PROJECT REPORT: FLIGHT BOOKING SYSTEM

List of Figure:

CHAPTER I: INTRODUCTION

1.1Introduction

The Flight Booking System has become a cornerstone of modern travel, transforming the way people plan their journeys. By offering real-time information on flight availability, pricing, and airline services, it empowers users to make informed decisions. This report will dissect the system's inner workings, from its user-friendly interface design to robust data management, security measures, and performance evaluations. We'll also explore the system's pivotal role in enhancing competition within the airline industry, leading to improved services and cost-effective travel options.

1.2Objective of the Project

The main objective of this flight booking system project is to provide travelers with a user-friendly, efficient platform to book flights. This system offers real-time information on flight availability, schedules, pricing, and airline services, ensuring users can make informed choices. It prioritizes an enhanced user experience through an intuitive and visually appealing interface. Robust security measures safeguard user data, while performance optimization ensures a responsive system capable of handling high user loads. Additionally, the project aims to promote competition in the airline industry, ultimately benefiting travelers with improved services and cost-effective travel options.

1.3 Methodology/Procedure

- For the development of this project, we employed a straightforward methodology and procedure. The initial database design was accomplished through the PHPMyAdmin interface, enabling us to structure and manage our data effectively. On the back end, we utilized basic PHP scripting to implement the core functionality, while for the front end, we continued with basic PHP for user interfaces. Our choice of these technologies reflects a

focus on simplicity and ease of development.

- Software methodologies are concerned with the process of creating software – not so much the technical side but the organizational aspects. Several software development approaches have been used since the origin of information technology.

1.4 Project Framework

The project is a flight booking system that utilizes a well-structured framework to ensure its successful development and deployment. A framework provides a foundation for the project's design and implementation, offering a structured approach to building software. In this context, the framework facilitates the organization and management of components, ensuring a cohesive and scalable system. The choice of a framework, whether it be a front-end framework like React or Angular or a back-end framework like Laravel or Symfony, greatly influences the efficiency and maintainability of the project. By following a framework, we establish best practices, standardized coding, and pre-built functionalities, resulting in a more robust and maintainable flight booking system.

1.5 Tools Used

- **Xampp:**
  - **Apache:**
    - (Application Server) Apache , often referred to as Server, is an open-source Java Servlet Container developed by the Apache Software Foundation.
  - **MySqlServer:**
    - It handles larege databases much faster than existing solutions.
    - It consists of multi-threaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and application programming interfaces (APIs)
    - Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.
- **Sublime Text 3.1.1-** Sublime Text is a sophisticated text editor for code, markup and prose. You'll love the slick user interface, extraordinary features and amazing performance.
- **Web browsers**: Google Chrome,Mozilla Firefox, Opera and Internet Explorer.
- **Git Hub**: GitHub Inc. is a web-based hosting service for version control using Git. It is mostly used for computer code. It offers all of the distributed version control and source code management functionality of Git as well as adding its own features.

CHAPTER II: TASK AND ACTIVITY PERFORMED

2.1 System Analysis

System analysis is a crucial phase in software development that involves a comprehensive examination of the Flight Booking System. It encompasses gathering and documenting user requirements, understanding use cases, and mapping data flows. Additionally, it entails designing the database structure and defining system architecture to ensure scalability and responsiveness. Evaluating the user interface design for intuitiveness and efficiency and scrutinizing data security measures for user data protection are also vital components. Furthermore, performance analysis ensures the system operates optimally under varying conditions. System analysis serves as the foundation for system design and development, guaranteeing that the Flight Booking System aligns with user needs, is secure, and functions efficiently.

2.2 Design and Development Problem

- Problem in running XAMPP.
- To debug the error during the development.
- To show a relationship between entity.
- Minor error with database table.

2.3 Feasibility Analysis

The feasibility analysis of a Flight Booking System is a crucial assessment of its practicality and viability. Economic feasibility examines the project's cost versus benefits, including return on investment and the payback period. Technical feasibility ensures that the required technology is available, and the system can scale and maintain data compatibility and security. Operational feasibility considers the availability of resources, organizational alignment, and change management. Schedule feasibility evaluates the project's timeline and adherence to milestones. This analysis helps in decision-making, risk mitigation, and aligning the system with organizational and user requirements.

