*A project report on*

# MENTAL HEALTH PREDICTION USING TRANSCRIPT DATA

*Submitted in partial fulfilment for the award of the degree of*

## Masters of Data Science

*By*

**Praveen. T(23MDT0051)**


VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

**SCHOOL OF ADVANCED SCIENCES**

April 2025

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# DECLARATION

I hereby declare that the project entitled “MENTAL HEALTH PREDICTION USING TRANSCRIPT DATA” submitted by us, for the award of the degree of M.Sc. (Data Science)is a record of bonafide work carried out by him under the supervision of Prof. A.Manimaran.

I further declare that the work reported in this project has not been submitted and will not be submitted, either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university.

**Place:** Vellore
**Date:** **Signature of the Candidate**

# CERTIFICATE

This is to certify that the project entitled "ONLINE TRAVEL BOOKING SYSTEM" submitted by DEEPAK.R (20BCS0093), PRAVEEN.T (20BCS0082), School of Information Technology & Engineering, Vellore Institute of Technology, Vellore for the award of the degree B.Sc. (Computer Science) is a record of bonafide work carried out by them under my supervision.

The contents of this report have not been submitted and will not be submitted either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university. The Project report fulfils the requirements and regulations of VELLORE INSTITUTE OF TECHNOLOGY, VELLORE and in my opinion meets the necessary standards for submission.

18/04/2023

**Signature of the Guide** **Signature of the HoD**

**Internal Examiner** **External Examiner**

# ABSTRACT

The advent of the internet has altered the travel industry's landscape by making travel items easily accessible to the general public via their virtual rather than physical presence. The term "online travel agent," "e-travel agents," and "virtual travel agents" (VTAs) are also used to refer to the online travel portal (OTP). The idea of a travel agent emerged as a supplier-to-consumer connecting point. In the previous five to ten years, tech-savvy tourists have tended to prefer purchasing their travel services online, much like they do with physical things. Travel and tourism scholars have stressed the significance of the internet. As a result, new online travel firms have gradually replaced traditional travel agencies in the travel sector (OTA). OTAs resemble online booking resources or websites more because they can offer full-service solutions for booking travel. The online travel sector currently dominates the e-commerce market, and its significance is only expected to grow in the future. Yet, these websites may only be available to a select group of users, leaving the remainder behind. The implementation of features like voice command and face recognition for physically challenged people as well as for the general public is the focus of this article. Analysing internet travel businesses as well as evaluating the numerous difficulties they confront. The review of credible sources was used to accomplish the goals, and the paper's analysis of the state of the Indian market in relation to online travel agencies served as the foundation for that analysis. The study closed with suggestions for how internet travel firms can overcome the difficulties they are now facing.

# ACKNOWLEDGEMENT

It is my pleasure to express with deep sense of gratitude to Prof. S. Kalaivani. Assistant Professor Senior, Grade 2, Vellore Institute of Technology, for her constant guidance, continual encouragement, understanding; more than all, he taught me patience in my endeavour. My association with her is not confined to academics only, but it is a great opportunity on my part of work with an intellectual and expert in the field of E-commerce.

I would like to express my gratitude to DR.G. VISWANATHAN, Chancellor VELLORE INSTITUTE OF TECHNOLOGY, VELLORE, MR. SANKAR VISWANATHAN, DR. SEKAR VISWANATHAN, MR.G V SELVAM, Vice – Presidents VELLORE INSTITUTE OF TECHNOLOGY, VELLORE, DR. RAMBABU KODALI, Vice – Chancellor, DR. S. NARAYANAN, Pro-Vice Chancellor DR. PARATHA SHARATHI MALLICK and Dr. S. SUMATHY, Dean, School of Information Technology & Engineering (SITE), for providing with an environment to work in and for his inspiration during the tenure of the course.

In jubilant mood I express ingeniously my whole-hearted thanks to Dr. Parimala, HoD/Professor, all teaching staff and members working as limbs of our university for their not-self-centered enthusiasm coupled with timely encouragements showered on me with zeal, which prompted the acquirement of the requisite knowledge to finalize my course study successfully. I would like to thank my parents for their support.

It is indeed a pleasure to thank my friends who persuaded and encouraged me to take up and complete this task. At last but not least, I express my gratitude and appreciation to all those who have helped me directly or indirectly toward the successful completion of this project.

**Place:** Vellore
**Date:** **Name of the student**

# TABLE OF CONTENTS

## CHAPTER 5

## IMPLEMENTATION & TESTING



## CHAPTER 6

## RESULTS

## LIST OF FIGURES

# LIST OF TABLES

## LIST OF ACRONYMS

OTA – ONLINE TRAVEL AGENCY

CVV – CARD VERIFICATION VALUE

PSM – PROCESS SAFETY MANAGEMENT

CBT – COMPUTER BASED TEST

ICT – INFORMATION COMMUNICATION TECHNOLOGY

HTML – HYPER TEXT MARKUP LANGUAGE

CSS – CASCADE STYLE SHEET

# Chapter 1
# Introduction

## 1.1 BACKGROUND

Nowadays, almost everyone has some mental health disorders, like depression, anxiety, and post-traumatic stress disorder (PTSD), which have become a world concern that affects millions of people. Traditional diagnostic techniques frequently rely on the subjective evaluation of mental health professionals. With advancements in Natural Language Processing, automated systems can analyze text-based conversations, such as therapy transcripts, to more accurately identify mental health issues.

## 1.2 MOTIVATION

Mental health issues often go undiagnosed due to the limit access to professionals. As text-based therapy becomes more popular, automated tools can assist in identifying issues at an early stage. Developments in natural language processing enable the examination of language patterns in therapy session transcripts.

## 1.3 PROJECT STATEMENT

The aim of this project is to develop a model to predict mental health using therapy transcript data. The BERT (Bidirectional Encoder Representations from Transformers) pre-trained model was used to fine-tune the classification of mental health conditions, and the model was optimized using the AdamW (Adaptive Moment Estimation Weight Decay) optimizer for better performance by analyzing the text and predicting the mental health condition.

## 1.4 OBJECTIVES

The objective of this project is to create a model that is used to predict mental health using transcript data. This model is processed with a BERT pre-trained model for text classification to find mental health conditions like depression, anxiety, etc. With the help of the AdamW optimizer, is used to improve the model's

performance during the training process. By analyzing the emotions and patterns in the transcript, the project aims to predict mental health and assist in understanding mental health conditions more easily and effectively.

## 1.5 SCOPE OF THE PROJECT

- Analysis of therapy session transcripts using NLP techniques.
- Preprocessing of text data for effective model input.
- Classification of text into mental health categories like depression or anxiety.

## Chapter 2

# Literature Survey

## 2.1 SUMMARY OF THE EXISTING WORKS

| s.no | title | Merits | Demerits |
|---|---|---|---|
| 1. | Online travel agencies and their role in the tourism industry | This article shows the evolution of online travel agencies, the main themes, authors, and methodologies, through a systematized review. The analysis has focused on 61 papers published from 2009 until 2020. This study helps to collaborate in the authors' decision making regarding the methodology to be used and which authors are being negotiated in futureresearch. The resultsshowed how the theme has evolved, changes in approaches, the way online travel agencies report to their partners (often in a conflictual way) and customers, pointing out new trends to be studied. | The research was limited by the journal ranking in the subject category tourism, leisure and hospitality management, furthermore the research is from 2009 to 2020 so the methodologies used at that time period cannot be used to determine today's environment. |
| 2. | Consumer Online Search with Partially revealed information | This paper provides information about thesearch platform and its two layers of information presentation. This paper also shows using a unique and rich panel tracking | This paper does not the necessary steps to overcome or prevention of information leak thus it only tells about howthe information leaking works in the layer. |

| | | | |
|---|---|---|---|
| | | consumer search behaviors at a large online travel agency (OTA), we specify a novel sequential search model that jointly describes the refinement search and product clicking decisions. We find that cognitive cost is a major component of search cost, while loading time cost has a much smaller share. | |
| 3. | How do online hotel consumers perceive room rates? | Here the authors investigate and talks about the price sensitivity of the Online Travel Agency (OTA) consumer segments, using price sensitivity measurement (PSM) by using factor analysis and cluster analysis. The results showed four OTAconsumer segments, i.e., planned bargain seekers,enthusiastic shoppers, deal hunters, and apathetic shoppers. Differences in price sensitivity was confirmed among these segments. This study uncovers the characteristics of OTA consumers who are more (less) price sensitive. By using PSM, this study presents and compares the optimal pricing points | This paper only shows about the theoretical implications. |

| | | | |
|---|---|---|---|
| | | across the customer segments in terms of monetary values. | |
| 4. | research on the influence of emotional labour on the service recovery effect of online travel agency | This study uses the situational experiment method to explore the effects of OTA employees' emotional intelligence and emotional labour (surface behaviour and deep behaviour) on the effect of service recovery. The results show that the emotional intelligence of OTA employees has a positive impact on the surface behaviour and deep behaviour; the emotional intelligence and deep behaviour of employees have a significant positive impact on service recovery satisfaction, this paper also proves service recovery satisfaction has a positive impact on customer loyalty. | This research is mainly focused on the behaviour and emotional state of the employee with assumptions. |
| 5. | winning tourism digitalization opportunity in the Indonesia CBT business | This research aims to examine the opportunities of Information Communication Technologies (ICT) and its use for the rural tourism businesses. The study used purposive random sampling of presence of tourist villages product in the | This paper is based on Indonesia. |

| | | | |
|---|---|---|---|
| | | Online Travel Agency (OTA) application in Indonesia. | |
| 6. | The impact of positioning on-click through rates in hotel metasearch engines | This paper shows the importance of metasearch as a distribution channel within the hotel industry has the potential to provide hotels less dependency on online travel agencies.it also about the hotels compete against popular and trustworthy online travel agencies, the minimalist and functional design of metasearch platforms might help consumers differentiate among the options, possibly impacting the decision-making process. | This paper does not talk about the sacrifice of details in order to achieve the result. |
| 7. | Online Travel portal and their Effect on travel agency | In the paper the authors explain the intermediary means between service providers and tourists, while the internet has reduced the significance of the traditional intermediary (travel agents) or to a large extent, the traditional part became very uncommon in today's practice. This paper examines perceptions of tourists traveling from eastern Uttar Pradesh who had not only used | This paper does not explain about in what other ways it affects the travel agency rather than through web portals. |

| | | | |
|---|---|---|---|
| | | traditional methods but also booked their itinerary through at least one travel website and Web Portals which can relate their experience in using them and their opinion upon disintermediation. | |
| 8. | Strengths of online travel Agencies from the perspective of the digital tourist | In this the author reviews the movement of the current distribution landscape toward disintermediation as the Internet and mobile technologies provide consumers with more and more tools for researching suppliers/providers and purchasing products and services directly to strengthen the OTA. | This paper does not tell about the position of online tourism retailers in the digital environment. |
| 9. | Understanding of online hotel booking process | In this paper the authors discuss about the process of the online hotel booking system which reduces the need of physical presence in the hotel to book the reservation rather than doing it via online. | This paper does not tell about the features that helps this system to work. |
| 10. | Online Bus Reservation System | This paper explains how bus reservation system deals with maintenance of records of details of each passenger. While it also includes maintenance of information like schedule and details of each bus. By | This paper does not tell about the errors they are faced during data entry and the time taken to implement these data. |

| | | | |
|---|---|---|---|
| | | understanding this we can get a clear view of thesystem works and how they are maintaining records of passenger details, seat availability, price per seat, bill generation and other things. | |

*Table 2.1 Summary on the existing systems*

**Chapter 3**

# Requirements

## 3.1 FUNCTIONAL REQUIREMENTS

### 3.1.1 PRODUCT PRESPECTIVE

The product is supposed to be an open source, under the general Public License. It is a web-based system implementing client-server model. The portal System provides simple mechanism for users to share and acquire knowledge.

### 3.1.2 USER CHARACTERISTICS

It is considered that the user does have the basic knowledge of operating the internet and to have access to it. The administrator is expected to be familiar with the interface of the tech support system.

### 3.1.3 ASSUMPTION AND DEPENDENCIES

This software highly depends on type and version of browser being installed in the system i.e., browser version should be used which have HTML5 support.

### 3.1.4 DOMAIN REQUIREMENTS

Domain requirement is the Requirement that comes from the application domain of the system that reflects the characteristics of that domain. Therefore, as our System is an inventory System, the domain requirement of this system should concern about the requirements that reflect characteristic of Inventory System.

## 3.2 NON- FUNCTIONAL REQUIREMENTS

### 3.2.1 SPACE EFFICIENCY

Storage efficiency is the ability to store and manage data that consumes the least amount of space with little to no impact on performance; resulting in a lower total operational cost. Efficiency addresses the real-world demands of managing costs, reducing complexity and limiting risk

### 3.2.2 TIME EFFICIENCY

The state or quality of being efficient, or able to accomplish something with the least waste of time and effort is Time efficiency; competency in performance. And accomplishment of or ability to accomplish a job with a minimum expenditure of time and effort.

### 3.2.3 PORTABILITY

Portability is a characteristic attributed to a computer program if it can be used in an operating system other than the one in which it was created without requiring major rework. Porting is the task of doing any work necessary to make the computer program run in the new environment.

### 3.2.4 USABILITY

Usability is the ease of use and learnability of a human-made object such as a tool or device. In software engineering, usability is the degree to which a software can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use.

