the research paper that must be acknowledged. First off, the study was primarily concerned with creating a working prototype of the online system for booking train tickets, which constrained the evaluation of the system's scalability and robustness. Second, it is challenging to assess the success of the suggested system because no comparison was made between

its performance and that of other current systems for making ticket reservations. Thirdly, while a detailed examination of the dangers and difficulties that could develop when constructing a PHP and MySQL-based online ticket reservation system would have been helpful to practitioners, such a study was not included in the paper. Last but not least, the study failed to indicate the user feedback survey sample size, which could have an impact on the validity and reliability of the research findings.

Design and Implementation of a Comprehensive E-Ticketing System

The paper, titled "Design and Implementation of a Comprehensive E-Ticketing System" by Zhang, Zhang, Yu, and Huang [19], presents the development and design of an e-ticketing system. The authors utilized Java EE technology, including the Eclipse IDE for Java EE developers, Apache Tomcat web server, and MySQL database management system, to create the system. The research methodology included an analysis of the requirements for an e-ticketing system, system architecture design, and system development.

To assess the system's effectiveness, the authors conducted performance testing, which involved load testing and stress testing. The study also included user feedback surveys to evaluate the system's usability, functionality, and security.

There are several restrictions on the study paper that should be acknowledged. First off, only load testing and stress testing were used to evaluate the system's performance; additional performance testing methods, such scalability testing, were not used. Second, the article did not compare the proposed e-ticketing system to current e-ticketing systems, which would make it difficult to determine how effective it is. Thirdly, the study omitted to discuss the potential hazards and difficulties involved in putting a Java EE-based e-ticketing system in place. Last but not least, the research did not disclose the user feedback

survey sample size, which could have an impact on the validity and reliability of the research findings.

Table 2.1 Literature Survey

Author(s)	**Year**	**Methodology**	**Limitation**
Huang, Zhang, and Jin	2019	Used microservice.	Difficult to assess the efficacy of the suggested strategy.
Ma, Zhang, and Zhang	2018	Both front-end and back-end development covered and MySQL was used as the database management system.	It ignored its scalability and resilience.
M. Shaikh et al.	2017	Online ticket booking system using PHP, HTML, CSS, JavaScript, and MySQL	Authors did not compare the system's performance to that of other current systems for purchasing tickets.

Jagtap, Mane, and Bhoir	2017	Designed and developed a prototype of the system using PHP and MySQL technologies.	The study failed to indicate the user feedback survey sample size.
Zhang, Zhang, Yu, and Huang	2018	Apache Tomcat web server, and MySQL database management system, to create the system.	The study omitted to discuss the potential hazards and difficulties involved in putting a Java EE-based e-ticketing system in place.

Chapter 3: SYSTEM DESIGN AND DEVELOPMENT

The prerequisites are illustrated in this section. It determines the software's hardware and programming requirements in order to ensure that the application functions properly. The Product Prerequisite Particular (SRS) is explained in focal point, which consolidates framework of this composition and furthermore the useful and non-pragmatic need of this report.

I chose this because it is typically the examination, plan, and execution stages performed simultaneously and, on each cycle, bringing about a framework model that will be checked on bythe task support. Based on the sponsor's comments the cycle continued indefinitely until the prototype successfully met the requirements. The last model will then be known as the framework. Because the "analysis design, and implementation" phases would be carried out in a concrete manner, this approach would be beneficial to the newly developed M-Ticket system. Besides M-Ticket framework requires effective and exact outcomes so connection with the client or support now and again is required. The following are the primary components covered by this method: Necessities get-together and framework advancement arranging. Fundamental examination and configuration will be directed and promptly beginning work on a fast framework model. The system's bare bones will be used to create an initial prototype of the system. The user will be shown this initial system prototype to get their feedback. In light of client's remarks examination, plan and execution stages will be rehashed and new highlights will be added. Until the system is finished, the process will be repeated. 18 System Prototype System Implementation System Prototyping development requires only initial fundamental analysis and design, so crucial system functions may not be identified until somewhere in the middle of the project timeline. As a result, it is possible to alter the initial design decision and begin from scratch. Even though it doesn't exactly meet the requirements, it can quickly deliver the system to users [10]. Additionally, creator would like as such to comprehend

client's necessities, as a matter of fact. Even though users have discussed the system's requirements, they may not always find that the system meets their expectations at the end of the system

development life cycle. Hence, creator would like to connect with client in the framework advancement life cycle to ensure last framework is true to form by the client. Besides, Course of events of the framework improvement is restricted as designer needs to complete it in a brief time frame. As a result, this method is chosen due to its cost- and time-saving benefits. With this approach framework model is grown rapidly and fundamental capabilities might be created first. The prototyping approach, on the other hand, might not be the most suitable approach for complex systems.

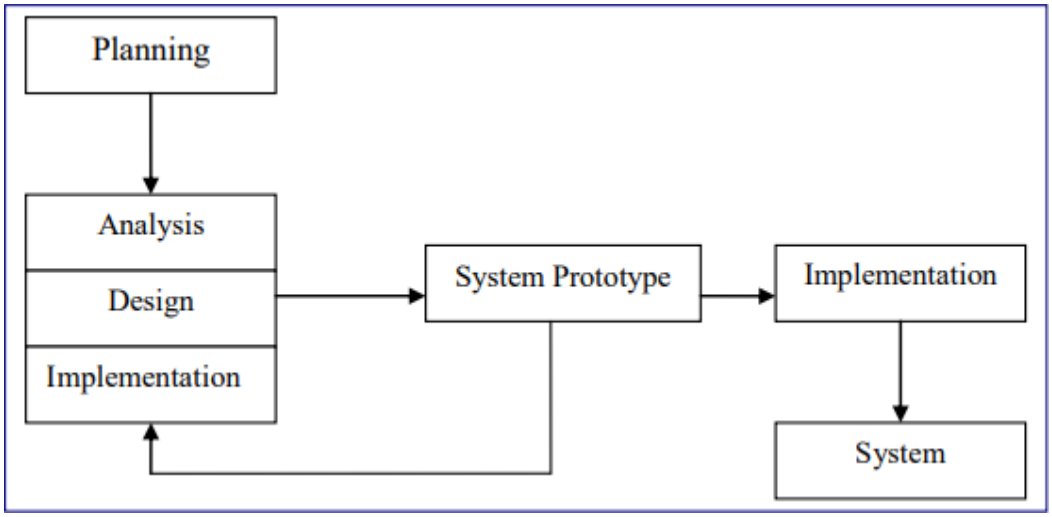

Figure 3.1: Prototyping-based Methodology of M-Ticket System

3.1 General Description

This system is simple to use and allows indicator boards to receive a wide range of information as needed. To make it easier for passengers to use. In most cases, when information is changed, the details are entered into the operation management system (OTS system). However, if there is a significant

disruption to the diagram, changes cannot be made quickly enough, so route control is done manually.

3.1.1 Users Perspective

The Attribute of this errand work is to give data flexibility security while sharing data through cloud. It gives a capable way to deal with share data through cloud.

3.2 Non-Functional Requirement

Non utilitarian necessities are the requirements which are not directly having a spot with the particular limit gave by the structure. Instead of specific procedures, this provides the criteria that can be used to conclude the operation of a framework.

This can be used to connect the properties of the rising structure, such as immovable quality, response time, and store occupancy. Again, they should show system goals, like the capacity of the data yield devices and the data representation used in the structure interfaces. Instead of focusing on specific structure highlights, all non-helpful essentials may relate to the system as a whole. This recommends they are sometimes fundamental show up diversely according to the individual practical necessities. Non utilitarian need traverses the client needs, considering spending plan constraints, various level approaches, and the prerequisite for interoperability with other programming and hardware systems.

The decision to comply with unimportant requirements merits consideration.

- Safety: The structure should allow a got correspondence between data owner and recipient.
- Unwavering quality: The system should be reliable, not tamper with the current structure's operation, and it shouldn't cause the structure to fall.

3.3 System Requirements

3.3.1 Hardware Requirement

- **Processor** : intel/amd
- **Keyboard** : 104 Keys
- **Floppy Drive** : 1.44 MB MHz Pentium III
- **RAM** : 128 MB
- **Hard Disk** : 10 GB
- **Monitor** : 14” VGA COLOR
- **Mouse** : Logitech Serial Mouse
- **Disk Space** : 1 GB

3.3.2 Software Requirements

- **Operating System** : Win 8/ 10
- **Server** : Wamp server
- **Technologies used** : PHP
- **JDK** : PHP 1.7
- **Database** : My SQL 5.0

3.4 Feasibility Study

The determination of whether an undertaking justifies action is known as believability. The methodology used to build their strength is known as an acceptability study, which determines whether or not a task can and should be completed.

The likelihood analysis considers three important ideas:

- Technical Feasibility
- Economic Feasibility
- Operational Feasibility

3.4.1 Technical Feasibility

This is where hardware and programming are considered. This will effectively meet the needs of the customer. The specific requirements of the framework may change, but they may include the office's ability to produce results in a certain amount of time.

- Time to react in specific states.
- The capacity to handle a particular type of transaction at a particular rate

3.4.2 Economic Feasibility

The most common method for determining whether a projected structure is feasible is budgetary examination. This is all the more generally recognized as cost/great position assessment. The strategy is to focus on the focal points, and trusts are typically used in conjunction with a projected structure, a difference between them, and fees. These benefits outweigh the costs; a decision is locked in to chart and understand the framework will should be ready in the event that to have a likelihood of is being embraced. At every stage of the system's life cycle, an ongoing effort to improve accuracy is made.

3.4.3 Operational Feasibility

It is generally related to human affiliation and supporting points. Focuses are taken into account:

- What modifications will the framework support?
- What definitive shapes are scattered?
- What brand-new skills will be required?
- Do the current employees of the framework possess these skills?
- On the off chance that not, could they have the option to be ready over the range of time?

3.5 Resources Requirement

3.5.1 PHP

An HTTP response would consist entirely or in part of the output of the interpreted and executed PHP code on a web server. Orchestrate or make it easier to create that response. PHP can also be used fora lot of programming tasks that aren't related to the web, like controlling robotic drones and standalone graphical applications. Additionally, PHP code can be executed directly from the command line.

The standard PHP mediator, controlled by the Zend Motor, is free programming delivered under the PHP Permit. PHP has been widely ported, and it can be used on most web servers on a wide range of platforms and operating systems.

Until 2014, there was no written formal specification or standard for the PHP language. Instead, the first implementation served as the de facto standard that other implementations aimed to follow. Work has continued to develop a formal PHP specification since 2014.

"By January 2023." Additionally, it states that only 8% of PHP users employ the 8.x versions that are currently supported. The majority use PHP 7, specifically version 7.4, which is not supported by security updates. Even PHP 5, which is known to have serious security flaws and accounts for 23% of all usage, is also not supported.

Chapter 4: EXPERIMENT AND RESULT ANALYSIS

4.1 System Analysis

4.1.1 System

A system is a purposeful social event of related parts associated together as shown by a game plan to achieve a specific objective. The primary characteristics of the organization are interaction, interdependence, integration, and a guiding objective.

4.1.2 System Analysis

In system analysis and design, the system approach is used to solve problems, typically with the assistance of computers. When reconstructing a system, an analyst must take into account its output and inputs, processor controls, feedback, and environment.