.

2.3.2 Economical Analysis

The economic analysis of a Flight Booking System entails a comprehensive assessment of its financial viability and potential economic benefits. To begin, the total cost of developing, operating, and maintaining the system is calculated, encompassing expenses like hardware, software, personnel, and infrastructure. The analysis then shifts focus to the expected benefits, predominantly concerning revenue generation and cost savings through automation. A cost-benefit analysis is performed, scrutinizing whether the total costs outweigh the projected benefits. The return on investment (ROI) is examined, evaluating if the system's financial gains exceed its incurred costs over a specified period. The payback period is assessed to ascertain how soon the initial investment can be recouped through generated revenue. Sensitivity analysis explores different cost and benefit scenarios, and non-financial benefits like improved customer satisfaction are

considered. Ultimately, the economic analysis informs critical decisions about project feasibility, taking into account both financial and non-financial factors that contribute to the system's economic impact.

2.3.2 Software Analysis

The software analysis aspect of the Flight Booking System involves a detailed examination of the system's software components. Key considerations include:

- **Development Tools and Technologies:** Select the appropriate programming languages, frameworks, and libraries for the system. This includes HTML, CSS, JavaScript, PHP, and MySQL for the development stack.
- **Database Design:** Create a well-structured database schema, ensuring efficient storage and retrieval of data. Define tables, relationships, and data integrity rules.
- **User Interface Design:** Develop an intuitive and visually appealing user interface that enhances the user experience. Pay attention to responsive design for various devices.
- **Security Measures:** Implement robust security practices, including data encryption, input validation, and protection against common security vulnerabilities such as SQL injection and cross-site scripting (XSS).
- **Testing and Quality Assurance:** Establish testing procedures, including unit testing, integration testing, and user acceptance testing. Ensure the system is thoroughly tested for functionality, security, and performance.