## 3.3 HARDWARE REQUIREMENTS

| | |
|---|---|
| **Processor** | >= Intel i3 |
| **RAM** | At least 4GB |
| **Hard disk** | 100GB or more |

*Table 3.1 Hardware Requirements*

## 3.4 SOFTWARE REQUIREMNETS

| | |
|---|---|
| **Operating system** | Windows10/Windows11 |
| **Coding Language** | HTML |

| | |
|---|---|
| **Front-end** | HTML, CSS, JavaScript, Python |
| **Back-end** | PHP, MySQL |
| **Connection** | XAMPP |

*Table 3.2 Software Requirements*

## 3.5 GANTT CHART

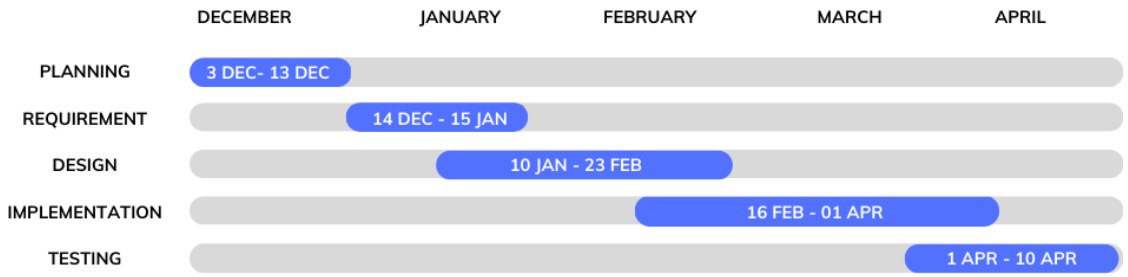



*fig 3.1 Gantt Chart*

The above (fig 4.1) shows the Gantt chart of the system, this includes planning, requirement, design, implementation and testing.

Chapter 4

# Analysis & Design

## 4.1 PROPOSED METHODOLOGY

The simulation first starts with user entering his/her credentials (name, Email password) using voice command and also customer can use the image Recognition for register propose. Using the both way customer can be verified. After verify user are guided with help voice assistant and voice commands the user can navigate through the website with ease, then the customer can choose from the various amenities which are available, which then proceeds to customer entering the appropriate details to fulfil their requirements, then personal details for conformation and finally payment, thus shown in the (fig 4.1).

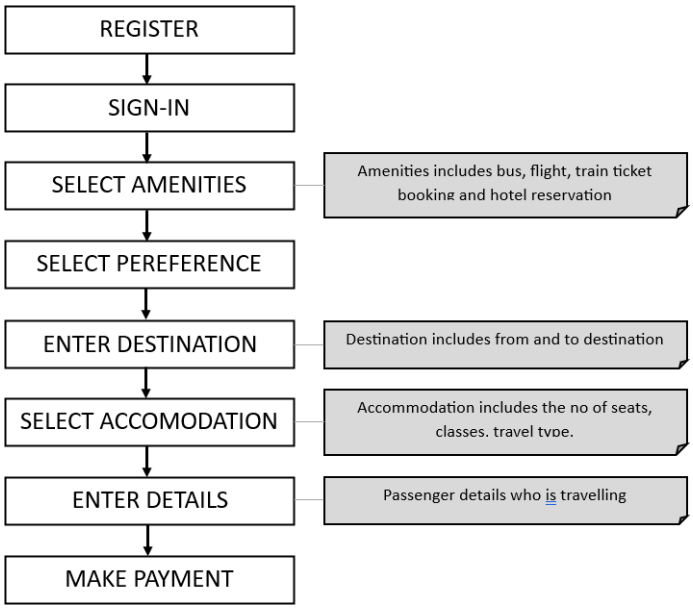



*fig 4.1 block diagram about how the system flows*

## 4.2 SYSTEM ARCHITECTURE

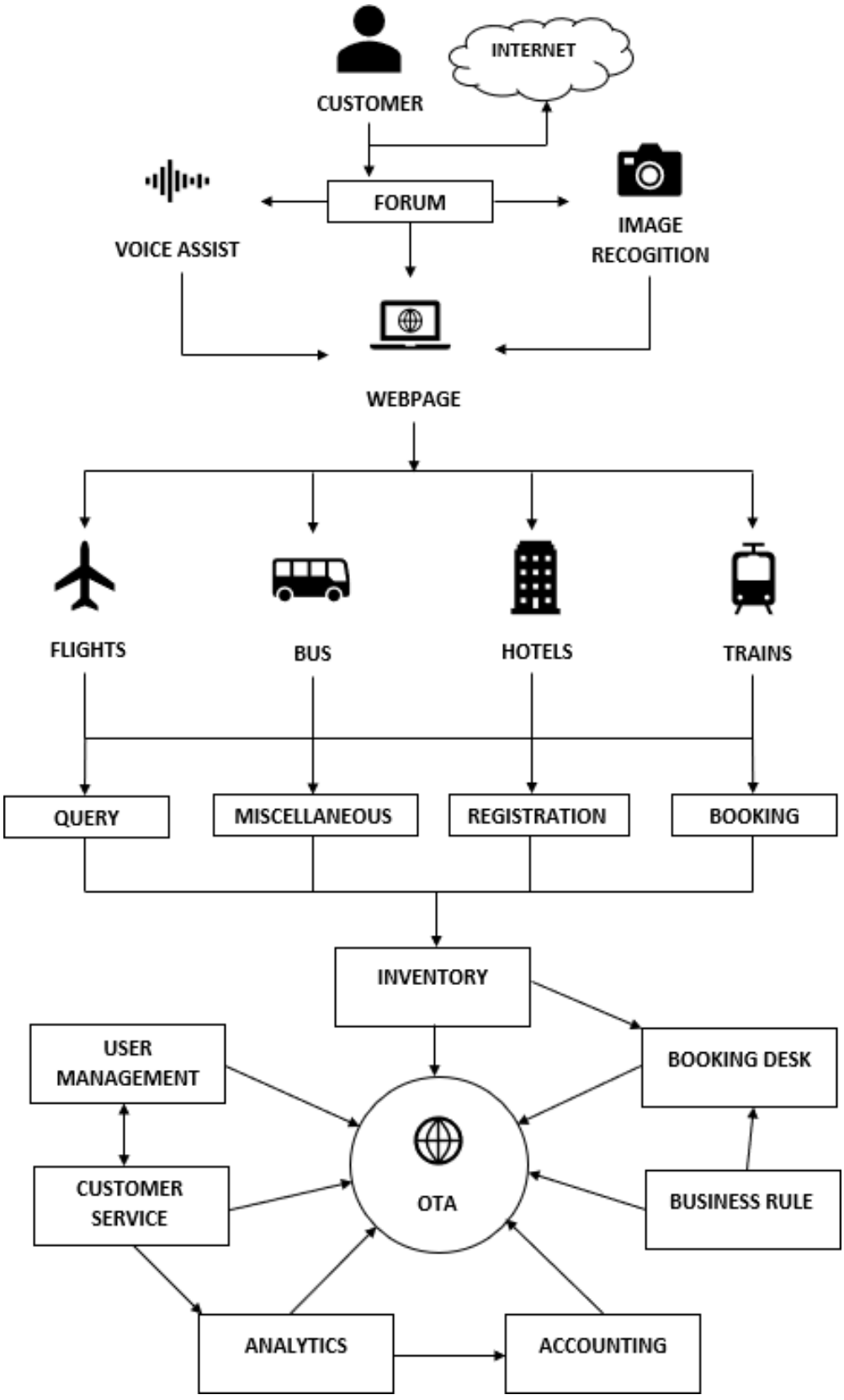



*fig 4.2 architecture diagram*

## 4.3 UML DIAGRAMS

### 4.3.1 USECASE DIAGRAM

The below diagram (fig 4.3) shows the interaction between the user and the OTA platform, this includes user functionalities like log in, book tickets, payment, feedback etc., to the system and OTA functionalities like the various amenities present in the system.

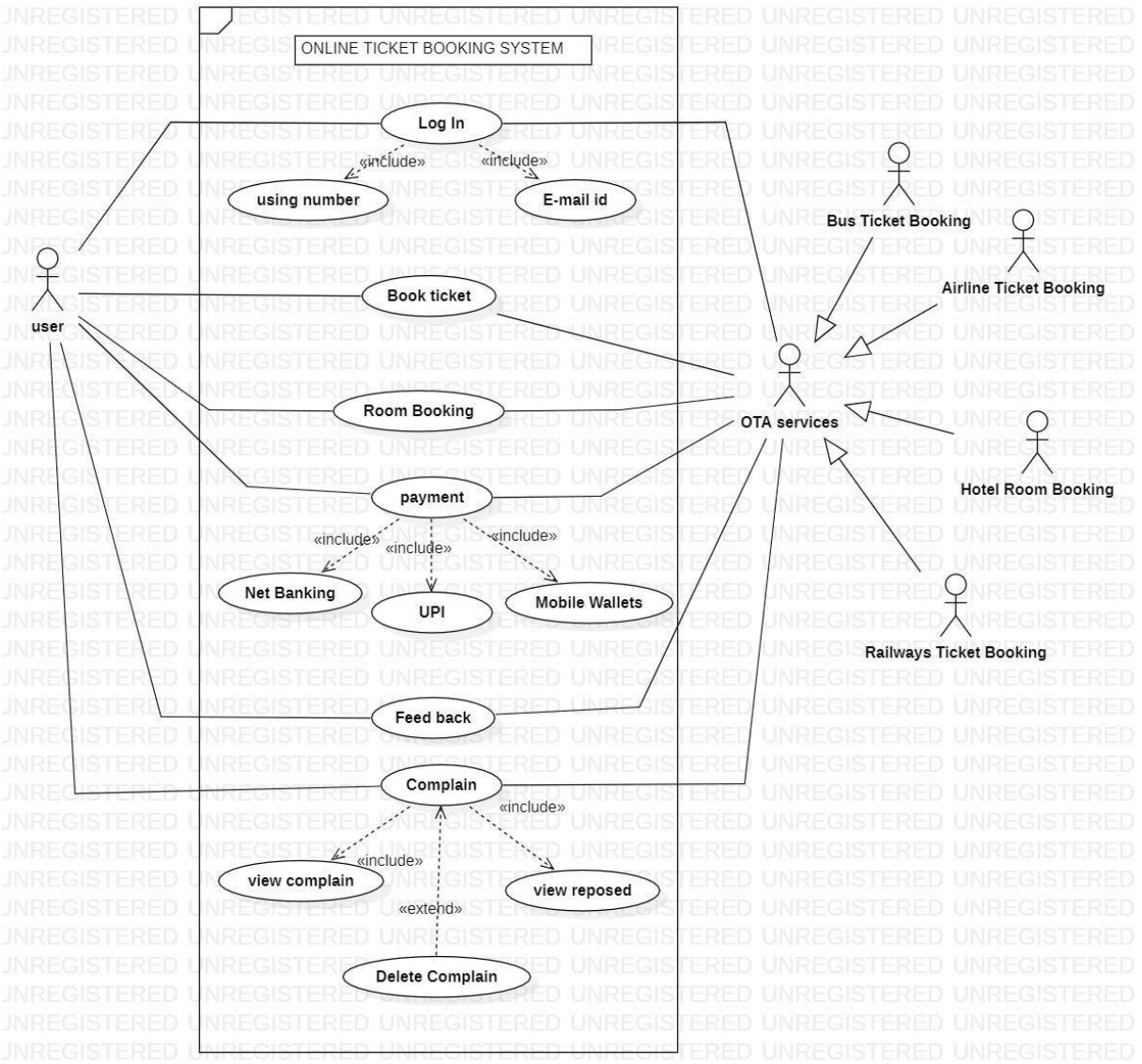



*fig 4.3 Usecase diagram*

### 4.3.2 USECASE SPECIFICATION

#### 4.3.2.1 USECASE SPECIFICATION FOR LOG IN

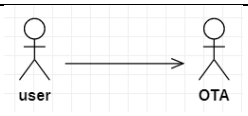
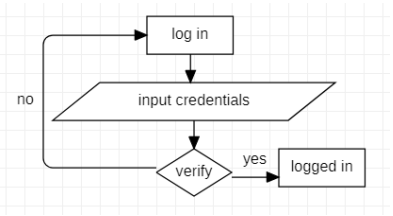
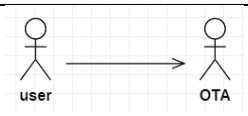
| Usecase | Log in |
|---|---|
| Description | An act of logging into a computer, a database or a system |
| Actors |  |
| Pre-Condition | - |
| Post-Condition | After login the user can proceed to book tickets. |
| Flow of event | Normal flow:<br>  |
| | Alternate Flow:<br>Log in → unable to log in<br>→ incorrect credentials |
| Extension | Using number → log in using your number.<br>E-mail id → log in using your E-mail id |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.1 Usecase description for 1og in*

The above image (table 4.1) shows the Usecase description of log in which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

#### 4.3.2.2 USECASE SPECIFICATION FOR BOOK TICKET

| Usecase | Book ticket |
|---|---|
| Description | The process of reserving a ticket for a destination. |
| Actors |  |
| Pre-Condition | Log in |
| Post-Condition | After select the book ticket option the is proceeded to room booking |
| Flow of event | Normal flow: |

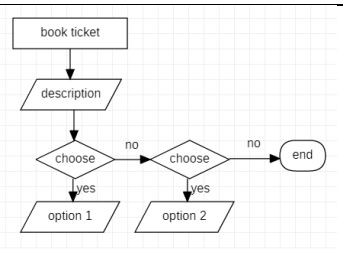
| | |
|---|---|
| |  |
| | Alternate Flow:<br>Book ticket → unable to book ticket<br>→ page unavailable |
| Extension | - |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.2 Usecase description for Book ticket*