4.2 Existing System

A variety of stations that interlock in real time, additionally, it gathers information from the train's originating stations regarding its identification. In order to enable the remote operation of points, etc., the system must provide data input to a few locations of relay interlocking. for control of train developments at these stations from Focal control office at CSTM.

4.3 DISADVANTAGES

- Stations office where we can get ticket, so time is squander at the holding up in the line.
- I have no idea when exactly I crossed the stations.

4.4 Proposed System

Names of the stations, times, a list of currently running trains, and a description of each train will be shown. Field objects should follow the layout of the area. In the online, only trains will be displayed. We create the data any place and at whatever point. to determine the precise time and crossing stations. Tickets can be purchased online, saving time spent waiting in the line.

4.5 Advantages of the Proposed System

- To determine the precise time at each crossing station.
- Tickets can be purchased online, saving time spent waiting in the line.

4.6 Project Module Description

- User Module:

  User module can be introduced in the metaphysics framework. The user should have an account in order to access or search the details; if not, they should register first.

- Tickets Online:

  This is very important for passengers because it makes it easy to get tickets. Additionally, these systems don't need as much manual labor and don't cost more to pay employees' salaries. This generates tickets based on the number of kilometers traveled by the train and the administrative cost per kilometer, which includes maintenance costs, in order to calculate the cost of railway tickets.

- New Train and Import the New Stations.

  The Significant work for the board Framework in train is to keep up with the Stations time When Presentation of New train and New Stations since it has such a great deal Effect in timing. There are a lot of

differences in train speed and timing when new stations are added to a route.

- Time Maintenance:

  Maintaining the time for use by commuters is the majority of the Management System in Train's work. The maintained times are determined by kilometers and speed, time complexity in relation to the number of features that need to be kept in the train.

4.7 Data Flow Diagram of User

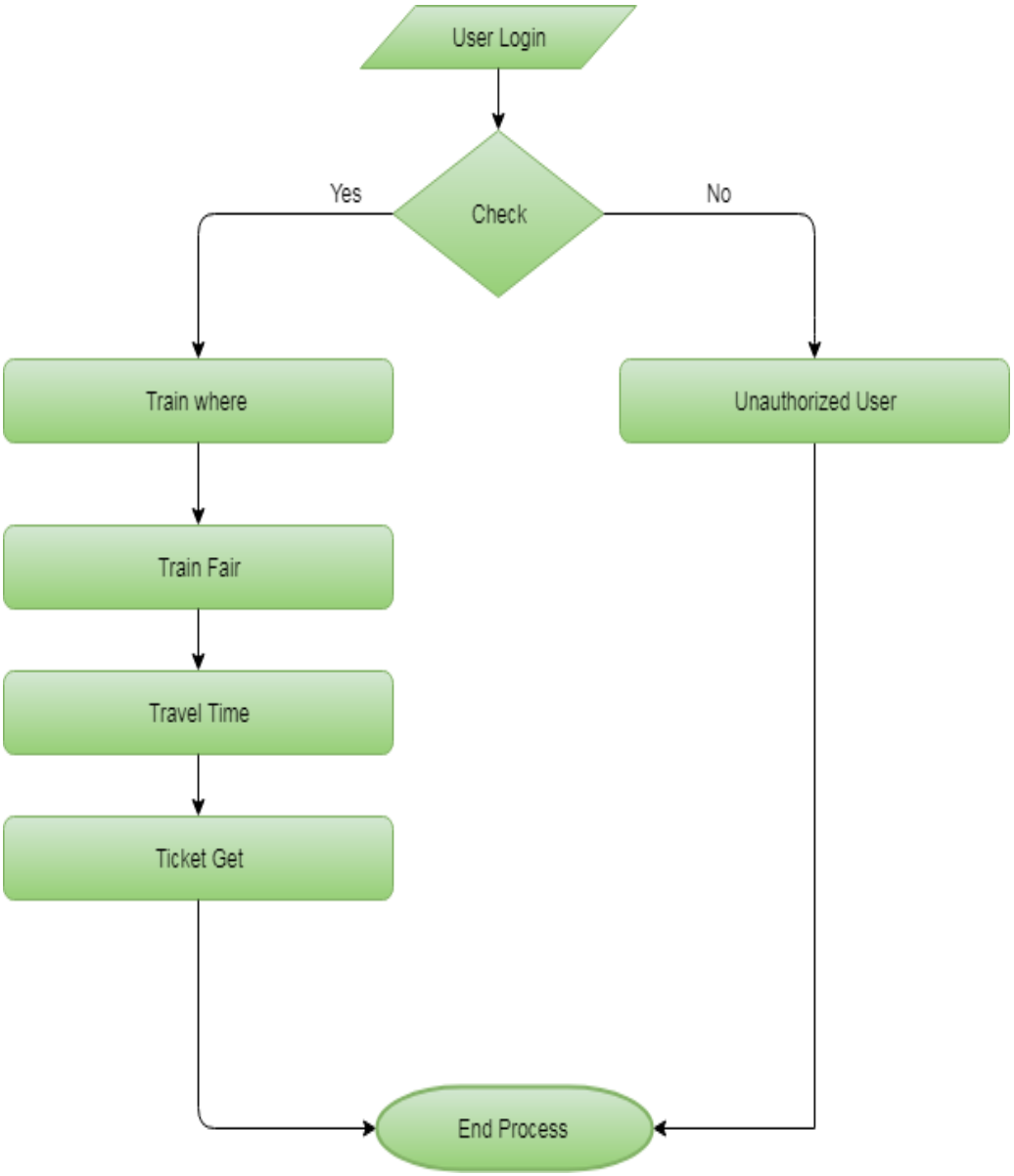

Fig. 4.1: Data Flow Diagram of user

Admin:

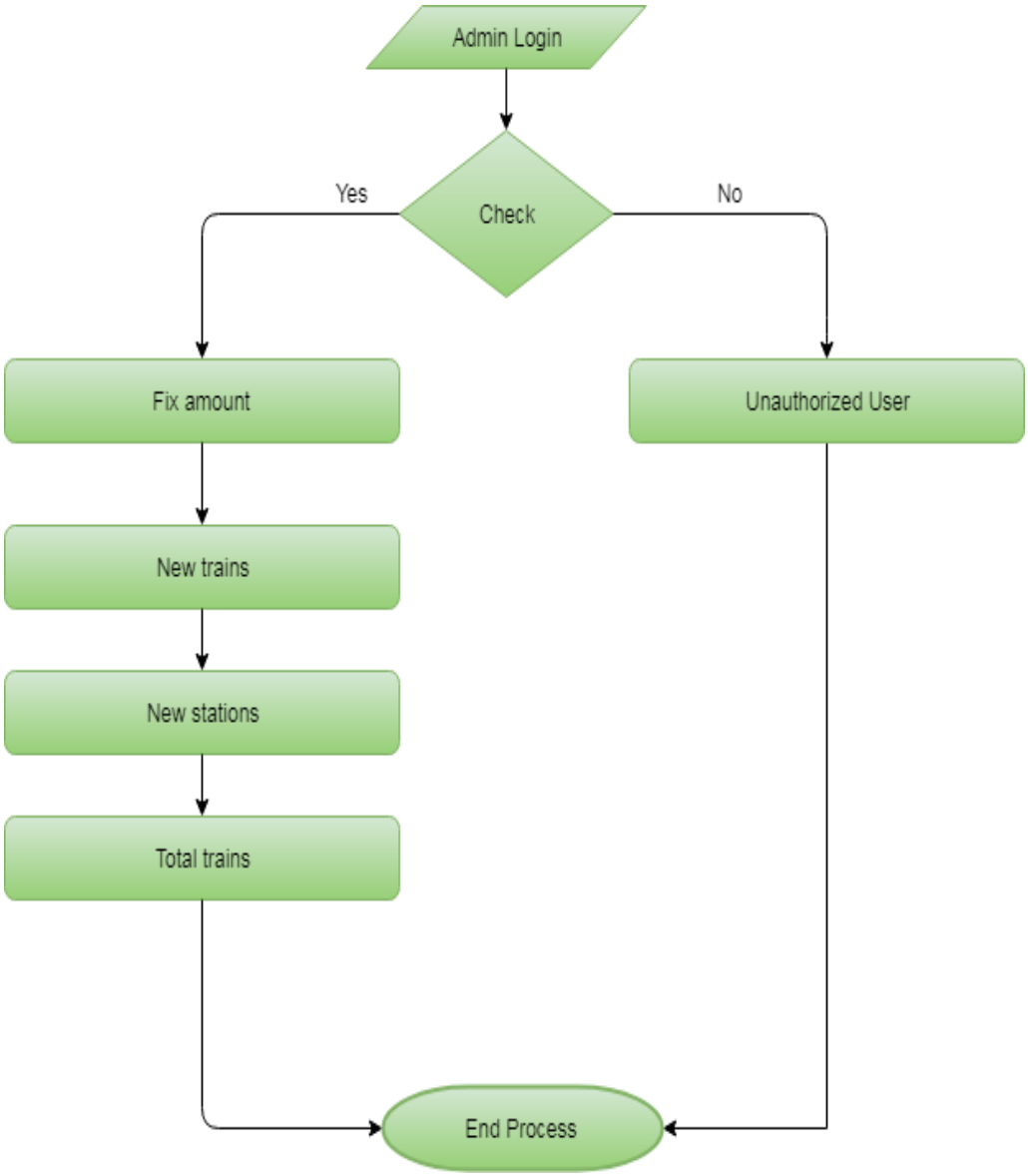

Fig. 4.2: Data Flow Diagram of Admin

4.8 Usecase Diagram

User

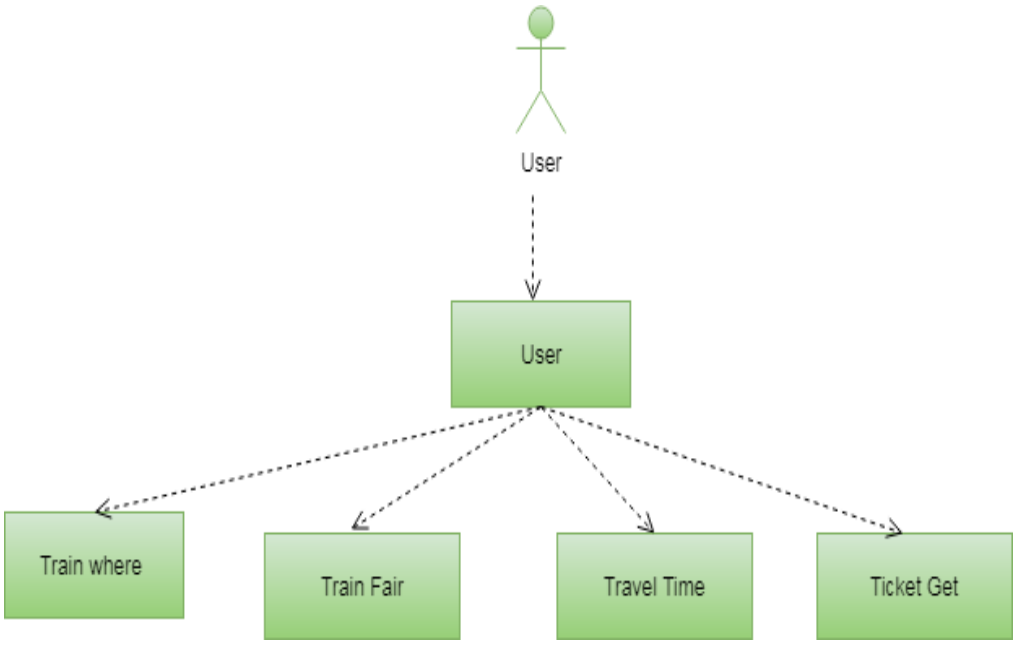

Fig. 4.3: Usecase Diagram of User

Admin

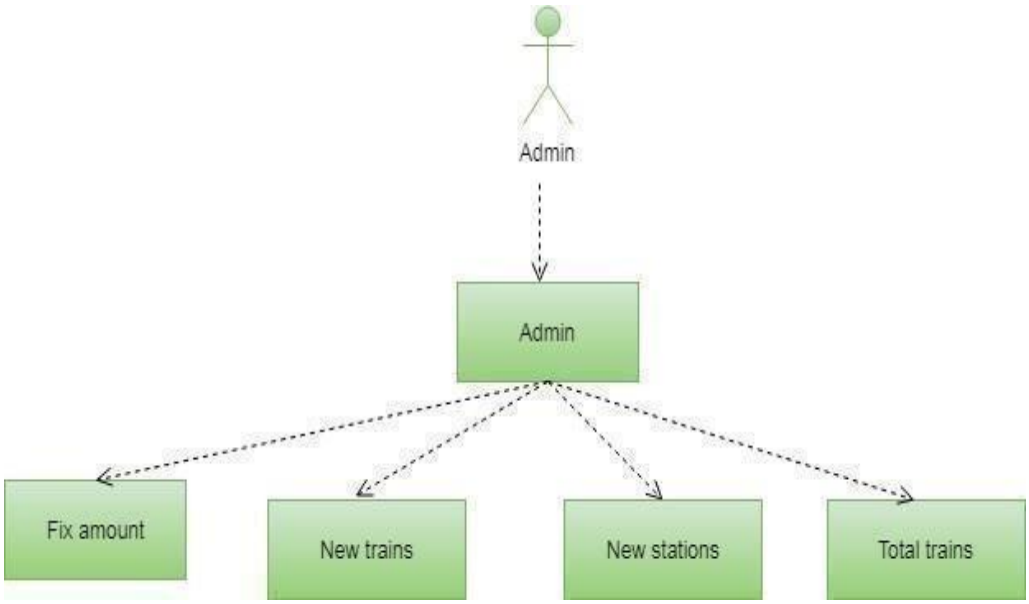

Fig. 4.4: Usecase Diagram of Admin

4.9 Class Diagram

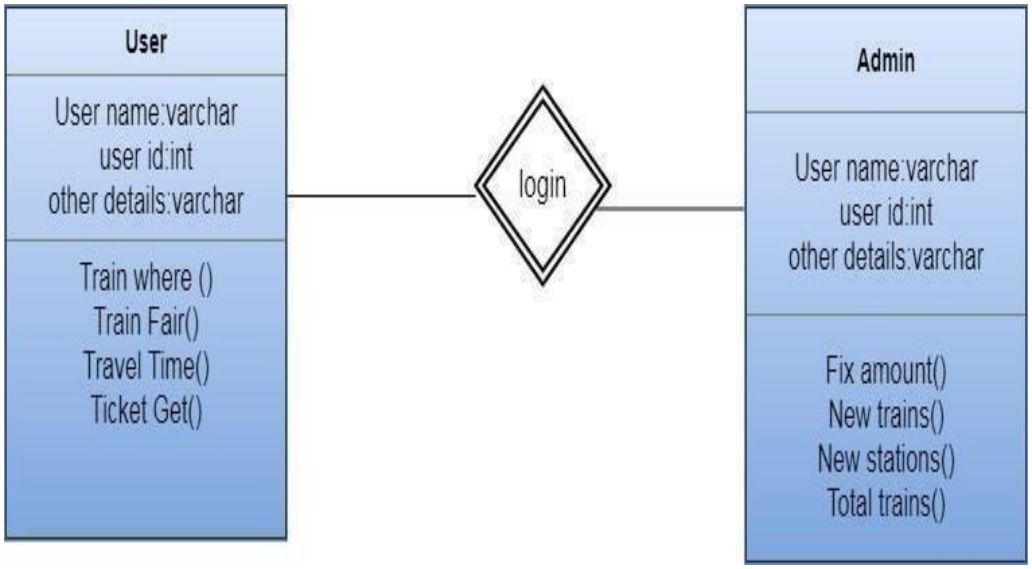

Fig. 4.5: Class Diagram

4.10 Sequence Diagram

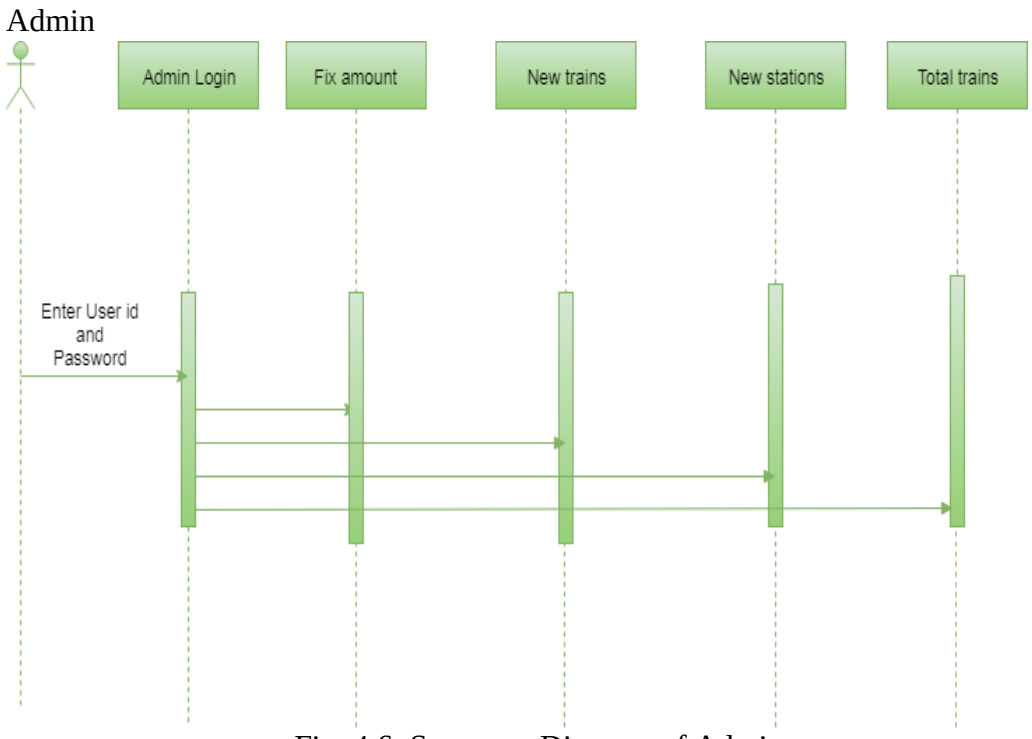

Fig. 4.6: Sequence Diagram of Admin

User

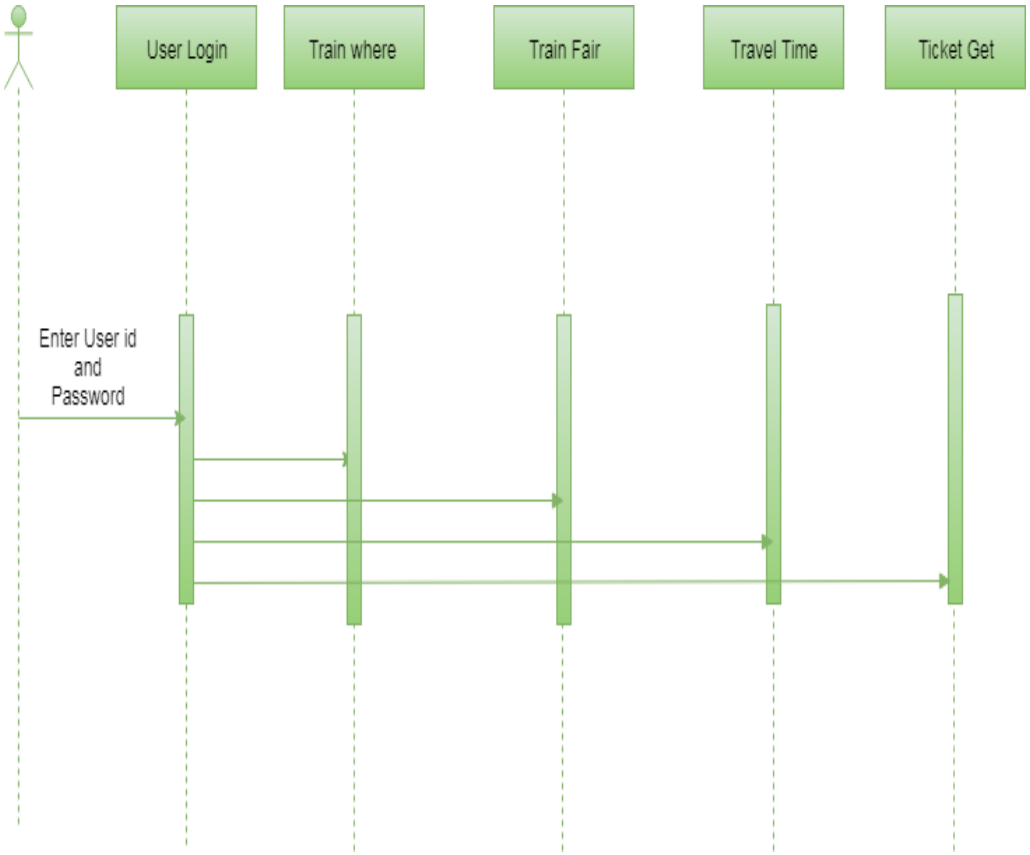

Fig. 4.7: Sequence Diagram of User

4.11 Activity Diagram

User

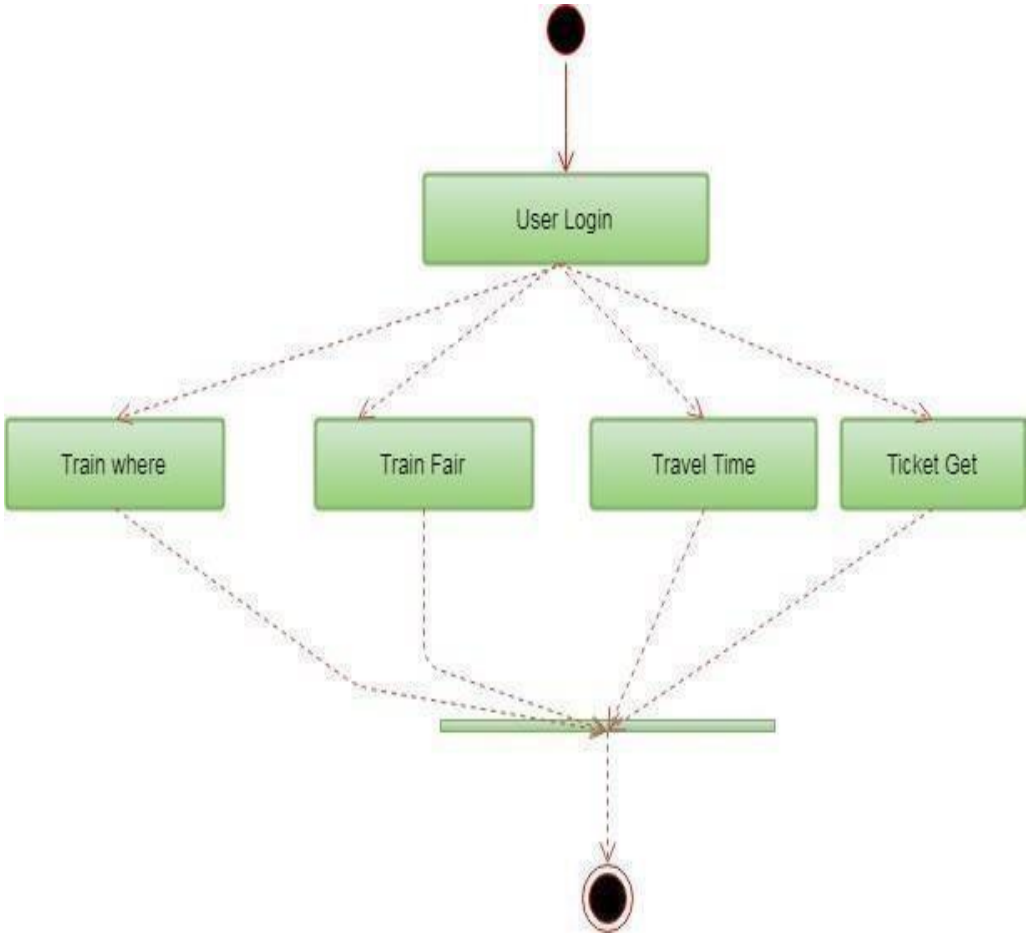

Fig. 4.8: Activity Diagram of User

Admin

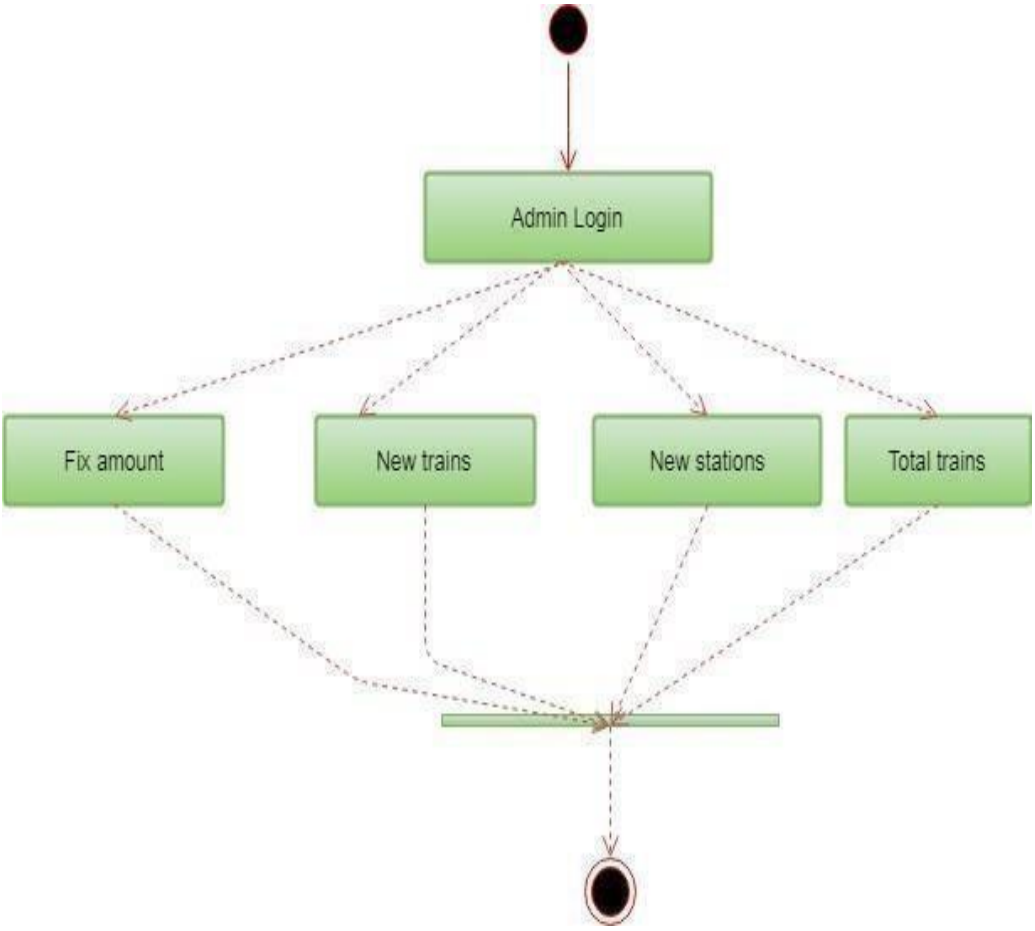

Fig. 4.9: Activity Diagram of Admin

4.12 Component Diagram

User

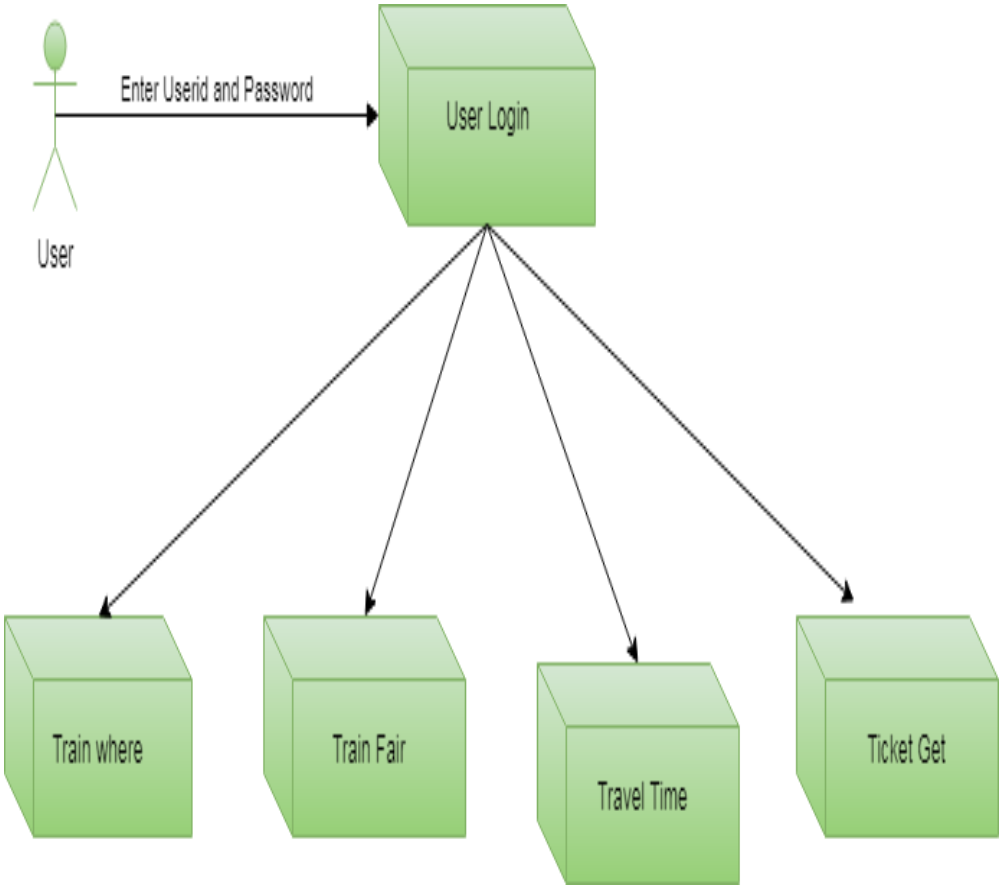

Fig. 4.10: Component Diagram of User

Admin

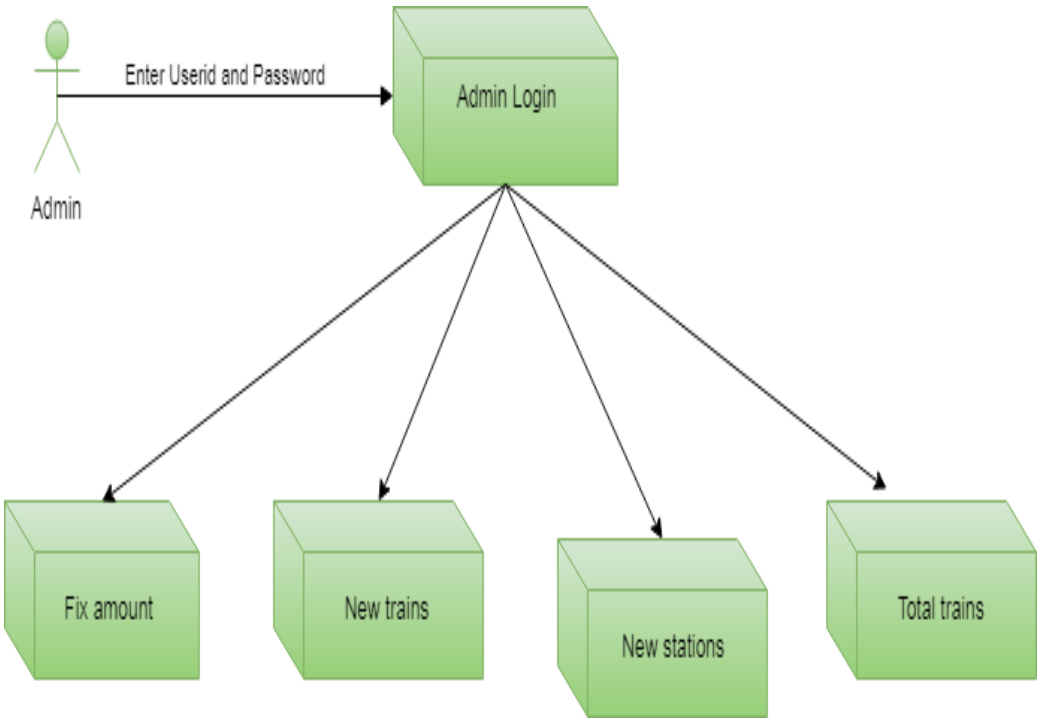

Fig. 4.11: Component Diagram of Admin

4.13 ER Diagram