2.4 Use case Diagram

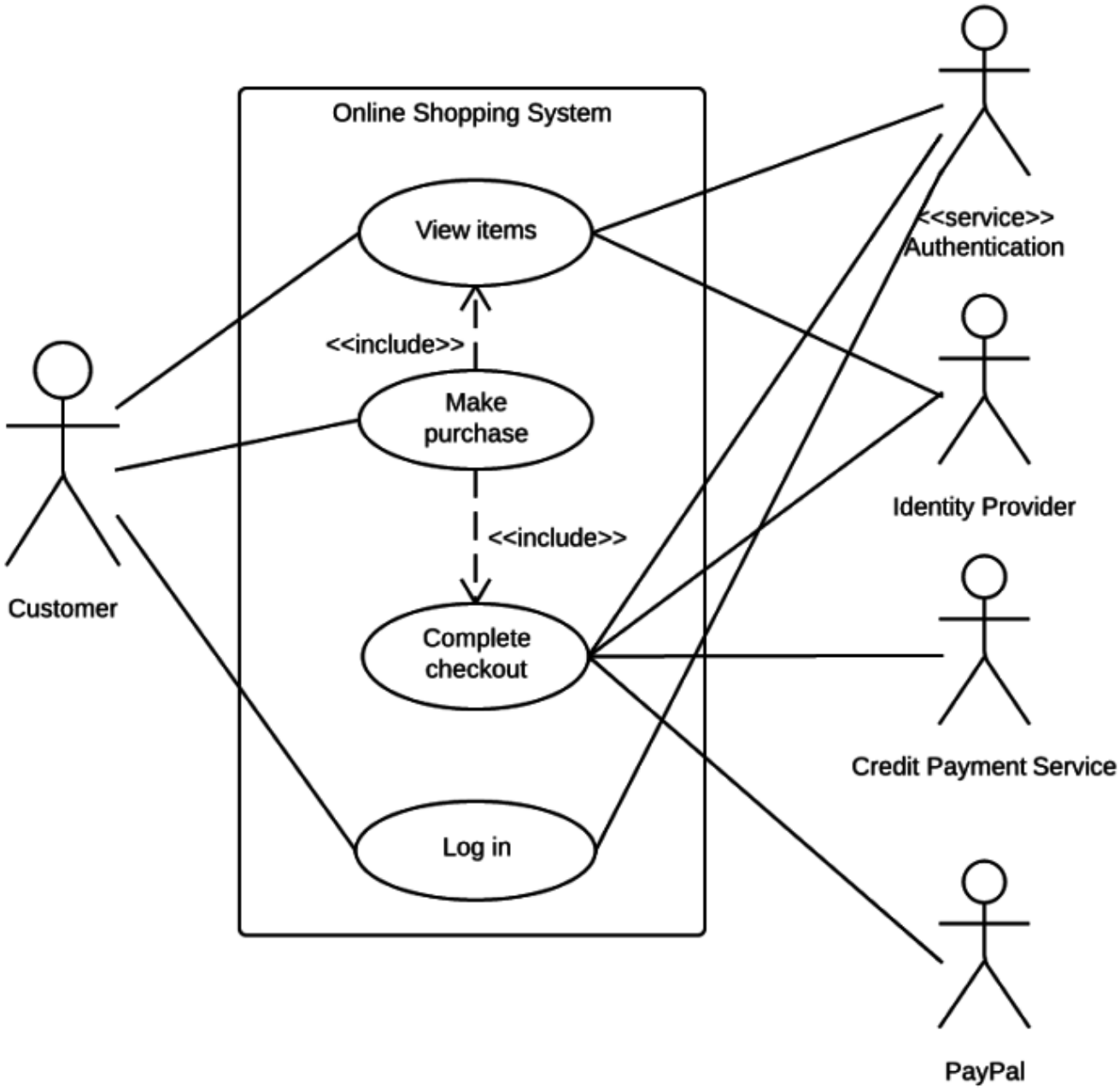


Figure 1: Use Case Diagram

Above figure represents Use Case Diagram of the project to define how users interact with the

system. Understand the different roles and scenarios involved in flight booking, including searching, selecting, and booking flights.