The above image (table 4.2) shows the Usecase description of book ticket which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

4.3.2.3 USECASE SPECIFICATION FOR ROOM BOOKING

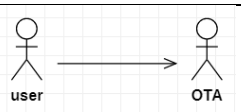
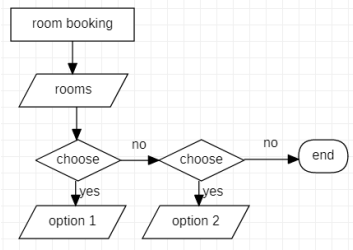
| | |
|---|---|
| Usecase | Room booking |
| Description | The process of booking a room for stay. |
| Actors |  |
| Pre-Condition | Book ticket |
| Post-Condition | After choosing the desired room then the user is navigated to payment. |
| Flow of event | Normal flow:<br>  |
| | Alternate Flow:<br>Room booking → unable to book room<br>→ room unavailable |
| Extension | - |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.3 Usecase description for room booking*

The above image (table 4.3) shows the Usecase description of *room booking* which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

4.3.2.4 USECASE SPECIFICATION FOR PAYMENT

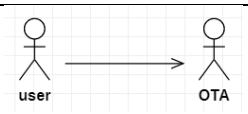
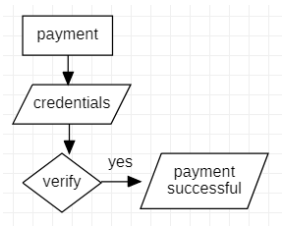
| Usecase | Payment |
|---|---|
| Description | The process of paying for your purchase |
| Actors |  |
| Pre-Condition | Room booking |
| Post-Condition | After payment the user can provide feedback |
| Flow of event | Normal flow:<br>  |
| | Alternate Flow:<br>Payment → payment unsuccessful<br>→ incorrect credentials |
| Extension | - |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.4 Usecase description for payment*

The above image (table 4.4) shows the Usecase description of *payment* which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

4.3.2.5 USECASE SPECIFICATION FOR FEED BACK

| Usecase | Feed back |
|---|---|
| Description | The process of providing personal experience about |

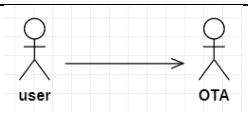
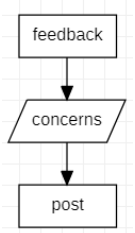
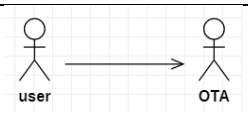
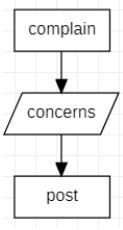
| | |
|---|---|
| | something. |
| Actors |  |
| Pre-Condition | Payment |
| Post-Condition | After given feedback the user can post complain if necessary. |
| Flow of event | Normal flow:<br>  |
| | Alternate Flow:<br>Feedback → feedback unsuccessful<br>→ error getting feedback details |
| Extension | - |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.5 Usecase description for feedback*

The above image (table 4.5) shows the Usecase description of *feedback* which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

4.3.2.6 USECASE SPECIFICATION FOR COMPLAIN

| | |
|---|---|
| Usecase | Complain |
| Description | Process of showing any discomfort or concerns. |
| Actors |  |
| Pre-Condition | Feed back |
| Post-Condition | - |
| Flow of event | Normal flow:<br>  |
| | Alternate Flow:<br>Complain → Complain unsuccessful |

| | |
|---|---|
| | → error posting complains |
| Extension | View complains → review the posted complain<br>Delete complain → delete existing complain<br>View response → view the response for the complain |
| Special Requirement | • Usability<br>• Accessibility<br>• Flexibility |

*Table 4.6 Usecase description for complain*

The above image (table 4.6) shows the Usecase description of *complain* which consist of Usecase, description, actors, pre & post condition, flow of event, extension and special requirements.

4.3.3 ACTIVITY DIAGRAM

4.3.3.1 FOR FLIGHT TICKET BOOKING

The below activity diagram (fig 4.4) for flight ticket booking shows the flow of the flight booking system, this starts by the user selecting the book flights option, then entering the arrival and departure location, date, month, year then the user can search flights. After selecting the desired flight, the user has to select the number of passengers and enter details about the passengers which consist of number of children, adults, senior citizen, class category and personal details, then finally payment.

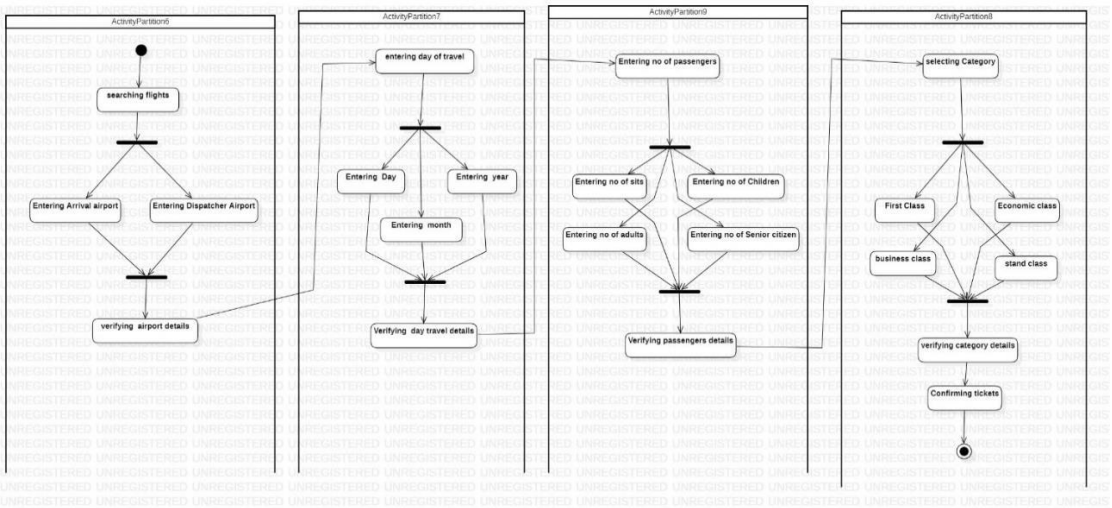



*fig 4.4 flight ticket booking activity diagram*

4.3.3.2 FOR BUS TICKET BOOKING

The below activity diagram (fig 4.5) for bus ticket booking shows the flow of the bus booking system, this starts by the user selecting the book bus option, then entering the arrival and departure location, date, month, year then the user can search buses. After selecting the desired bus, the user has to select the number of passengers and enter details about the passengers which consist of number of children, adults, senior citizen, class category and personal details, then finally payment.

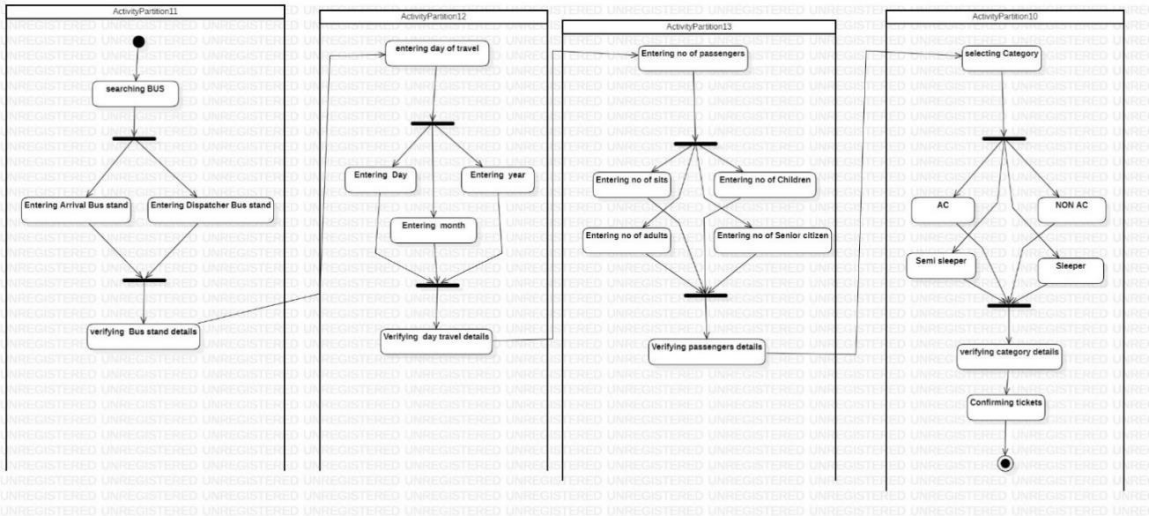



*fig 4.5 bus ticket booking activity diagram*

4.3.3.3 FOR TRAIN TICKET BOOKING

The below activity diagram (fig 4.6) for train ticket booking shows the flow of the train booking system, this starts by the user selecting the book train option, then entering the arrival and departure location, date, month, year then the user can search trains. After selecting the desired train, the user has to select the number of passengers and enter details about the passengers which consist of number of children, adults, senior citizen, class category and personal details, then finally payment.

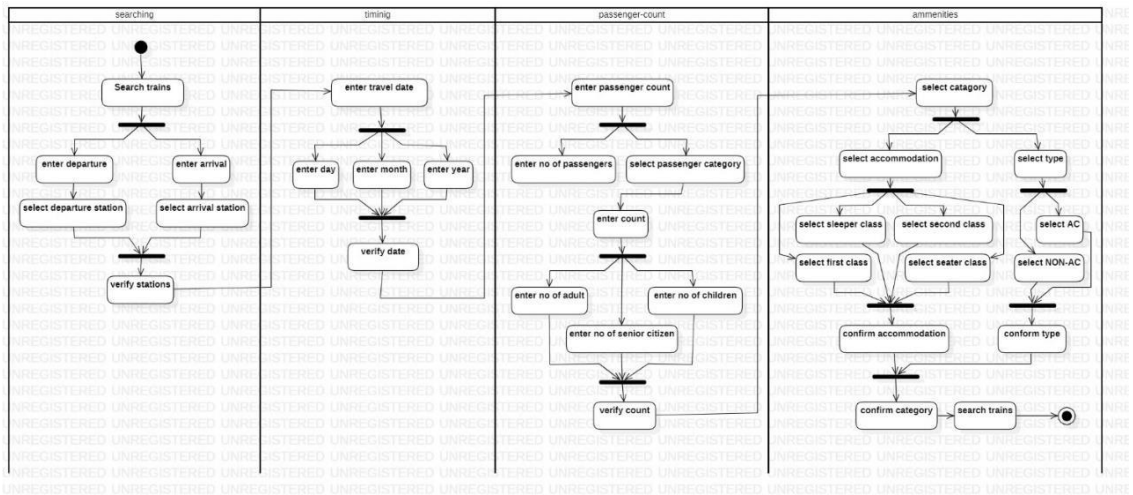



*fig 4.6 train ticket booking activity diagram*

4.3.3.4 FOR HOTEL RESERVATION

The below activity diagram (fig 4.7) for hotel reservation shows the flow of the hotel reservation system, this starts by the user selecting the book hotel option, then entering the location of stay along with date, month, year then the user can search hotels. After selecting the desired hotel, the user has to selectthe number of customer and enter details about the customer which consist of number of children, adults, senior citizen, accommodation and personal details, then finally payment.

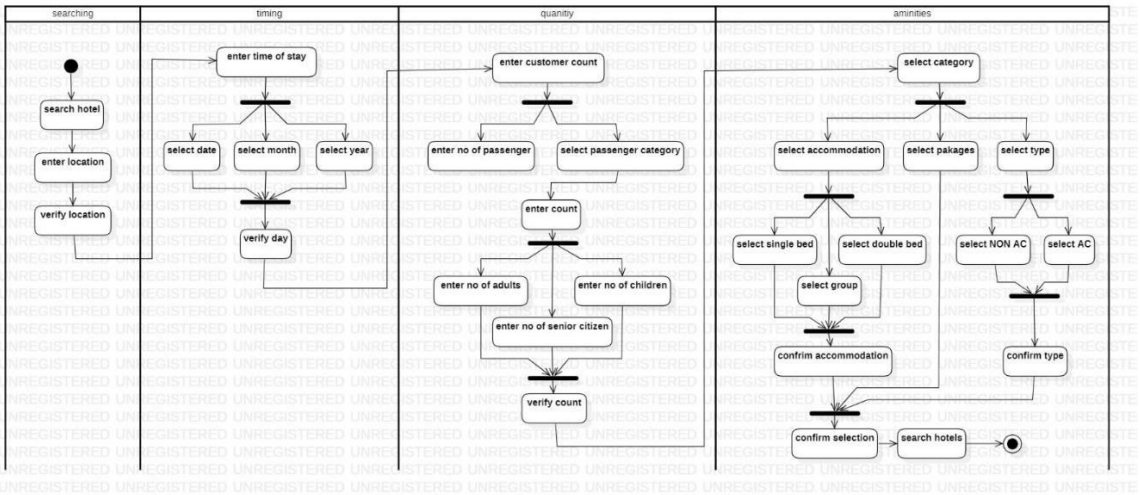



*fig 4.7 hotel reservation activity diagram*

4.3.4 SEQUENCE DIAGRAM

The below sequence diagram (fig 4.8) shows the entire the interaction between the user and the OTA platform this includes registration, log in, sign in and it alsoincludes the interaction with the amenities like flight booking, train booking, flight booking and hotel reservation then finally payment.