User

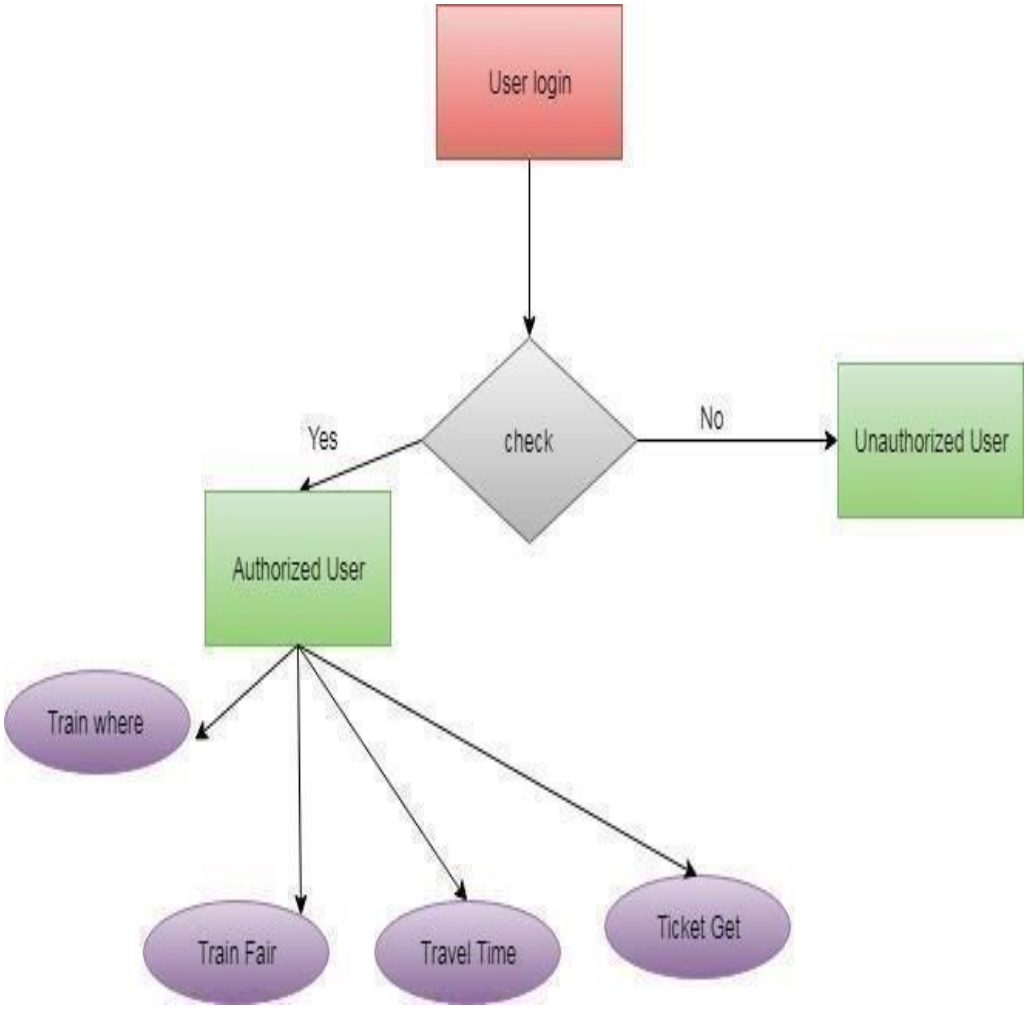

Fig. 4.12: ER Diagram of User

Admin

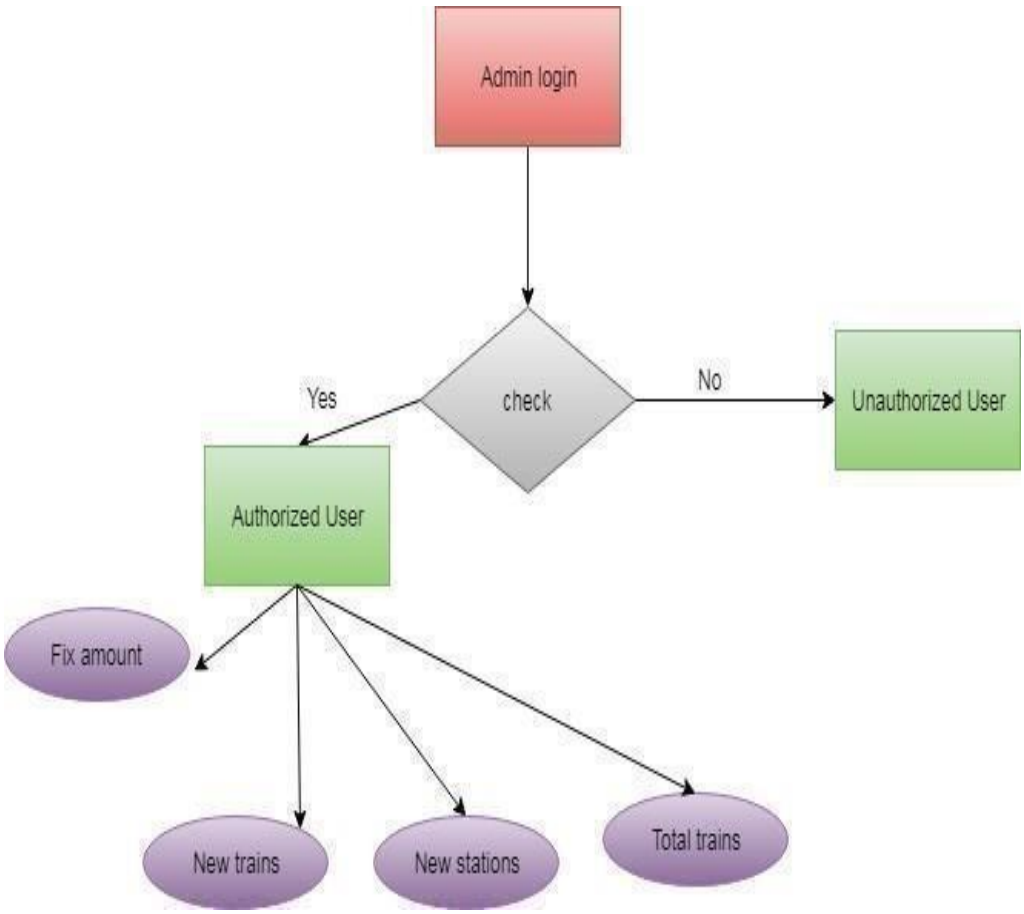

Fig. 4.13: ER Diagram of Admin

4.14 System design

4.14.1 Design process

1. The interface's structure and relationships are depicted in the interface outline. Consolidates a depiction of screen design, a significance of the strategies for cooperation, and a portrayal of course parts. The originator selects one of a variety of connection systems using Interface Control instruments to carry out route options.
2. The process of designing an interface begins with the identification of

the client, the project, and the natural requirements. Client situations are created and broken down to describe an arrangement of interface protests and activities after client errands have been identified.

3. Stylish diagram similarly called visual correspondence depicts the "look and feel" of the WebApp. incorporates geometric design and shading plans. Size of the content, position and style of the text, the use of designs, and related choices for style.
4. The design, structure, and blueprint of every content that is displayed as a part of the WebApp are characterized by the content plan. builds connections between items in the content.
5. The navigational path that connects all WebApp capabilities and substance objects is referred to as the navigation outline.
6. The architecture outline identifies the WebApp's general hypermedia structure. Engineering configuration is connected to the WebApp's goals, the content that will be displayed, the visitors, and the route logic that has been built.

- Content designing, revolves around the manner by which content fights and coordinated for presentation and course.
- WebApp design addresses the application's structure for managing client communication, internal preparation tasks, impact path, and presentation of content.