2.5 Data Flow Diagram

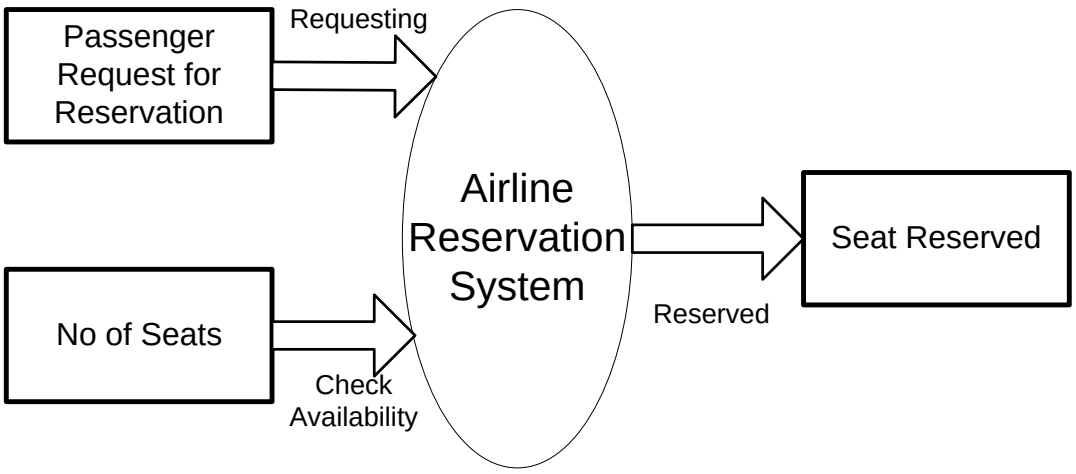
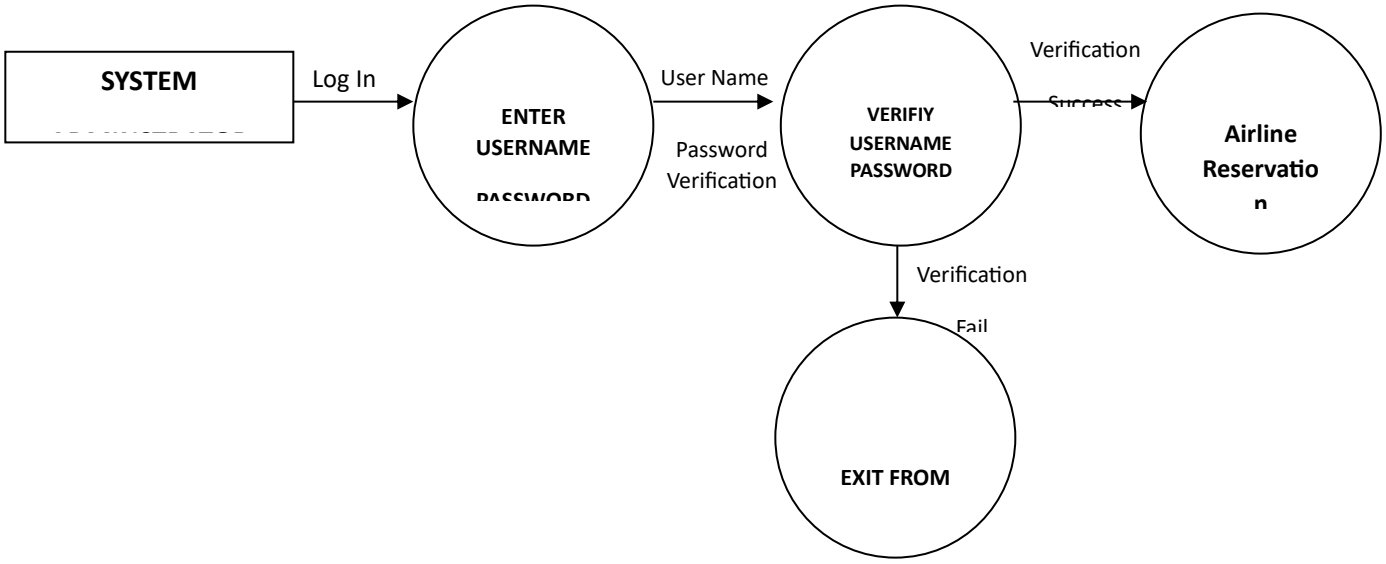


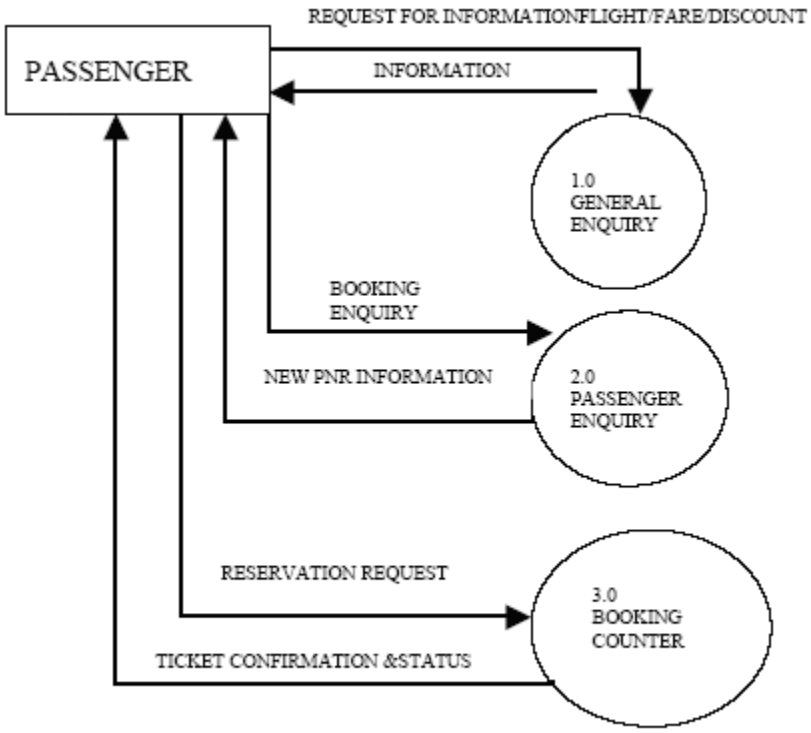
Figure 2: Data Flow Diagram

Above Data Flow Diagram, explains the overall structure of the system. It shows how and what types of services the client chooses and the amount of admin interaction in it.