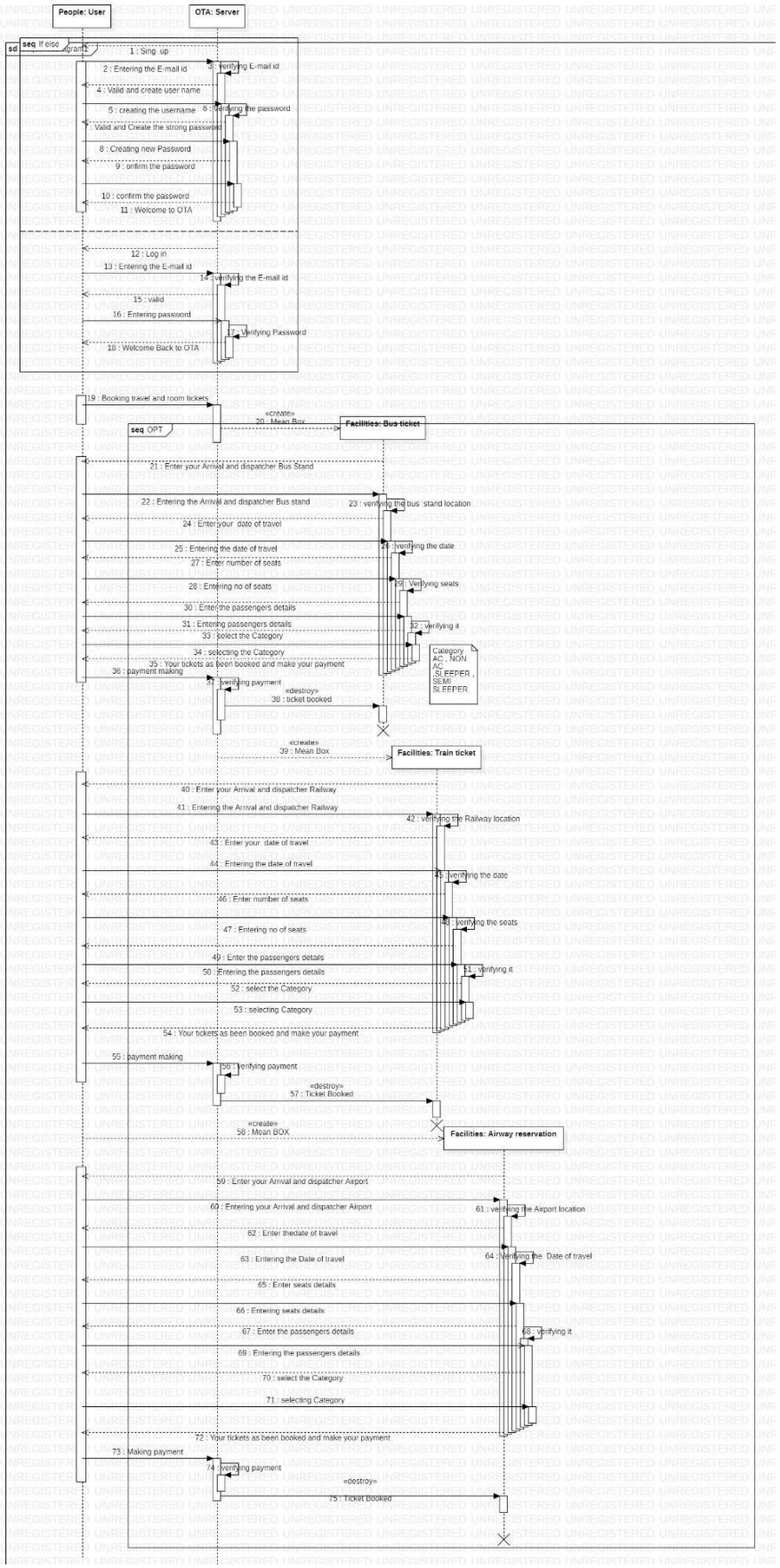



*fig 4.8 Sequence diagram*

## 4.4 MODULE DESCRIPTIONS

### 4.4.1 LOGIN & SIGN-UP

Users must create an account in the database by entering their name, email address, and password in the appropriate fields. If all the requirements are met, the user will be successfully registered in the database. Signing into the website requires a password and the registered email address. They can reset their password by selecting the "forgot password" option and entering their registered email address.

### 4.4.2 BUS TICKET BOOKING

After logging in, the user can book bus tickets by first selecting the from and to destinations, choosing their desired bus after selecting the seat of their choice, and then entering their information and completing their payment. Lastly, you can download your ticket.

### 4.4.3 FLIGHT TICKET BOOKING

After logging in, the user can book flight tickets by first choosing the from and to destinations, then their preferred flight, then selecting the seat of their preference, then entering their information and completing their payment. Lastly, you can download your ticket.

### 4.4.4 TRAIN TICKET BOOKING

After logging in, the user can book train tickets. After choosing the from and to destinations, the user must choose their desired class. After choosingyour favourite class, input your information and complete your payment. Lastly, you can download your ticket.

### 4.4.5 HOTEL RESERVATION

After logging in, the user can view their hotel reservation. To do this, they must first choose their destination and then their selected type of room or package. Enter your information and complete your payment after choosing the amenity of your choice. Lastly, you can download your ticket.

### 4.4.6 PASSENGERS DETAILS

The passengers' details page in which the user has to fill details like name, e-mail, phone number, number of persons, date, other details according to the specific amenities, the user can submit to finalize.

### 4.4.7 PAYMENT

The payment page where the user needs to enter details such as name, card number, card name, address, expiry details, CVV, pin code, state to finish payment.

(Note: all the above modules can be accessed by voice commands)

**Chapter 5**

# Implementation & Testing

## 5.1 SAMPLE CODE

### 5.1.1 HOMEPAGE

#### 5.1.1.1 HOMEPAGE HTML

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>OTA</title>
    <link rel="stylesheet" type="text/css" href="css/style.css" />
    <link rel="stylesheet"
href="https://unpkg.com/boxicons@latest/css/boxicons.min.css">
    <link rel="preconnect" href="https://fonts.googleapis.com">
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;400;500
;600;700;800;900&display=swap" rel="stylesheet">
  </head>
  <body>
    <header>
      <a href="#" class="logo">OTA</a>
      <div class="bx bx-menu" id="menu-icon"></div>
      <ul class="navbar">
        <li><a href="#home">Home</a></li>
        <li><a href="#about">About</a></li>
        <li><a href="#services">Services</a></li>
        <li><a href="#contact">Contact</a></li>
      </ul>
    </header>
```

```
<section class="plane" id="plane">
    <div class="plane-text">
        <h1>PLANES</h1>
        <h2>Book your <br> best flight deals <br> here</h2>
        <a href="flight.html" class="btn" for="btn" name="btn" id="btn">Book</a>
    </div>
    <div class="plane-img">
        <img src="img/plane.png">
    </div>
</section>

<section class="bus" id="bus">
    <div class="bus-img">
        <img src="img/bus.png">
    </div>
    <div class="bus-text">
        <h1>BUS</h1>
        <h2>Need to go somewhere <br> best deals <br> here</h2>
        <a href="Search.html" class="btn1" for="btn1" name="btn1"
id="btn1">Book</a>
    </div>
</section>

<section class="train" id="train">
    <div class="train-text">
        <h1>TRAIN</h1>
        <h2>Connecting cities <br> reserver your ticket <br> here</h2>
        <a href="train.html" class="btn2" for="btn2" name="btn2"
id="btn2">Book</a>
    </div>
    <div class="train-img">
        <img src="img/train.png">
    </div>
</section>
```

```
<section class="hotel" id="hotel">
    <div class="hotel-img">
        <img src="img/hotel.png">
    </div>
    <div class="hotel-text">
        <h1>HOTELS</h1>
        <h2>Vaction or<br>family trip etc <br>get best deals here</h2>
        <a href="gallery.html" class="btn3" for="btn3" name="btn3"
id="btn3">Book</a>
    </div>
</section>

<section class="services" id="services">
    <div class="heading">
        <span>Services</span>
        <h2>.....</h2>
    </div>
    <div class="service-container">
        <div class="s-box">
            <img src="img/1.png">
            <h3>User-friendly</h3>
            <p>our website provides many facilities even physcially challenged
person can able to operate our website with ease</p>
        </div>

        <div class="s-box">
            <img src="img/2.png">
            <h3>Voice Commands</h3>
            <p>access our website with your voice, you can navigate through
different pages with your voice</p>
        </div>

        <div class="s-box">
```

```
            <img src="img/3.png">
            <h3>Image Recognition</h3>
            <p>face authentication and our website understands people through their
emotions </p>
          </div>
        </div>
      </section>

      <section class="cta">
        <h2>For feedback and quries</h2>
        <a href="#" class="btn4">Click Here</a>
      </section>

      <section id="contact">
        <div class="footer">
          <div class="main">
            <div class="col">
              <h4>Menu links</h4>
              <ul>
                <li><a href="#">Home</a></li>
                <li><a href="#">About</a></li>
                <li><a href="#">Service</a></li>
                <li><a href="#">Contact</a></li>
              </ul>
            </div>

            <div class="col">
              <h4>Our services</h4>
              <ul>
                <li><a href="Authentication.html">Authentication</a></li>
                <li><a href="Image recognition.html">Image recognition</a></li>
                <li><a href="Voice commands.html">Voice commands</a></li>
                <li><a href="#">Behaviour analysis</a></li>
              </ul>
```

```
            </div>

            <div class="col">
              <h4>Information</h4>
              <ul>
                <li><a href="#">Abouts us</a></li>
                <li><a href="#">Team mates</a></li>
                <li><a href="privacy policy.html">Privacy policy</a></li>
                <li><a href="T and D.html">Terms & Conditions</a></li>
              </ul>
            </div>

            <div class="col">
              <h4>Contact Us</h4>
              <div class="social">
                <a href="#"><i class='bx bxl-facebook'></i></a>
                <a href="#"><i class='bx bxl-instagram'></i></a>
                <a href="#"><i class='bx bxl-twitter'></i></a>
              </div>
            </div>
          </div>
        </div>
      </section>

      <scripts src="app/app.js"></script>
      <script
src="//cdnjs.cloudflare.com/ajax/libs/annyang/2.6.1/annyang.min.js"></script>
 <script>
   if (annyang) {
     var commands = {
      'sign in': function(btn5) {
        document.getElementById('btn5').click();
      },
      'select flight ticket booking': function(btn) {
```

```
        document.getElementById('btn').click();
      },
      'select bus ticket booking': function(btn1) {
        document.getElementById('btn1').click();
      },
      'select train ticket booking': function(btn2) {
        document.getElementById('btn2').click();
      },
      'select hotel booking': function(btn3) {
        document.getElementById('btn3').click();
      },
    };

    annyang.addCommands(commands);
    annyang.start();
  }
 </script>
  </body>
</html>
```

5.1.2 FLIGHT

5.1.2.1 DESTINATION HTML

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Sign in</title>
    <link rel="stylesheet" href="fsearch.css">
    <script type="module"
src="https://unpkg.com/ionicons@5.5.2/dist/ionicons/ionicons.esm.js"></script>
    <script nomodule
src="https://unpkg.com/ionicons@5.5.2/dist/ionicons/ionicons.js"></script>
  </head>
  <body>
```

```
    <div class="slider">
    </div>
    <div class="container">
      <div class="form-box">
        <form name="Formfill" onsubmit="return validation()">
          <h2>SEARCH THE TICKETS</h2>
          <div class="input-box">
            <input for="praveen" type="text" name="praveen"
placeholder="From" id="praveen">
          </div>
          <div class="input-box">
            <input for="praveent"type="location" name="praveent"
placeholder="TO" id="praveent">
          </div>
          <div class="input-box">
           <input for="date" type="date" name="date" placeholder="Enter The
Date" id="day">
         </div>
          <div class="button">
            <input type="submit" class="btn" onclick="validation()"
value="submit" id="btn">
          </div>
        </form>
      </div>
    </div>
    <script src="js/fsearch.js"></script>
    <script src="app/appflight.js"></script>
    <script
src="//cdnjs.cloudflare.com/ajax/libs/annyang/2.6.1/annyang.min.js"></script>
    <script>
      if (annyang) {
        var commands = {
          'type from *praveen': function(username) {
            document.getElementById('praveen').value += username;
```

```
        },
        'type to *praveent': function(email) {
          document.getElementById('praveent').value += email;
        },
        'type date *day': function(date) {
          document.getElementById('date').value += date;
        },
        'submit form': function(btn) {
          document.getElementById('btn').click();
        }
      };

      annyang.addCommands(commands);
      annyang.start();
    }
  </script>
 </body>
</html>
```

5.1.2.3 FLIGHT VIEW HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="Home.html">
  <link rel="stylesheet" href="fhome.css">
  <link rel="icon" href="Saran.jpeg">
  <title>tickets</title>

</head>
```

```
<body>

   <div style="color:orange; font-family:'Poppins', sans-serif; margin-top: 100px;
margin-left: 400px;"class="heading">
      <h1> AVAILABLE FLIGHTS IN CHENNAI</h1>
   </div>
   <div class="airlines">
      <div style="margin-bottom:40px;" class="List_2">
         <div style="padding-bottom:5px;" class="head">
            <h1 id="fl_name" style="text-align:center; font-size: 28px;">Indigo-6E-
5385</h1>
         </div>
         <div class="list_1">
            <div class="one">
               <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/6E_2x.png" width="50px" height="50px">
            </div>

            <div  class="two">
               <p><b>Departure:</b></p>
               <p id="myP">Chennai</p>
            </div>

            <div  class="three">
               <p><b>Arrival:</b></p>
               <p id="myS">Bangalore</p>

            </div>
            <div  class="four">
               <p><b>Timing:</b>22:20 to 00:15</p>