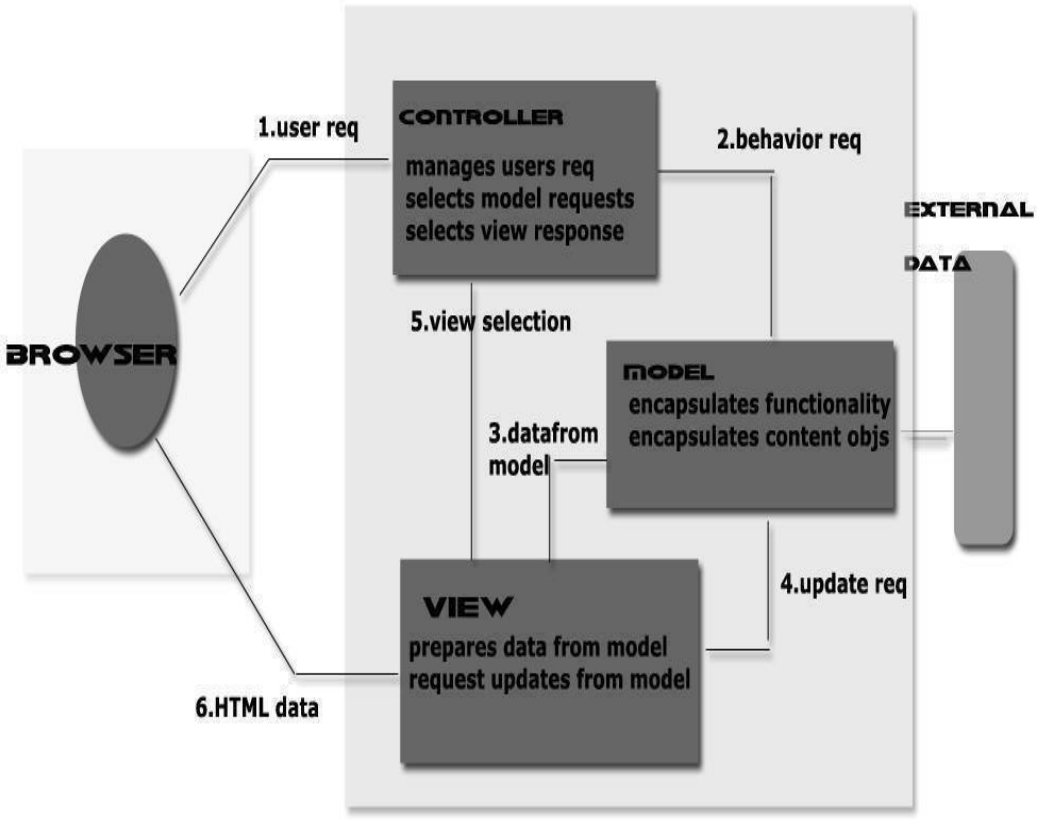

Fig. 4.14: MVC Architecture

4.15 Result

M-Ticket Booking Portal

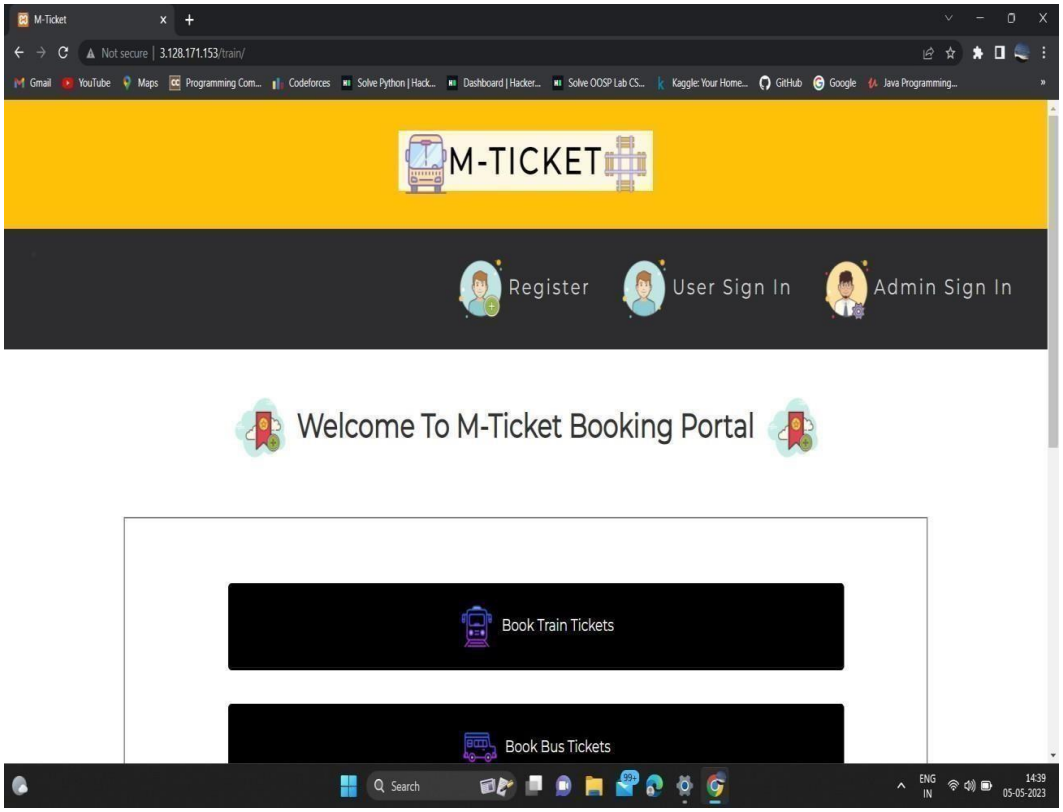

Fig. 4.15: M-Ticket Booking Portal Page

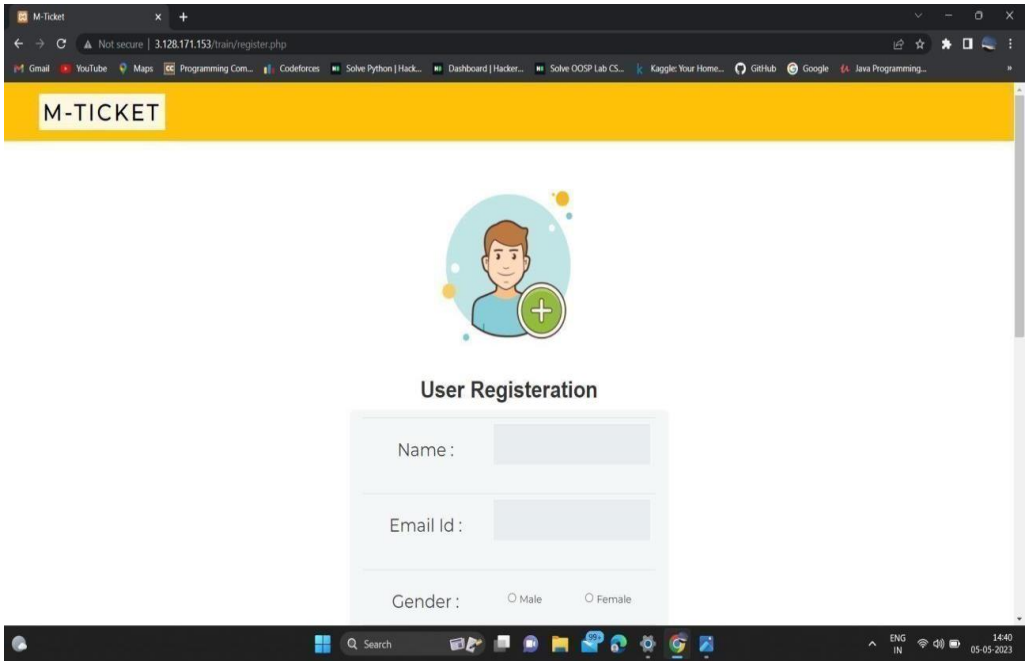

Fig. 4.16: M-Ticket user registration Page

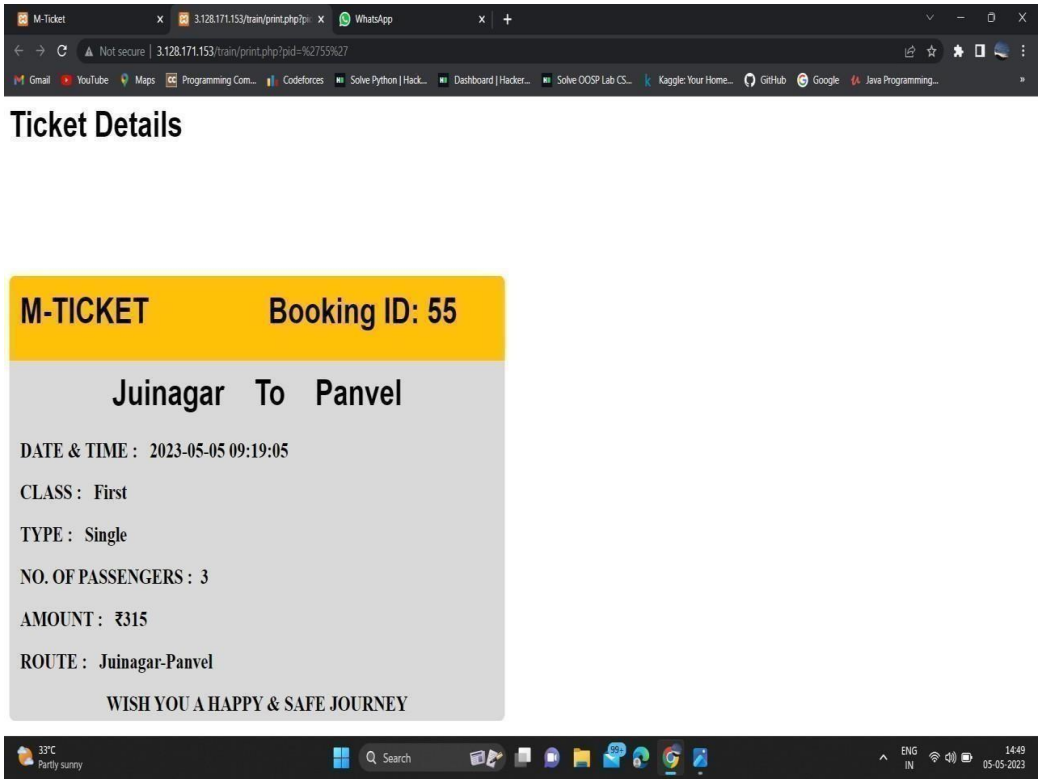

Fig. 4.17: Ticket details Page

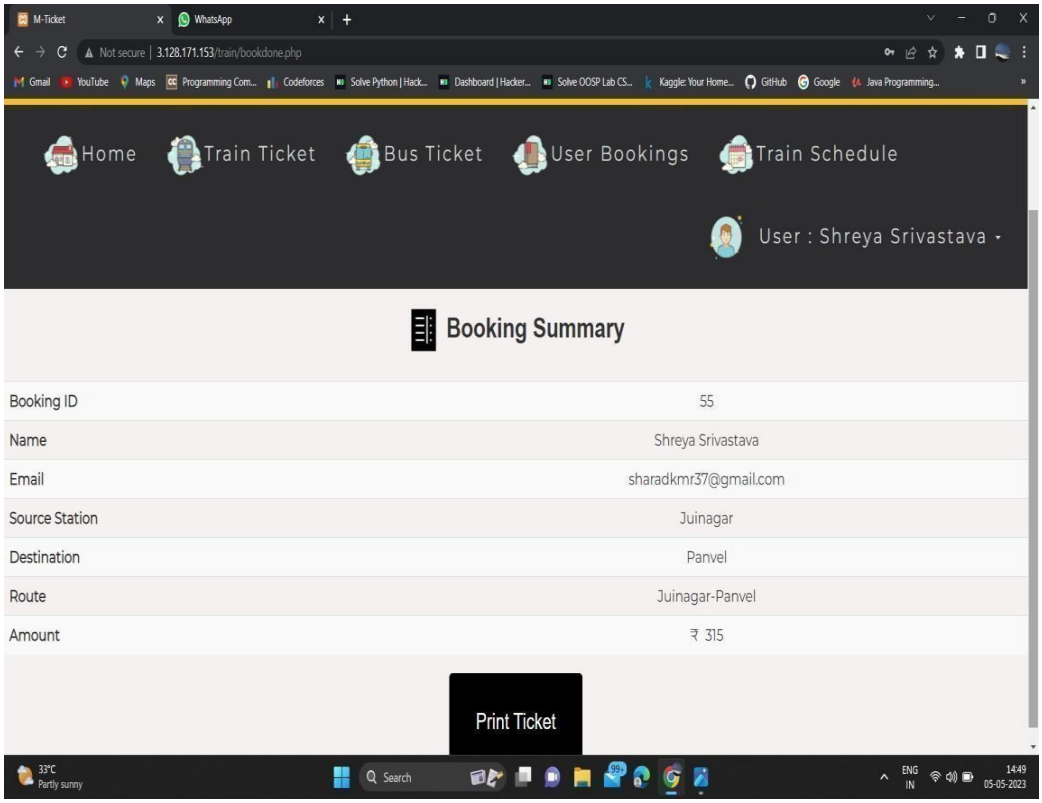

Fig. 4.18: Ticket summary Page

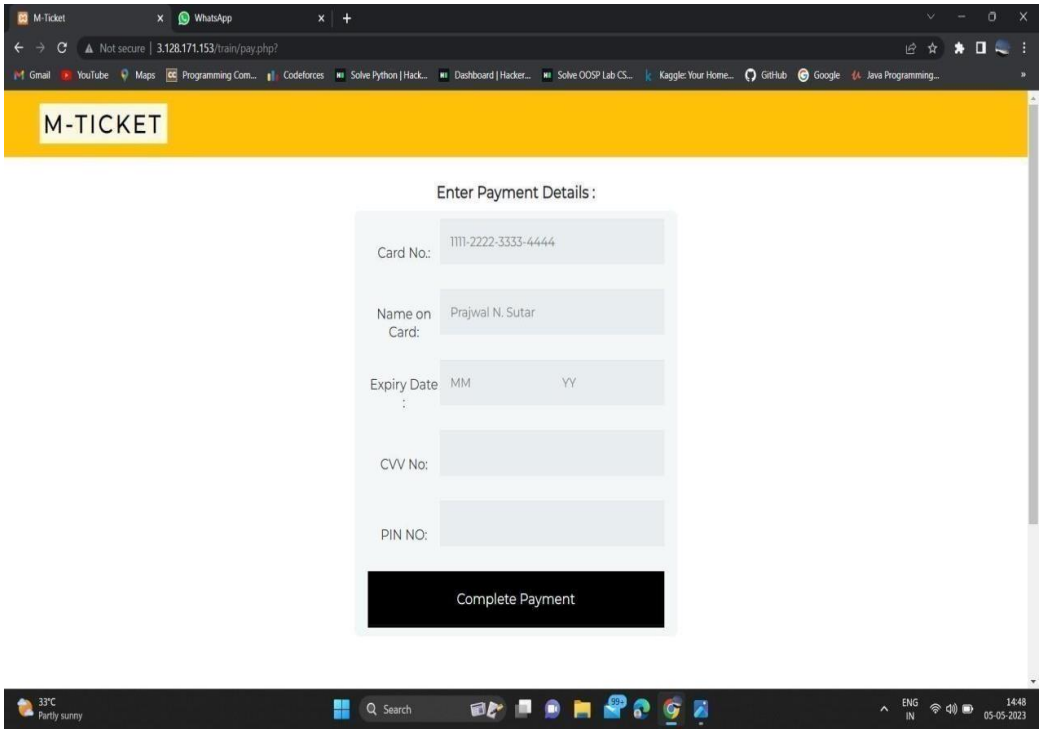

Fig. 4.19: Payment details

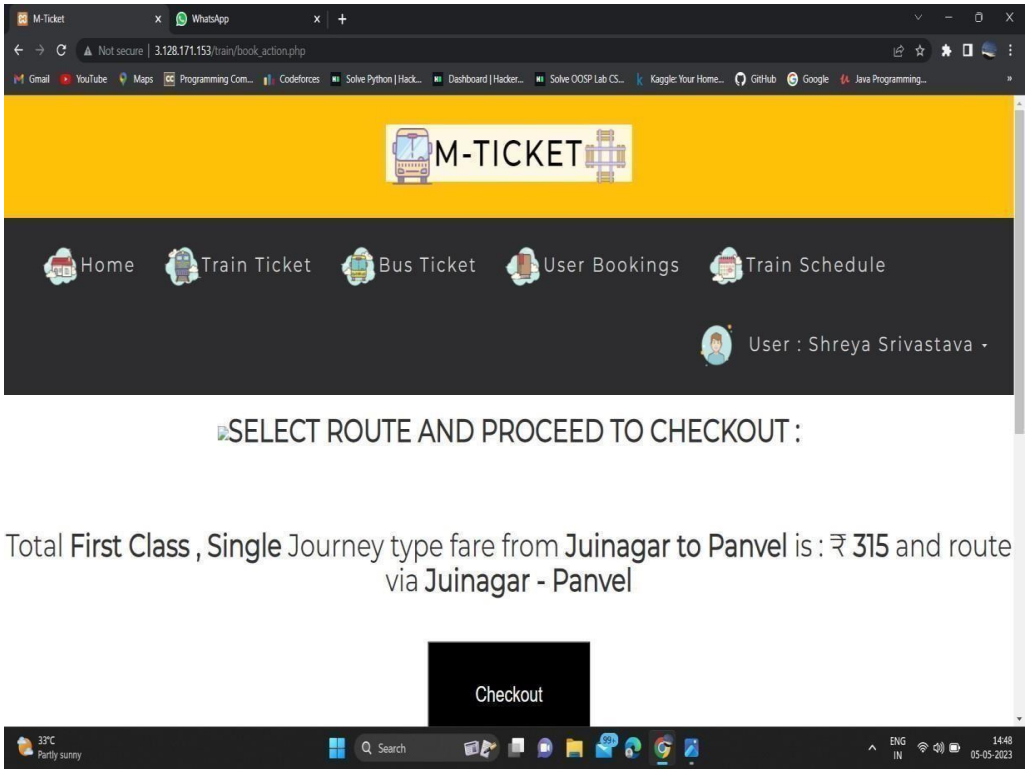

Fig. 4.20: Route details

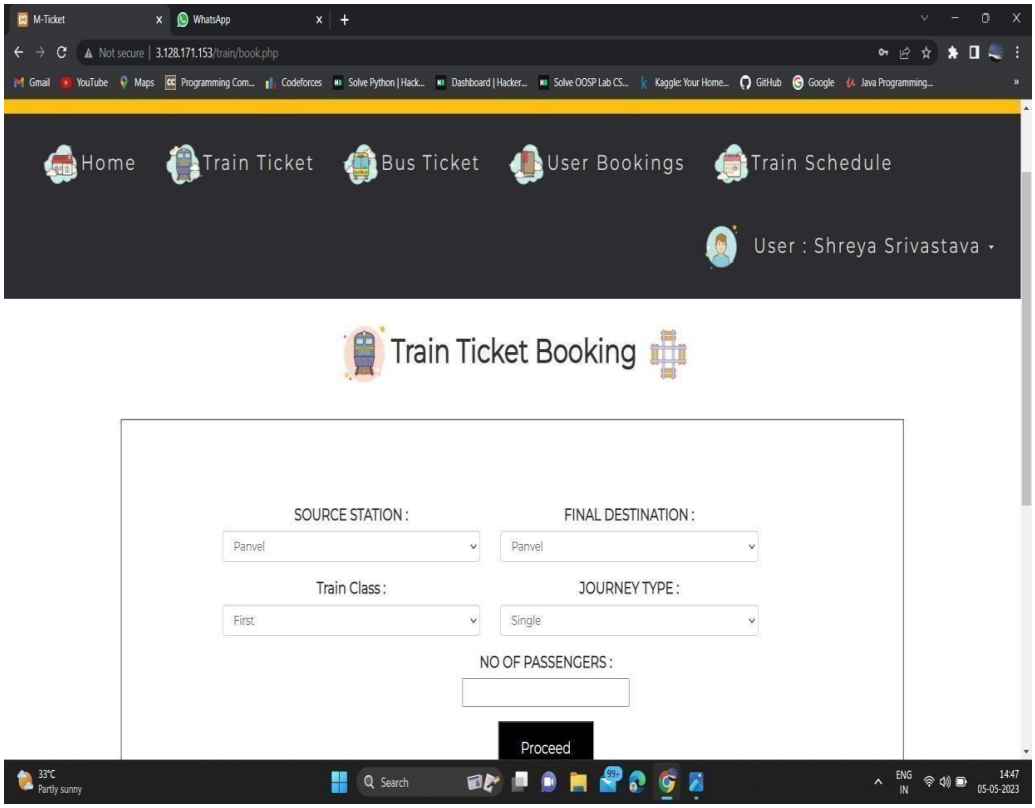

Fig. 4.21 Train Ticket Booking

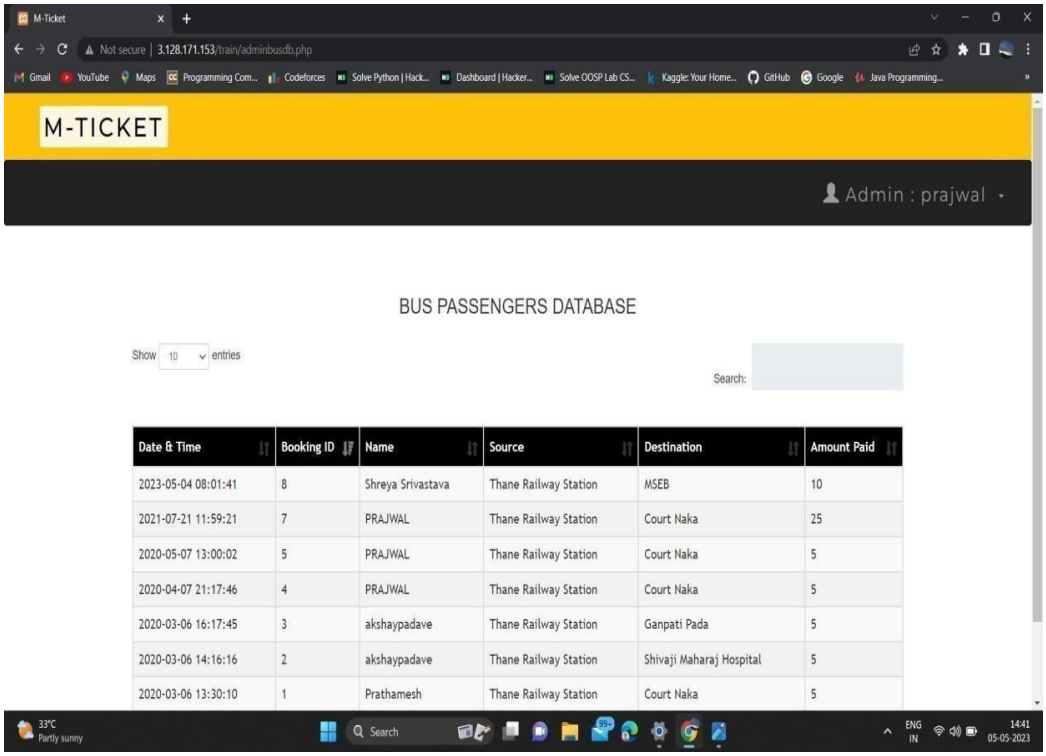

Fig4.22: Bus Passenger database

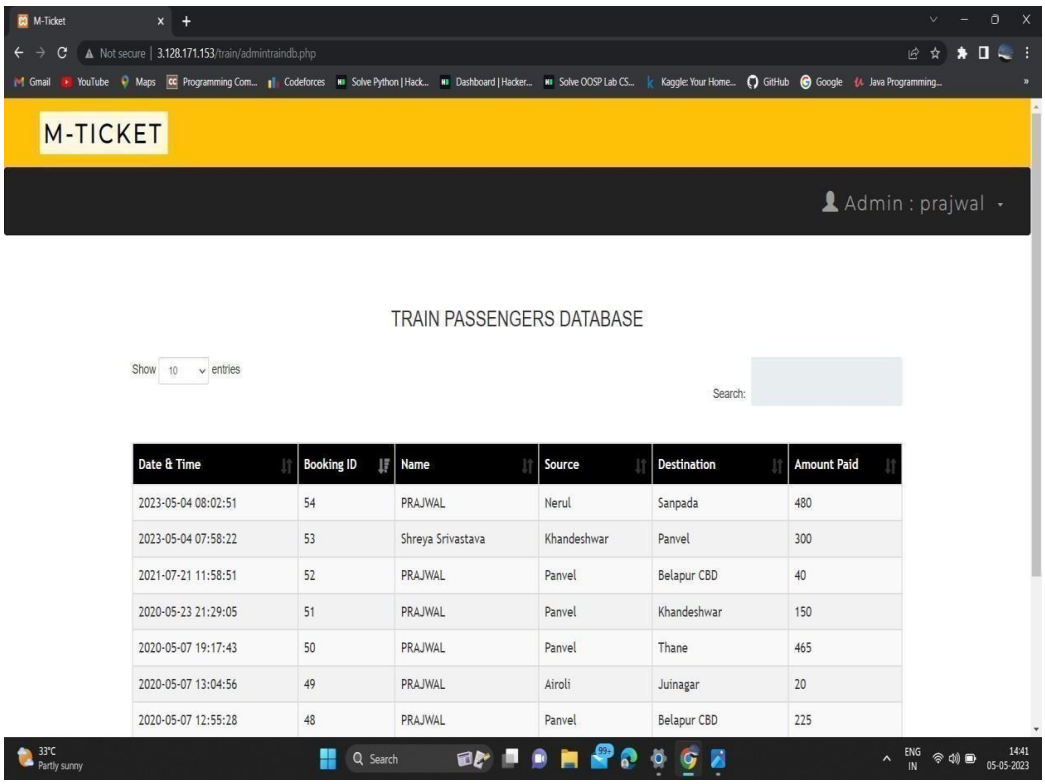

Fig. 4.23: Train Passenger database

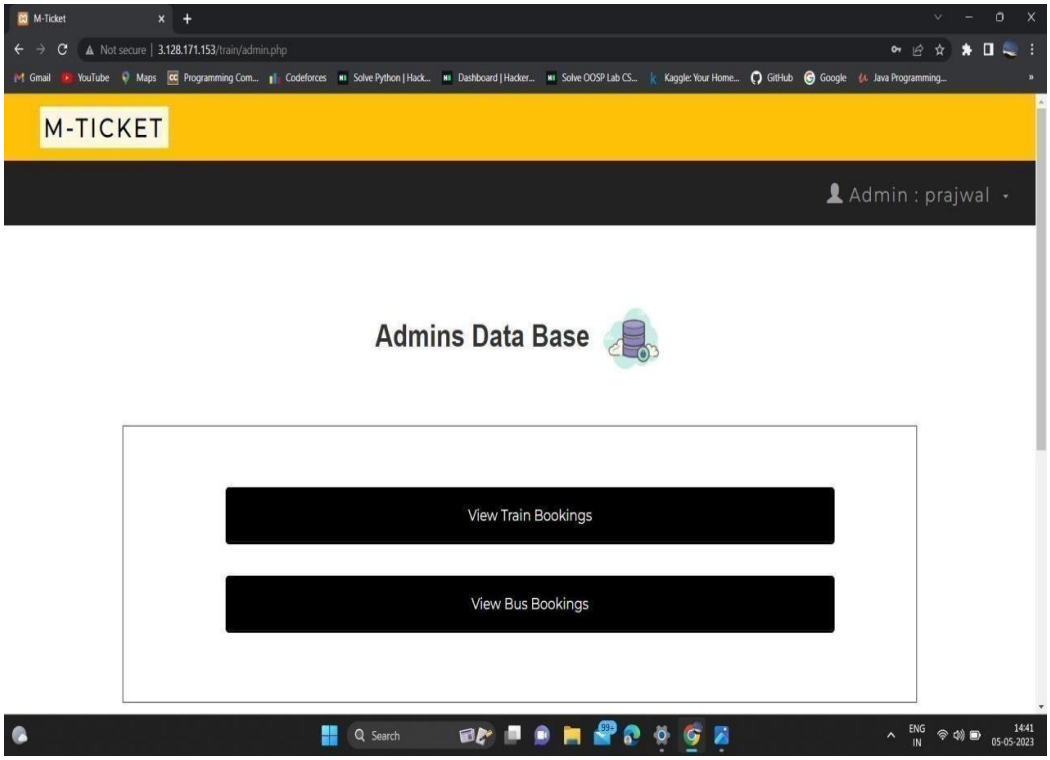

Fig. 4.24: Admin Database

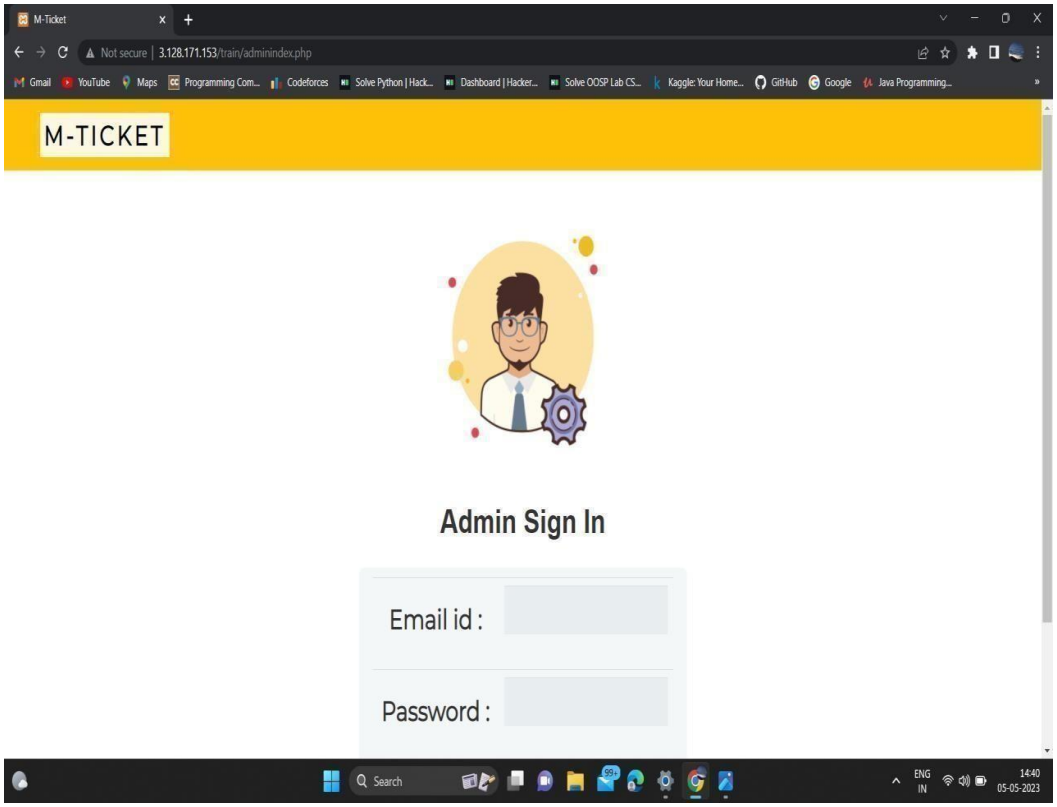

Fig. 4.25: Admin Login page

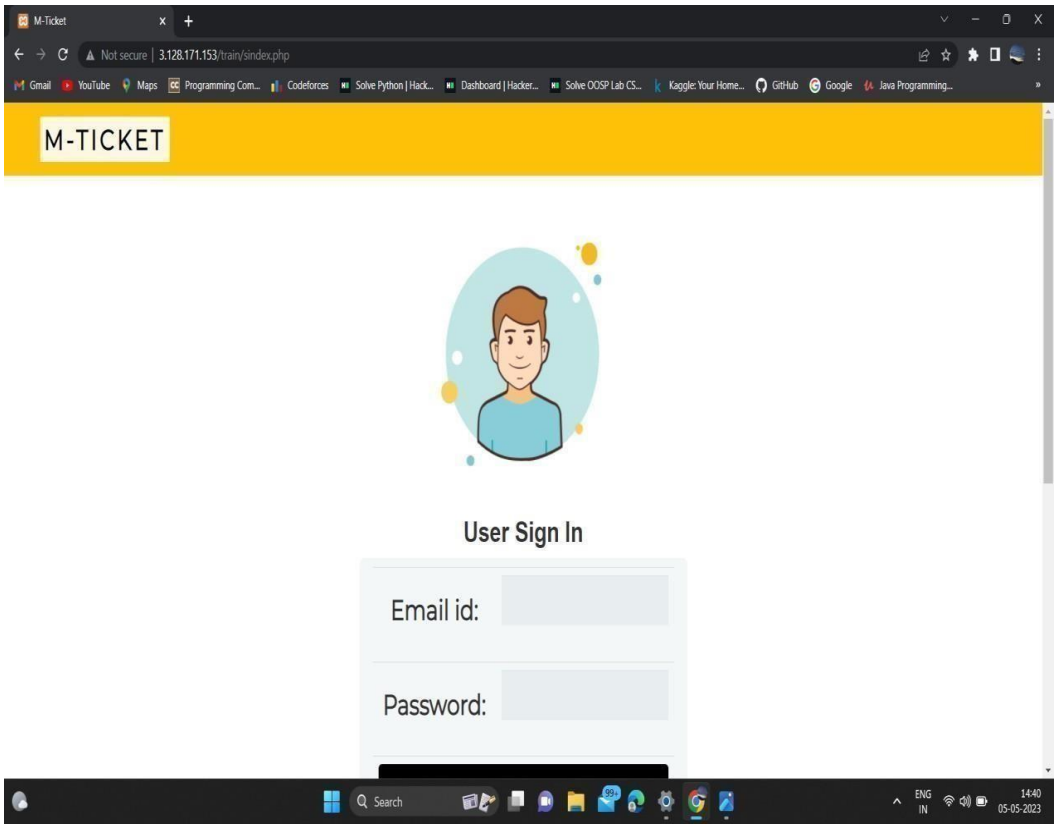

Fig. 4.26: User Login Page

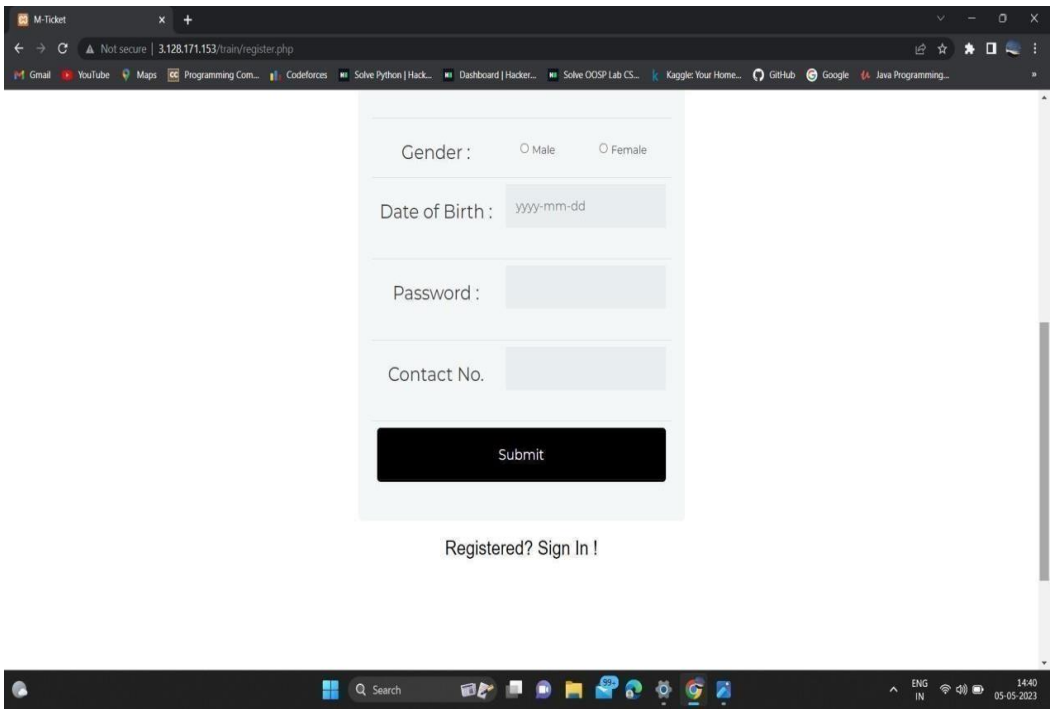

Fig. 4.27: Registration Page