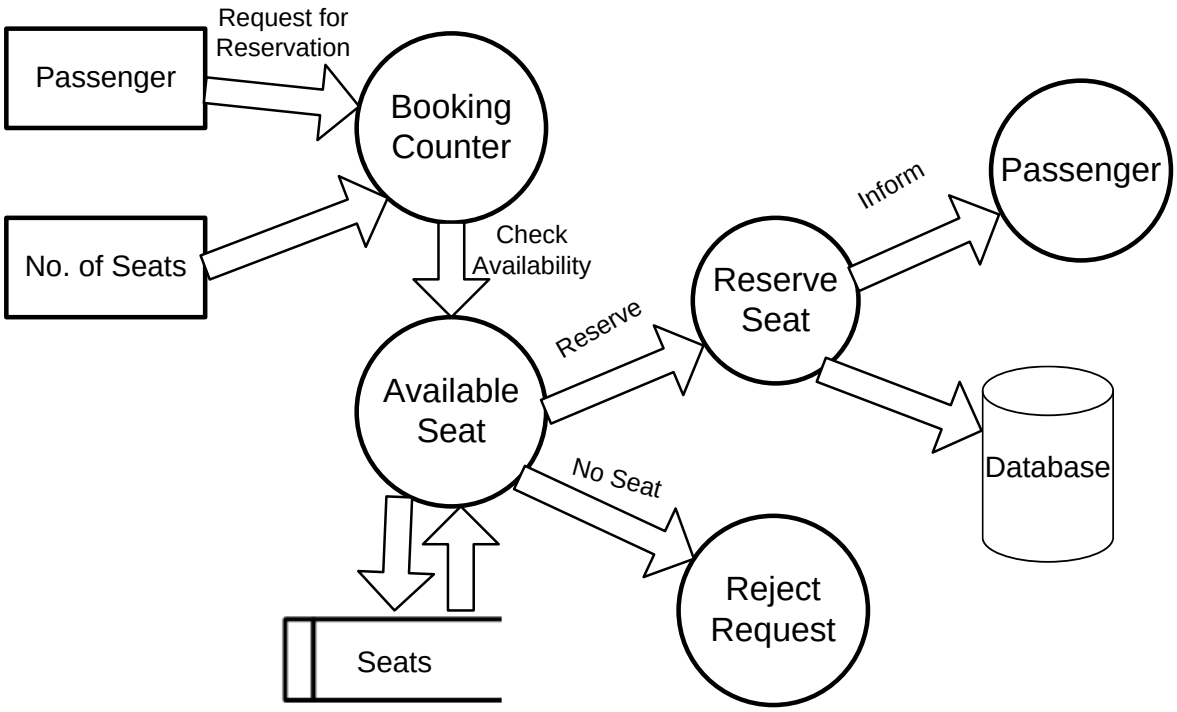
2.6.1 First Level of Data Flow Diagram for System Login