            </div>
            <div  class="five">
```

```
            <p><b>Duration:</b>1h 55m (non-stop)</p>

        </div>
        <div  class="six">
            <p><b>Price:</b>3,490/-</p>

        </div>
        <div  class="view">
            <button id="btn" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
        </div>
      </div>
    </div>

    <div style="margin-bottom:40px;" class="List_2">
      <div style="padding-bottom:5px;" class="head">
        <h1 id="fl_name_1" style="text-align:center; font-size: 28px;">SpiceJet-
SG-612</h1>
      </div>
      <div class="list_1">
        <div class="one">
          <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/SG_2x.png" width="50px" height="50px">
        </div>

        <div  class="two">
          <p><b>Departure:</b></p>
          <p id="myP_1">Chennai</p>

        </div>
        <div  class="three">
          <p><b>Arrival:</b></p>
          <p id="myS_1">Bangalore</p>
```

```
            </div>
            <div  class="four">
               <p><b>Timing:</b>22:00 to 23:55</p>

            </div>
            <div  class="five">
               <p><b>Duration:</b>1h 55m (non-stop)</p>

            </div>
            <div  class="six">
               <p><b>Price:</b>3,520/-</p>

            </div>
            <div  class="view">
               <button id="btn1" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
            </div>
         </div>

      </div>
      <div style="margin-bottom:40px;" class="List_2">
         <div style="padding-bottom:5px;" class="head">
            <h1 id="fl_name_2" style="text-align:center; font-size: 28px; ">Indigo-6E-
6149</h1>
         </div>
         <div class="list_1">
            <div class="one">
               <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/6E_2x.png" width="50px" height="50px">
            </div>

            <div  class="two">
```

```
            <p><b>Departure:</b></p>
            <p id="myP_2">Chennai</p>

          </div>
          <div  class="three">
            <p><b>Arrival:</b></p>
            <p id="myS_2">Bangalore</p>

          </div>
          <div  class="four">
            <p><b>Timing:</b>20:25 to 22:30</p>

          </div>
          <div  class="five">
            <p><b>Duration:</b>2h 5m (non-stop)</p>

          </div>
          <div  class="six">
            <p><b>Price:</b>6,850/-</p>

          </div>
          <div  class="view">
            <button id="btn2" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
          </div>
        </div>

      </div>
      <div style="margin-bottom:40px;" class="List_2">
        <div style="padding-bottom:5px;" class="head">
          <h1 id="fl_name_3" style="text-align:center; font-size: 28px;">Vistara-UK-
824</h1>
        </div>
        <div class="list_1">
```

```
            <div class="one">
               <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/UK_2x.png" width="50px" height="50px">
            </div>

            <div  class="two">
               <p><b>Departure:</b></p>
               <p id="myP_3">Chennai</p>

            </div>
            <div  class="three">
               <p><b>Arrival:</b></p>
               <p id="myS_3">Bangalore</p>

            </div>
            <div  class="four">
               <p><b>Timing:</b>20:30 to 22:35</p>

            </div>
            <div  class="five">
               <p><b>Duration:</b>2h 5m (non-stop)</p>

            </div>
            <div  class="six">
               <p><b>Price:</b>6,915/-</p>

            </div>
            <div  class="view">
               <button id="btn3" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
            </div>
         </div>
```

```
</div>
<div style="margin-bottom:40px;" class="List_2">
  <div style="padding-bottom:5px;" class="head">
    <h1 id="fl_name_4" style="text-align:center; font-size: 28px;">Indigo-6E-
5278</h1>
  </div>
  <div class="list_1">
    <div class="one">
      <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/6E_2x.png" width="50px" height="50px">
    </div>

    <div  class="two">
      <p><b>Departure:</b></p>
      <p id="myP_4">Chennai</p>

    </div>
    <div  class="three">
      <p><b>Arrival:</b></p>
      <p id="myS_4">Bangalore</p>

    </div>
    <div  class="four">
      <p><b>Timing:</b>19:30 to 21:20</p>

    </div>
    <div  class="five">
      <p><b>Duration:</b>1h 50m (non-stop)</p>

    </div>
    <div  class="six">
      <p><b>Price:</b>7,350/-</p>
```

```
            </div>
            <div  class="view">
               <button id="btn4" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
            </div>
          </div>

       </div>
       <div style="margin-bottom:40px;" class="List_2">
          <div style="padding-bottom:5px;" class="head">
             <h1 id="fl_name_5" style="text-align:center; font-size: 28px;">Indigo-6E-
6143</h1>
          </div>
          <div class="list_1">
             <div class="one">
                <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/6E_2x.png" width="50px" height="50px">
             </div>

             <div  class="two">
                <p><b>Departure:</b></p>
                <p id="myP_5">Chennai</p>

             </div>
             <div  class="three">
                <p><b>Arrival:</b></p>
                <p id="myS_5">Bangalore</p>

             </div>
             <div  class="four">
                <p><b>Timing:</b>19:00 to 23:15</p>

             </div>
```

```
            <div  class="five">
               <p><b>Duration:</b>4h 15m (1 stop)</p>

            </div>
            <div  class="six">
               <p><b>Price:</b>8,507/-</p>

            </div>
            <div  class="view">
               <button id="btn5" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
            </div>
         </div>

      </div>
      <div style="margin-bottom:40px;" class="List_2">
         <div style="padding-bottom:5px;" class="head">
            <h1 id="fl_name_6" style="text-align:center; font-size: 28px;">Indigo-6E-
5381</h1>
         </div>
         <div class="list_1">
            <div class="one">
               <img
src="https://fastui.cltpstatic.com/image/upload/resources/images/logos/air-
logos/6E_2x.png" width="50px" height="50px">
            </div>

            <div  class="two">
               <p><b>Departure:</b></p>
               <p id="myP_6">Chennai</p>

            </div>
            <div  class="three">
               <p><b>Arrival:</b></p>
```

```
            <p id="myS_6">Bangalore</p>

          </div>
          <div  class="four">
            <p><b>Timing:</b>18:05 to 19:55</p>

          </div>
          <div  class="five">
            <p><b>Duration:</b>1h 50m (non-stop)</p>

          </div>
          <div  class="six">
            <p><b>Price:</b>8,600/-</p>

          </div>
          <div  class="view">
            <button id="btn6" class="ticket_1" onclick="window.location.href =
'seat5.html'">Book</button>
          </div>
        </div>
    </div>
    <script
src="//cdnjs.cloudflare.com/ajax/libs/annyang/2.6.1/annyang.min.js"></script>
    <script>
    if (annyang) {
      var commands = {
        'select zero': function(btn) {
        document.getElementById('btn').click();
       },
       'select one': function(btn1) {
        document.getElementById('btn1').click();
       },
       'select two': function(btn2) {
        document.getElementById('btn2').click();
```

```
        },
        'select three': function(btn3) {
          document.getElementById('btn3').click();
        },
        'select four': function(btn4) {
          document.getElementById('btn4').click();
        },
        'select five': function(btn5) {
          document.getElementById('btn5').click();
        },
        'select six': function(btn6) {
          document.getElementById('btn6').click();
        }
      };