Chapter 5: CONCLUSIONS

We have presented a train management system for time, distance, and new stations in this project. This system is simple to use for station staff and allows for the output of a variety of information to indicator boards as needed. To further develop traveler accommodation. In most cases, when information is changed, the details are entered using the Operation Management System (OTS system). However, if there is a significant disruption to the diagram, changes cannot be made quickly enough, so route control is done manually.

By combining information that is interconnected with information that is current on the line, In the event of a failure or accident, the status of the system is monitored to ensure prompt recovery, and functions are included to notify maintenance personnel of problems.

Additionally, the status of the current information can be checked to guarantee that passengers receive accurate information. In this final-year project, a flexible train ticketing system called M- Ticket was developed.

It speeds up, simplifies, and improves the booking process. No longer is it necessary to be present at the train office counter to book, pay for, or cancel a ticket, receive a refund, or take advantage of the student discount.

M-Ticket has carried out a few sorts of advancements, online administrations, online installment, discount coupon, SMS administrations, M-tickets and seats usage, however the extent of M- Ticket in this last year project, is to completely execute the web-based administrations (booking, wiping out) message to administrations (scratch-off, ticket status checking).

Since the M-Ticket system's goal is to offer flexibility and efficiency to the current reservation procedures, the recommendations for M-Ticket include

implementing waiting list features, m- ticket, and seat utilization. State-of-the-art, creator has executed every one of the designated executions that were expected to be finished in this last year project and for the suggested highlights which referenced previously; The intends to put them into action in the future.

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