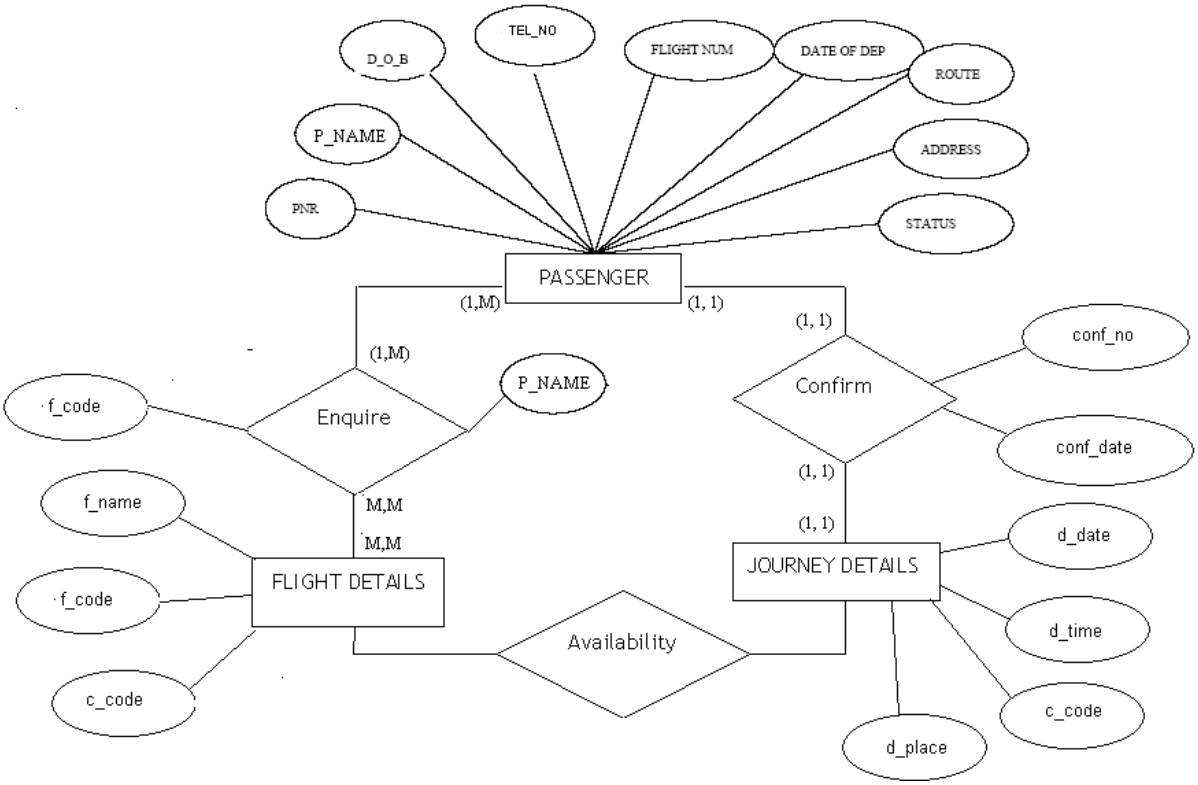
2.6.2:Second Level of Data Flow Diagram for General Inquiry System



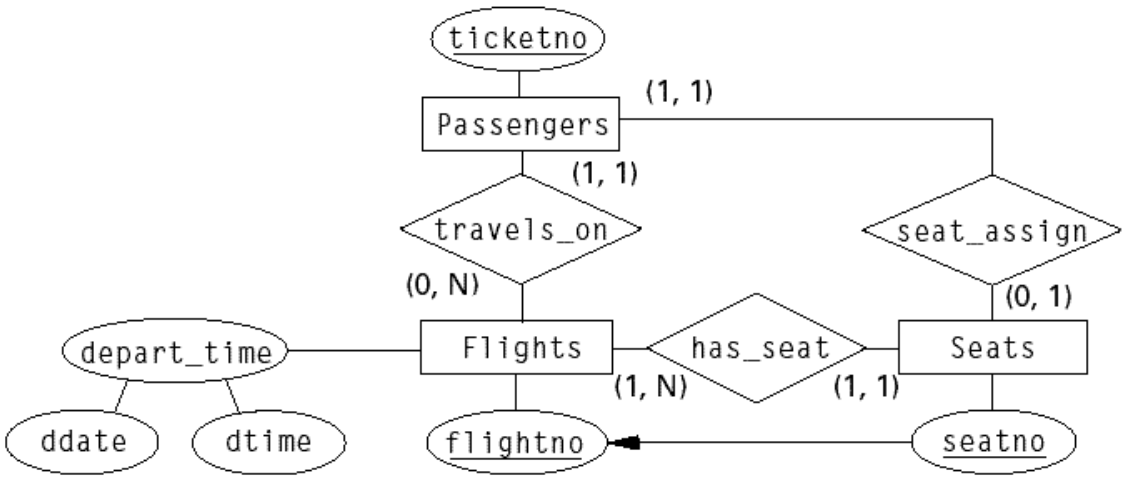
2.6.3:Third Level DATA FLOW DIAGRAM OF BOOKING SECTION