      annyang.addCommands(commands);
      annyang.start();
    }
  </script>
</body>
</html>
```

## 5.2 SAMPLE OUTPUT

### 5.2.1 VOICE COMMAND OUTPUT

The below diagram (fig 5.1) shows how the voice command works, in order to active the voice command the user have tell the specific phrase to activate voice command.

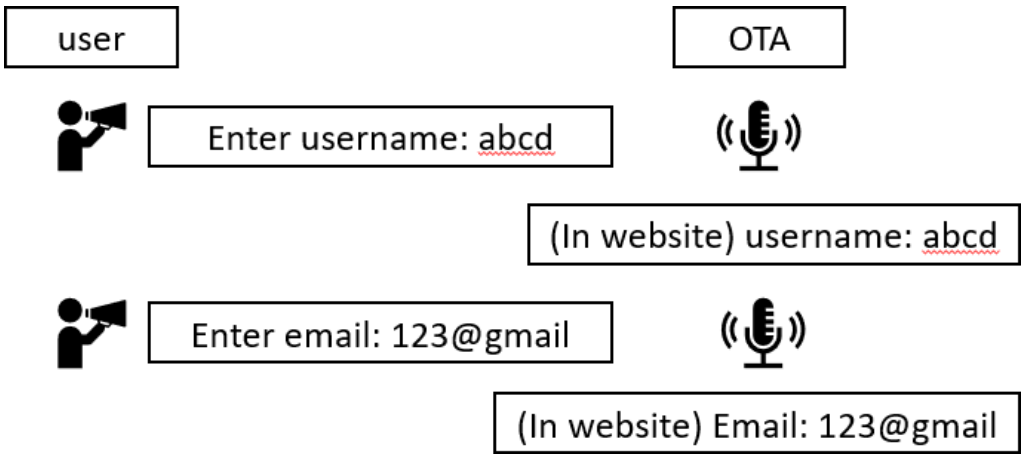



*fig 5.1 voice command output*

### 5.2.2 RESULT

#### 5.2.2.1 REGISTRATION

The below image (fig 5.2) shows the registration page where the user needs to enter details to get login credentials, this includes the user creating new username and password.

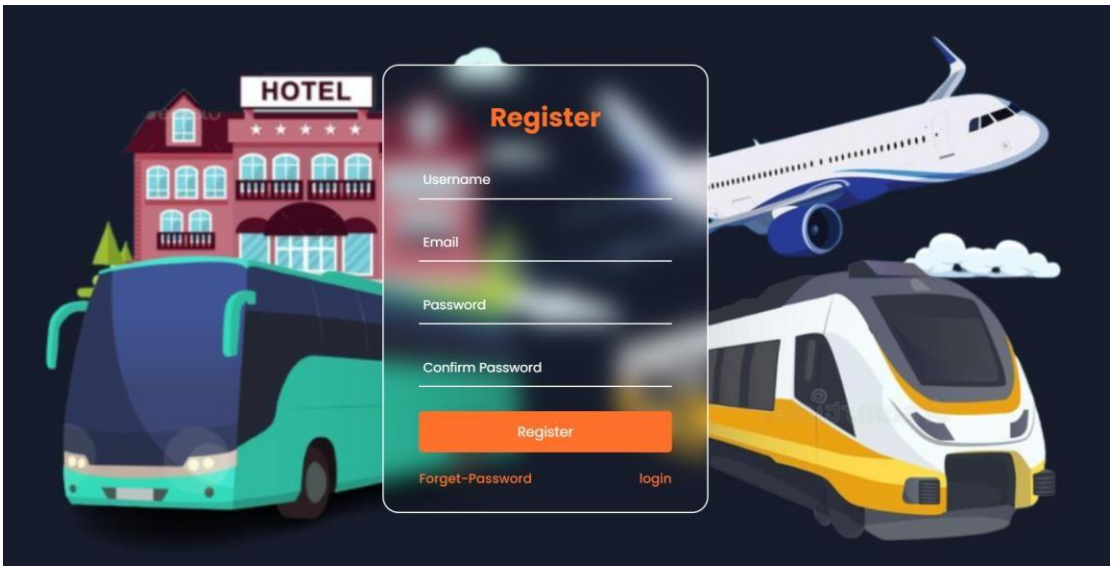



*fig 5.2 registration page*

5.2.2.2 LOG IN

The below image (fig 5.3) shows the login page used by the system to access the website

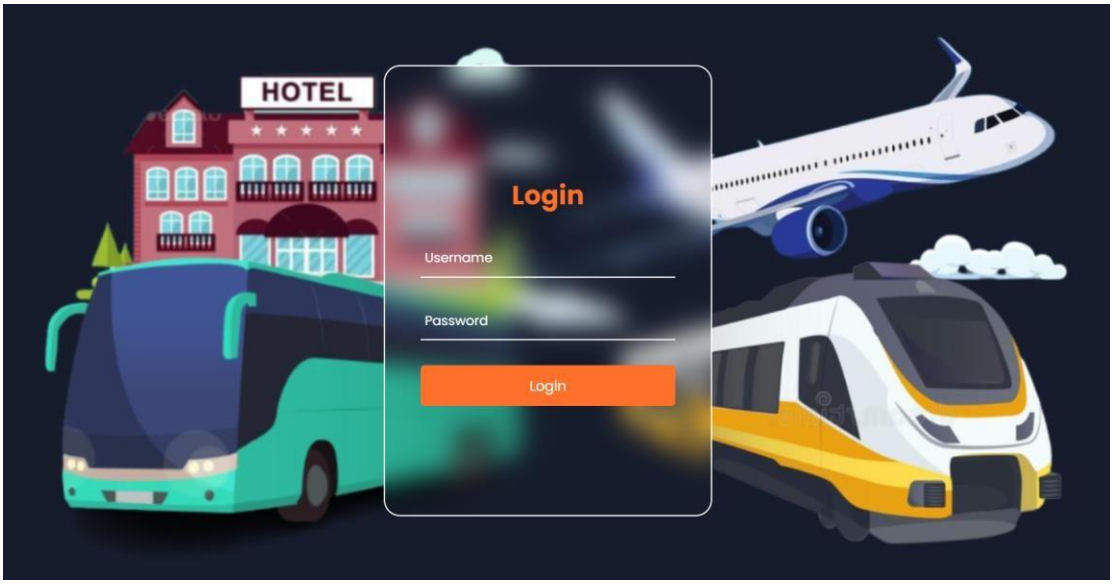



*fig 5.3 log in page*

5.2.2.3 BUS TICKET BOOKING

The following image (fig 5.4) shows the bus booking page where the process starts by user clicking the book button.

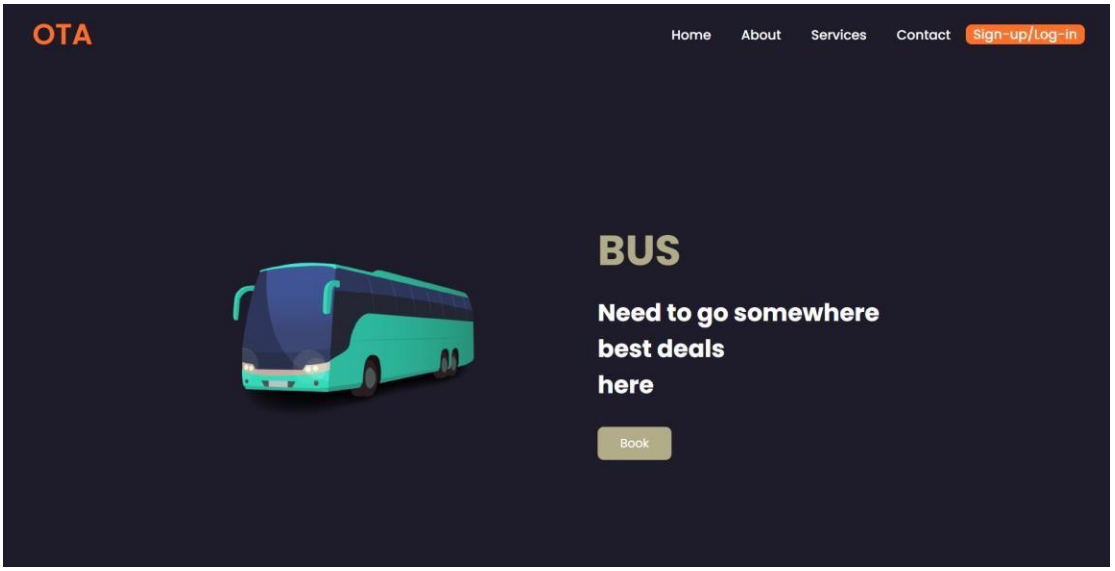



*fig 5.4 bus ticket booking page*

5.2.2.4 ARRIVAL/DEPARTURE PAGE

The following image (fig 5.5) shows the arrival/departure page where the user needs to enter from and to locations.

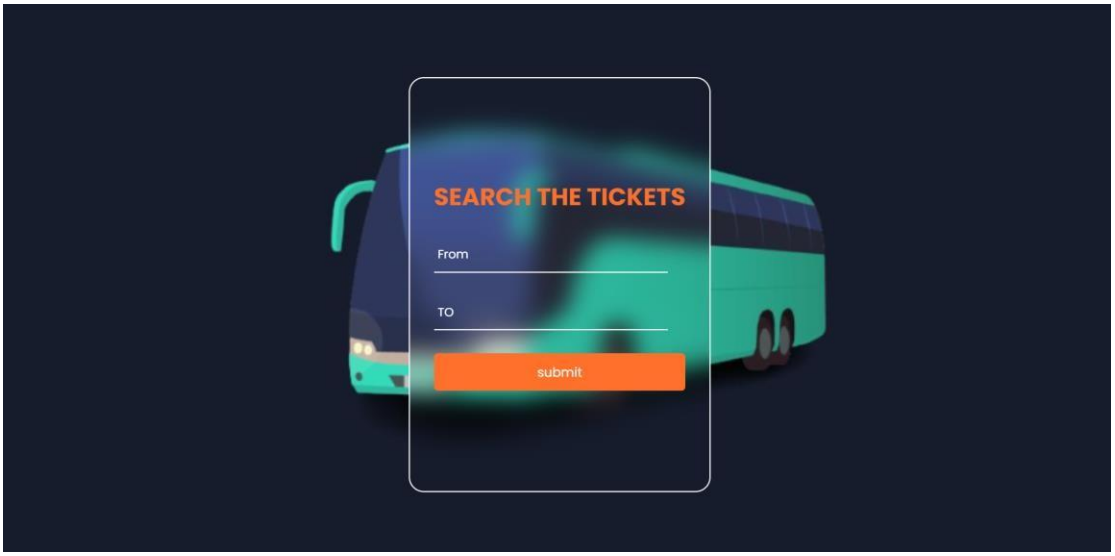



*fig 5.5 arrival/departure page*

5.2.2.5 BUSES VIEW PAGE

The following image (fig 5.6) shows the buses that are available for the selected choice.

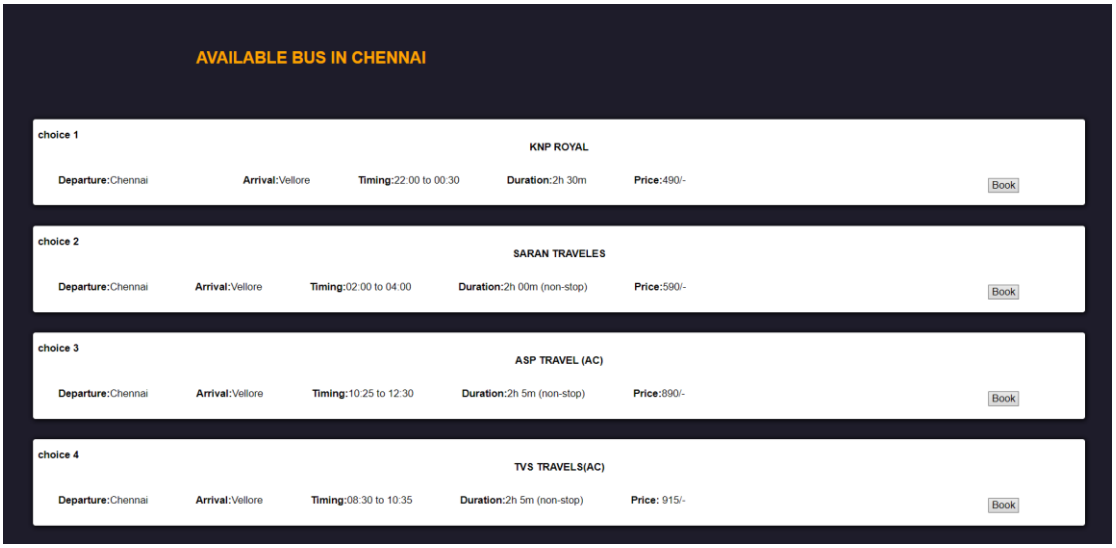



*fig 5.6 buses view page*

5.2.2.6 SEAT LAYOUT PAGE

The following image (fig 5.7) shows the overall seat layout of the preferred bus the user has selected.


*fig 5.7 seat layout page*

5.2.2.7 FLIGHT TICKET BOOKING

The following image (fig 5.8) shows the flight booking page where the process starts by user clicking the book button.

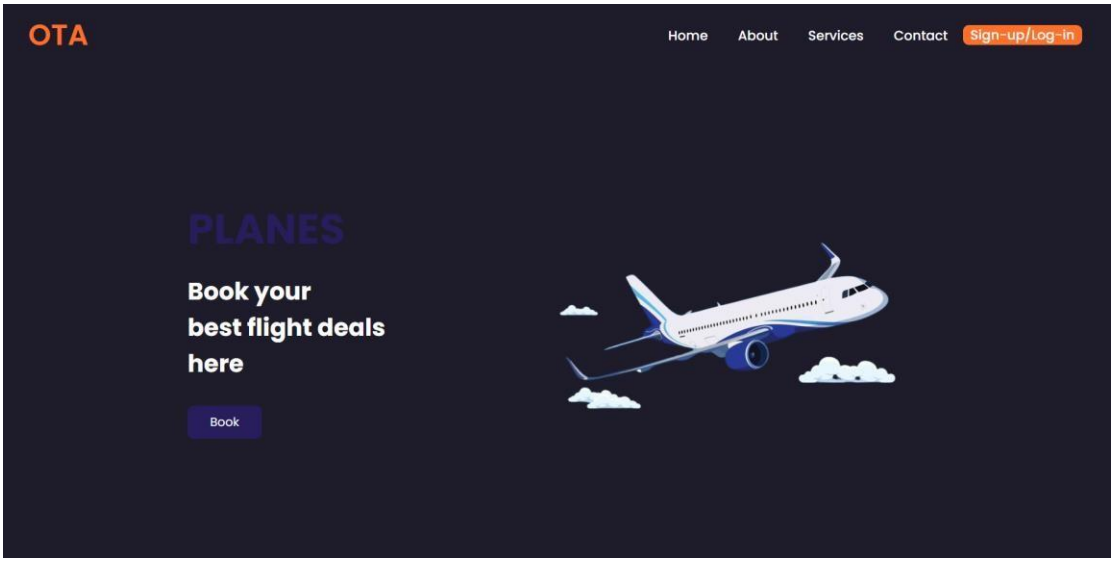



*fig 5.8 flight ticket booking page*

5.2.2.8 ARRIVAL/DEPARTURE PAGE

The following image (fig 5.9) shows the arrival/departure page where the user need to enter from and to locations.

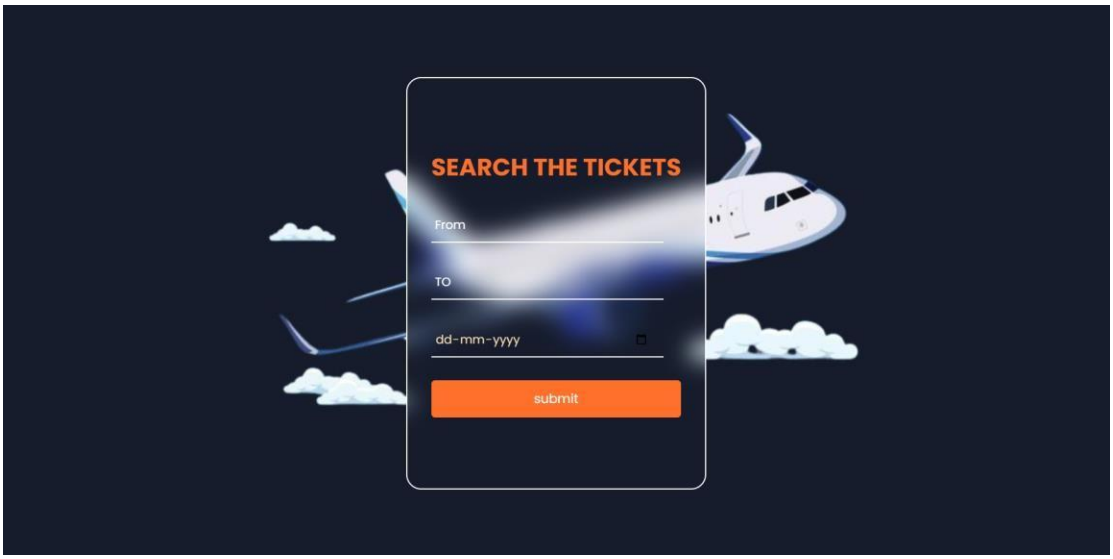



*fig 5.9 arrival/departure page*

5.2.2.9 FLIGHT VIEW PAGE

The following image (fig 5.10) shows the flights that are available for the selected choice.

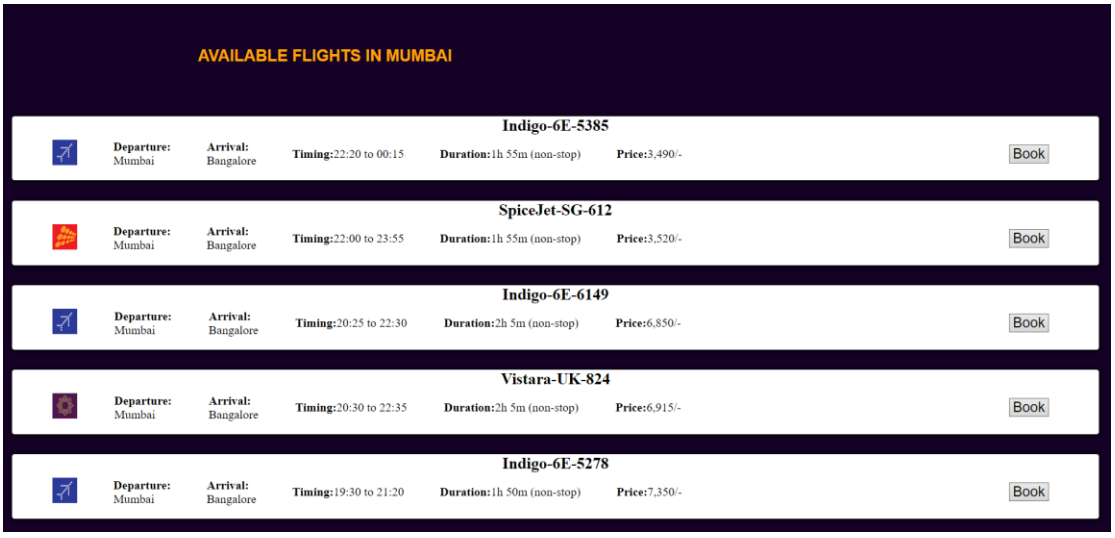



*fig 5.10 flights view page*

5.2.2.10 SEAT LAYOUT PAGE

The following image (fig 5.11) shows the overall seat layout of the preferred flight the user has selected.

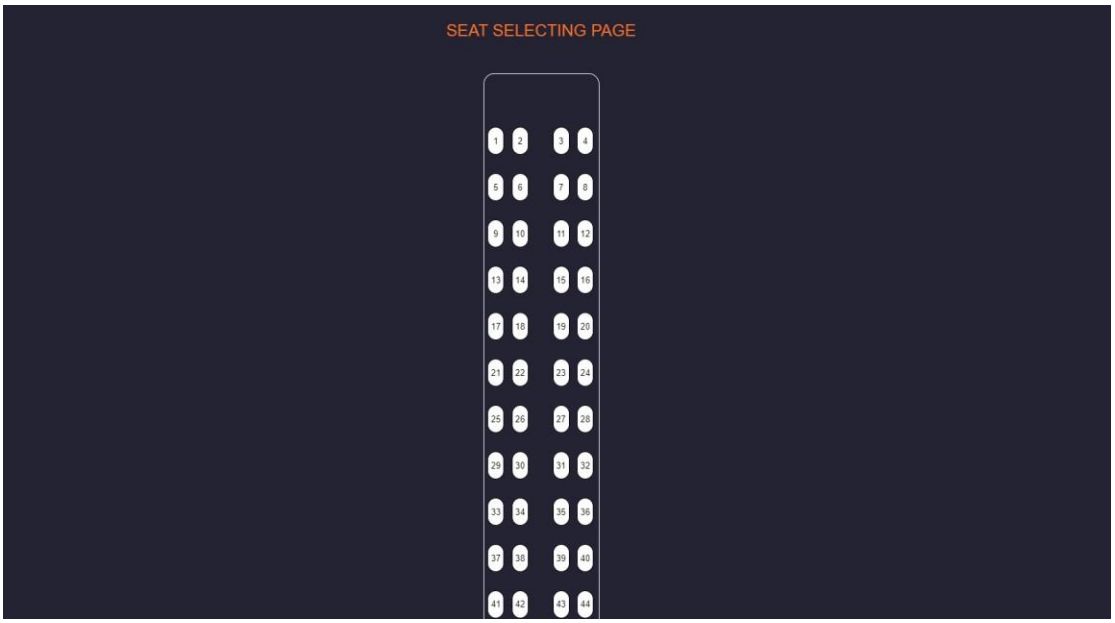



*fig 5.11 seat layout page*

5.2.2.11 TRAIN TICKET BOOKING

The following image (fig 5.12) shows the train booking page where the process starts by user clicking the book button.

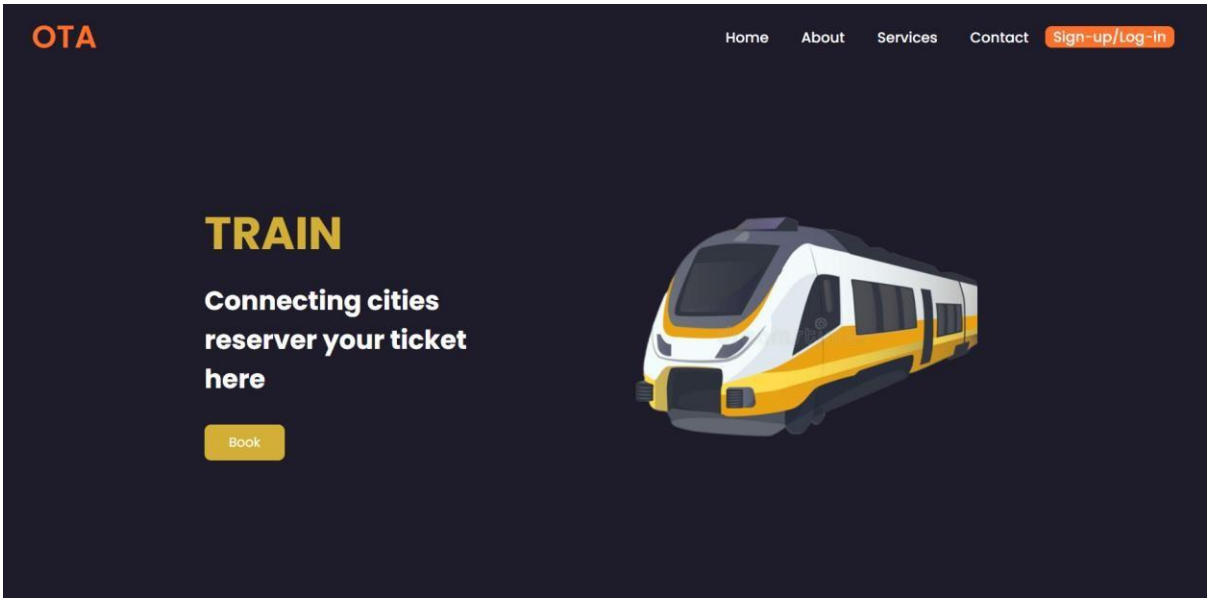



*fig 5.12 train ticket booking page*

5.2.2.12 ARRIVAL/DEPARTURE PAGE

The following image (fig 5.13) shows the arrival/departure page where the user needs to enter from and to locations.

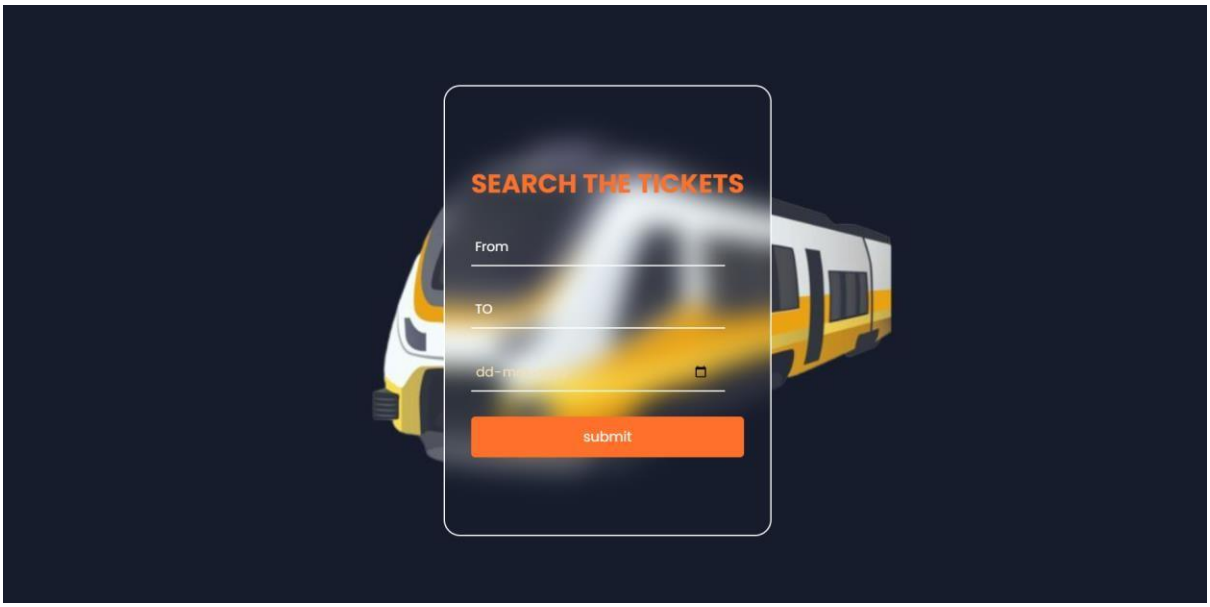



*fig 5.13 train ticket booking page*

5.2.2.13 TRAIN VIEW PAGE

The following image (fig 5.14) shows the trains that are available for the selected choice.

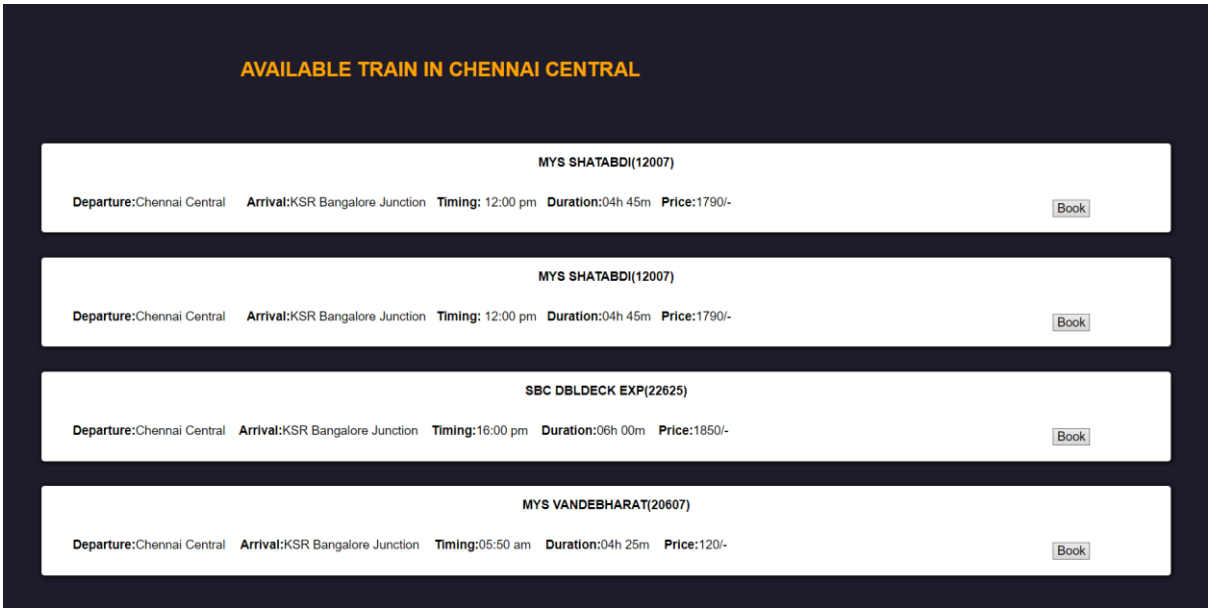



*fig 5.14 train view page*

5.2.2.14 SEAT LAYOUT PAGE

The following image (fig 5.15) shows the overall seat layout of the preferred train the user has selected.


*fig 5.15 seat layout page*

5.2.2.15 HOTEL RESERVATION

The following image (fig 5.16) shows the hotel booking page where the process starts by user clicking the book button.

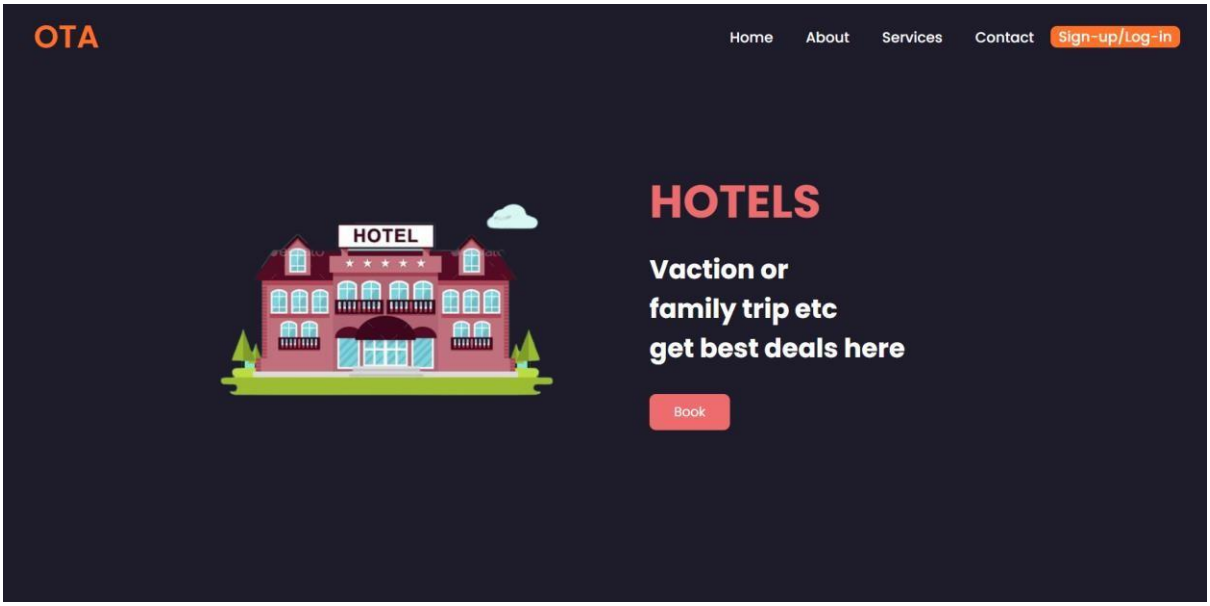



*fig 5.16 hotel reservation page*

5.2.2.16 HOTEL VIEW PAGE

The following image (fig 5.17) shows the various hotels which are available for further processing.

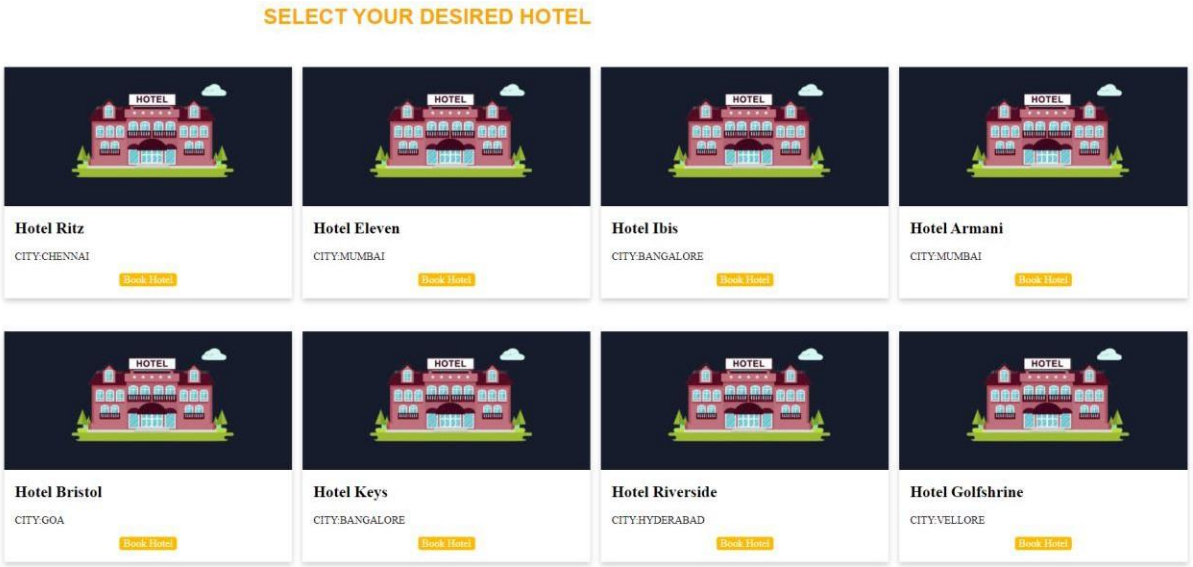



*fig 5.17 hotel view page*

5.2.2.17 PASSENGER DETAILS

The below image (fig 5.18) shows the details of passengers which isfurther processing, this includes details like name, e-mail, phone number, accommodations etc.,

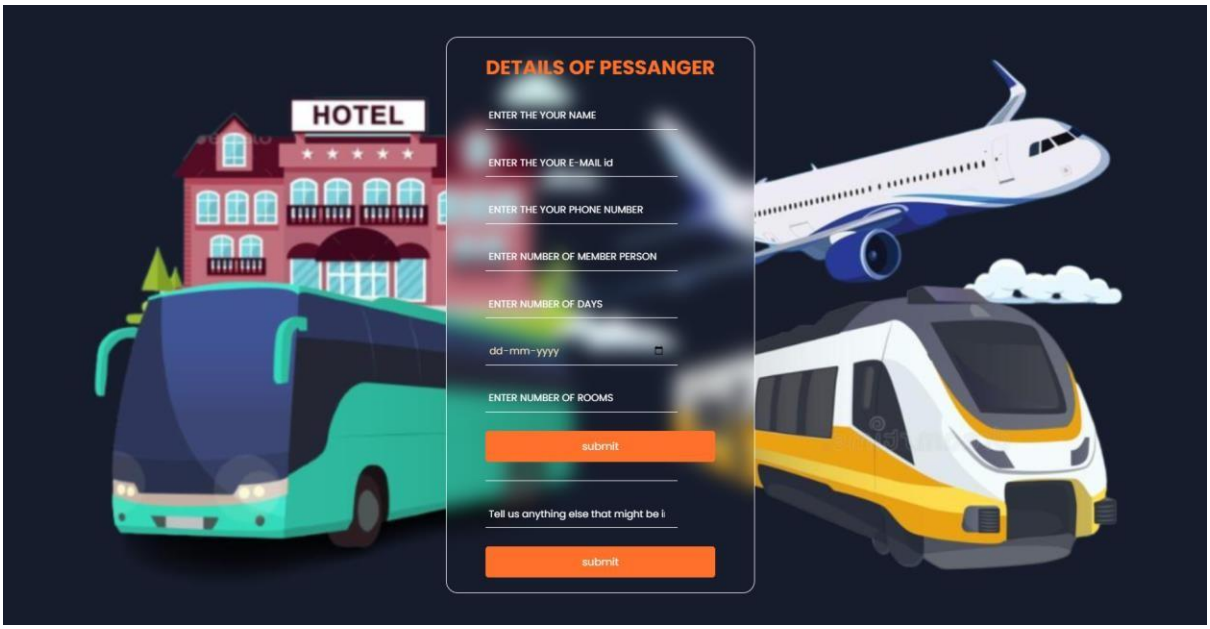



*fig 5.18 passenger details page*

5.2.2.18 PAYMENT

The below image (fig 5.19) shows the payment page for final processing, this includes entering card details and proceed for checkout.

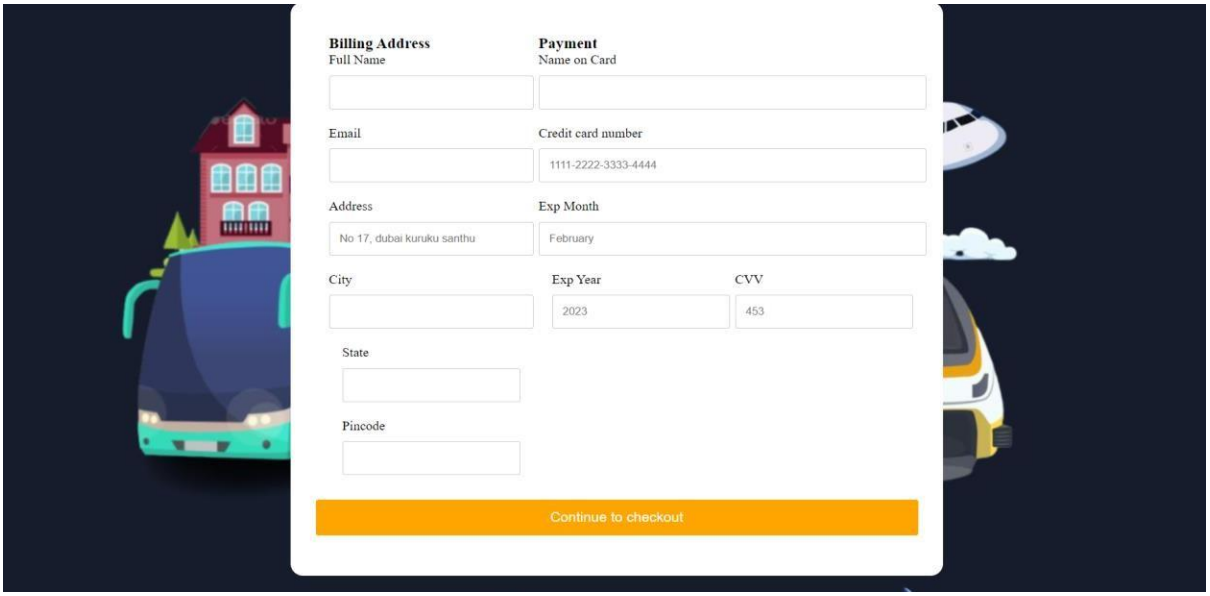



*fig 5.19 payment page*

5.2.2.19 OUTPUT MESSAGE

The following image (fig 5.20) shows the final message which will be derived after completing the payment.


*fig 5.20 output message page*