2.7.1 ER Diagram for flight booking system



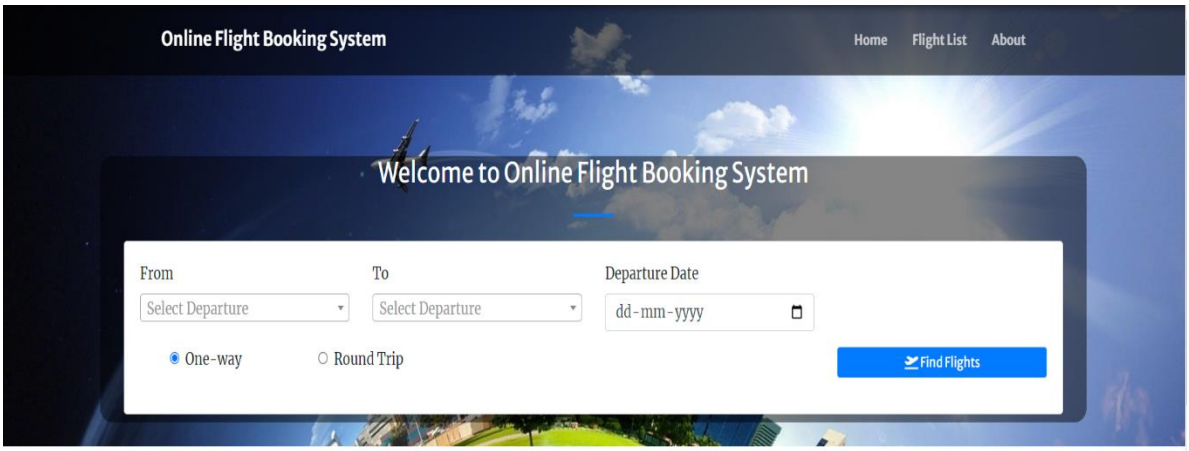
2.7:**ER-DIAGRAM FOR PASSENGER**