## 5.3 TESTING

| s.no | Testcase | Testing type | Description | Status |
|---|---|---|---|---|
| 1. | newuser@123, “Type username newuser@123” | Unit testing | Registration: Check whether the parameters given are satisfied | Pass |
| | | Unit testing | Check voice command | Pass |
| 2. | newuser@123, “Type username newuser@123” | Integration testing | Log in: Check whether it satisfies the parameters | Pass |
| | | Unit testing | Check voice command | Pass |
| 3. | “Select flight ticket booking" | Unit testing | Amenity selection: Voice command using the specific command | Pass |
| 4. | “Type from Chennai” | Unit testing | Flight destination selection: Check voice command | Pass |
| | | Unit testing | Voice command assistance | Pass |
| 5. | “Type from Chennai” | Unit testing | Bus destination selection: Check voice command | Pass |
| | | Unit testing | Voice command assistance | Pass |
| 6. | “Type from Chennai” | Unit testing | Train destination selection: Check voice command | Pass |
| | | Unit testing | Voice command | Pass |

| | | | | |
|---|---|---|---|---|
| | | | assistance | |
| 7. | “Type destination Chennai” | Unit testing | Hotel destination selection: Check voice command | Pass |
| | | Unit testing | Voice command assistance | Pass |
| 8. | “Select seat one” | Unit testing | Flight seat selection: Check voice command | Pass |
| 9. | “Select seat one” | Unit testing | Bus seat selection: Check voice command | Pass |
| 10. | “Select seat one” | Unit testing | Train seat selection: Check voice command | Pass |
| 11. | “Select hotel xyz” | Unit testing | Hotel selection: Check voice command | Pass |
| 12. | “Enter name abcd” | Unit testing | Input details: Check whether the parameters given are satisfied | Pass |
| | | Unit testing | Check voice command | Pass |
| 13. | “Proceed to payment” | Unit testing | Payment: Check voice command | Pass |

*Table 5.1 testing*

# Chapter 6

# Results

## 6.1 RESEARCH FINDINGS

| Objective | Findings |
|---|---|
| Basic concept about online travel agency | Online travel agencies have experienced significant growth over the years, with the global online travel market expected to reach $1.095 trillion by 2022, according to Statista. The increasing adoption of online booking platforms and the convenience they offer to travellers have been key drivers of this growth. |
| | Research has shown that consumers rely heavily on online travel agencies for researching, planning, and booking travel. Many travelers use OTAs to compare prices, read reviews, and access a wide range of travel options in one place. Price, convenience, and availability are among the top factors influencing consumers' decisions when booking through OTAs. |
| | Mobile usage has transformed the online travel industry, with a growing number of travelers booking trips through mobile devices. According to eMarketer, in 2021, mobile travel sales are projected to account for nearly half of all digital travel sales globally. This highlights the increasing importance of mobile optimization andseamless user experience in OTA websites and apps. |
| | The OTA market is highly competitive, with several major players dominating the industry. Research has shown that a small number of |

| | |
|---|---|
| | OTAs, such as Expedia, Booking.com, and Agoda, hold a significant share of the global online travel market. However, there are also niche OTAs that cater to specific travel segments or regions, offering unique services and experiences. |
| | OTAs also face challenges, such as increasing competition from other distribution channels, regulatory issues, and dependence on partnerships with hotels and airlines. OTAsalso face the risk of potential reputational damage due to negative customer reviews, as travelers rely heavily on reviews and ratings when making booking decisions. |
| | Some emerging trends in the OTA industry include the growing adoption of artificial intelligence (AI) and machine learning for personalized recommendations, virtual and augmented reality for enhanced user experiences, and the integration of social media and user-generated content for travel inspiration and planning. |
| Voice commands in a website | Research has shown that voice commands can enhance the overall user experience of a website by providing a more convenient and hands-free way of interacting with the website's content and functionality. Users appreciate the ease of use and the ability to perform tasks on a website using voice commands, especially in situations where manual input may be challenging, such as when driving or multitasking. |
| | Voice commands can improve website accessibility for users with disabilities, including those with mobility impairments or visual impairments. Voice commands can |

| | |
|---|---|
| | enable users to navigate a website, access content, and complete tasks without relying on traditional input methods, such as keyboard or mouse. |
| | Voice commands can potentially increase the efficiency and speed of completing tasks on a website. Research has shown that voice commands can save users time and effort, especially for tasks that involve repetitive or lengthy input, such as filling out forms or performing searches. |
| | Studies have found that the adoption of voice commands on websites is still relatively low, with many users not fully utilizing voice commands as a primary means of interaction. User preferences for voice commands may vary depending on factors such as age, language proficiency, and personal comfort level with using voice technology. |
| | Voice recognition technology is still evolving, and research has shown that accuracy and reliability of voice commands can vary depending on the specific platform, language, and accent of the user. Inaccurate voice recognition can lead to frustration and a subpar user experience. |

*table 6.1 research findings*

## 6.2 RESULT ANALYSIS

### 6.2.1 USER BEHAVIOUR ANALYSIS

This could involve analysing the behaviour of users, such as their browsing patterns, booking preferences, search queries, booking etc.,

### 6.2.2 CUSTOMER SATISFACTION ANALYSIS

This can be taken from customer review about the online travel booking website to improve for future development.

### 6.2.3 LIMITATIONS

This involves awareness of people, today most websites are not voice enabled thus no one are aware about this concept.

## 6.3 EVALUATION METRICES

#### 6.3.1 ACCURACY

This metric measures how accurately the voice commands areinterpreted and executed by the website. It can be measured by comparing the voice commands spoken by users with the commands executed by the website.

#### 6.3.2 EFFICIENCY

This metric measures how quickly users are able to complete tasks using voice commands compared to other interaction methods, such as typing or clicking.

#### 6.3.3 USER SATISFACTION

This metric measures the overall satisfaction of users with the voice command functionality in the website. It can be measured through surveys or feedback forms that gather users' opinions on their experience with voice commands.

#### 6.3.4 TASK COMPLETION RATE

This metric measures the percentage of tasks that are successfully completed using voice commands. It can be measured by tracking the completion status of tasks initiated through voice commands. Higher task completion rates indicate that users are able to successfully complete tasks usingvoice commands, while lower completion rates may indicate issues with voice command functionality.

### 6.3.5 USER ENGAGEMENT

This metric measures the level of user engagement with the voice command functionality in the website. It can be measured by tracking the frequency and duration of voice command interactions, as well as the number of unique users who use voice commands.

# CONCLUSION AND FUTURE WORKS

The internet revolution has changed the scenario of travel industry through the easily accessible of travel products to the mass consumers by their virtual presence rather than physical. The online travel Portal (OTP) is also known by Online Travel agent, E-travel agents and virtual travel agents (VTA's). The concept of travel agents immersed as a connecting link between supplier and consumer. In a last 5-10 years techno friendly visitors prefer more to buy their travel services online like the online shopping of physical goods with this development along with our functionalities every one including physically challenged persons can navigate and usethe OTA platform without any help required.

As of future the website can be integrated with machine learning, so that it can generate responses itself rather than giving commands for each and every function, the website can be also integrated with artificial intelligence so that itbehaves like a virtual assistant rather than a website.

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