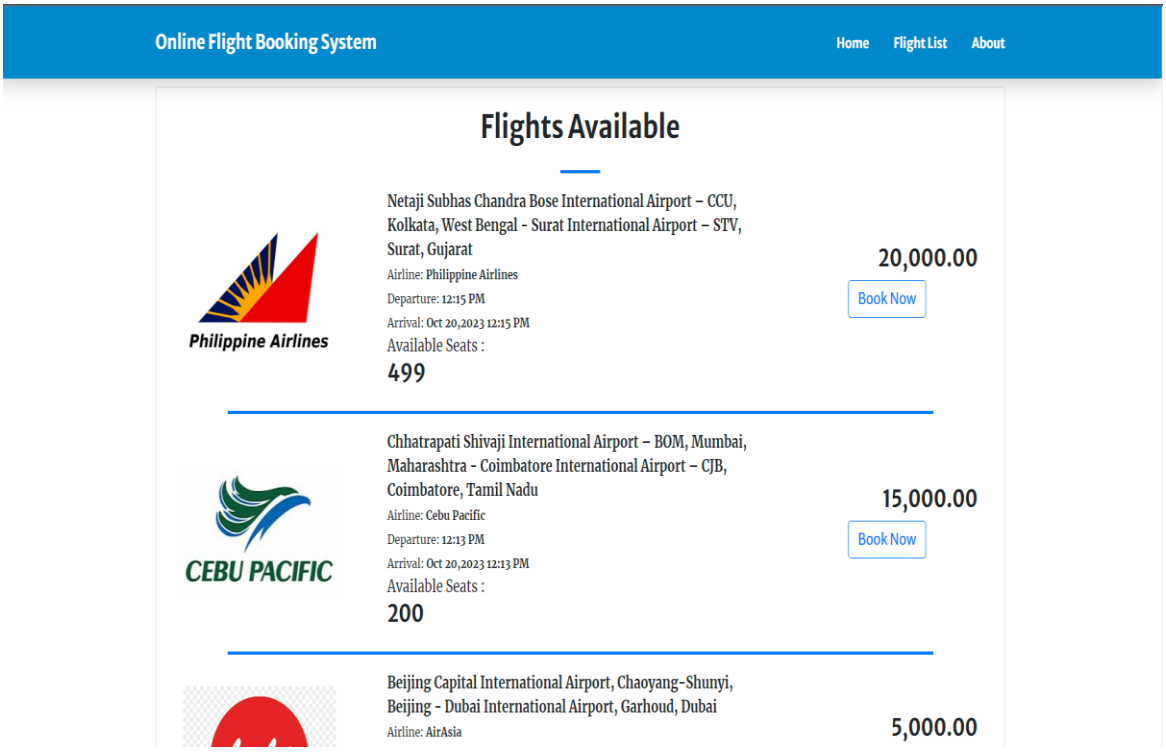
2.8Application's Output

2.8.1Frontend

LOGIN PAGE

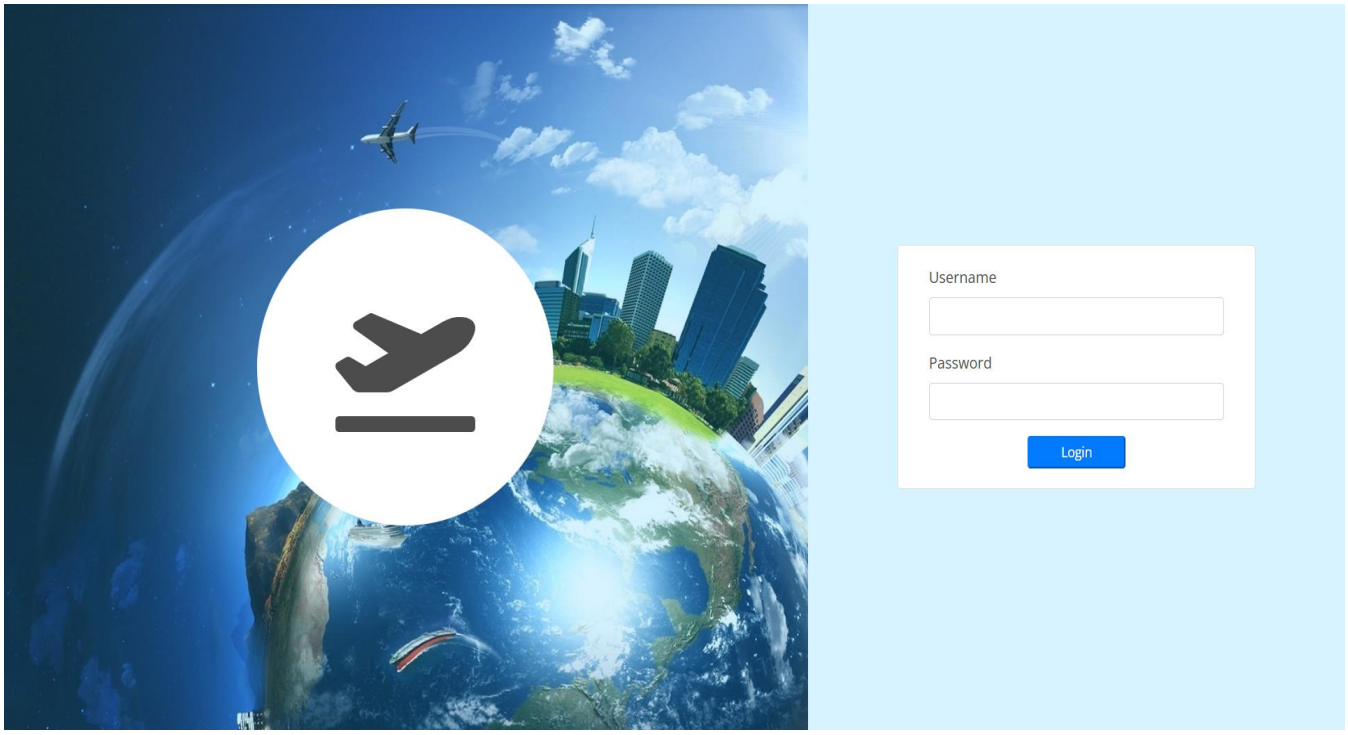


CHECKING AVAILABLE FLIGHT

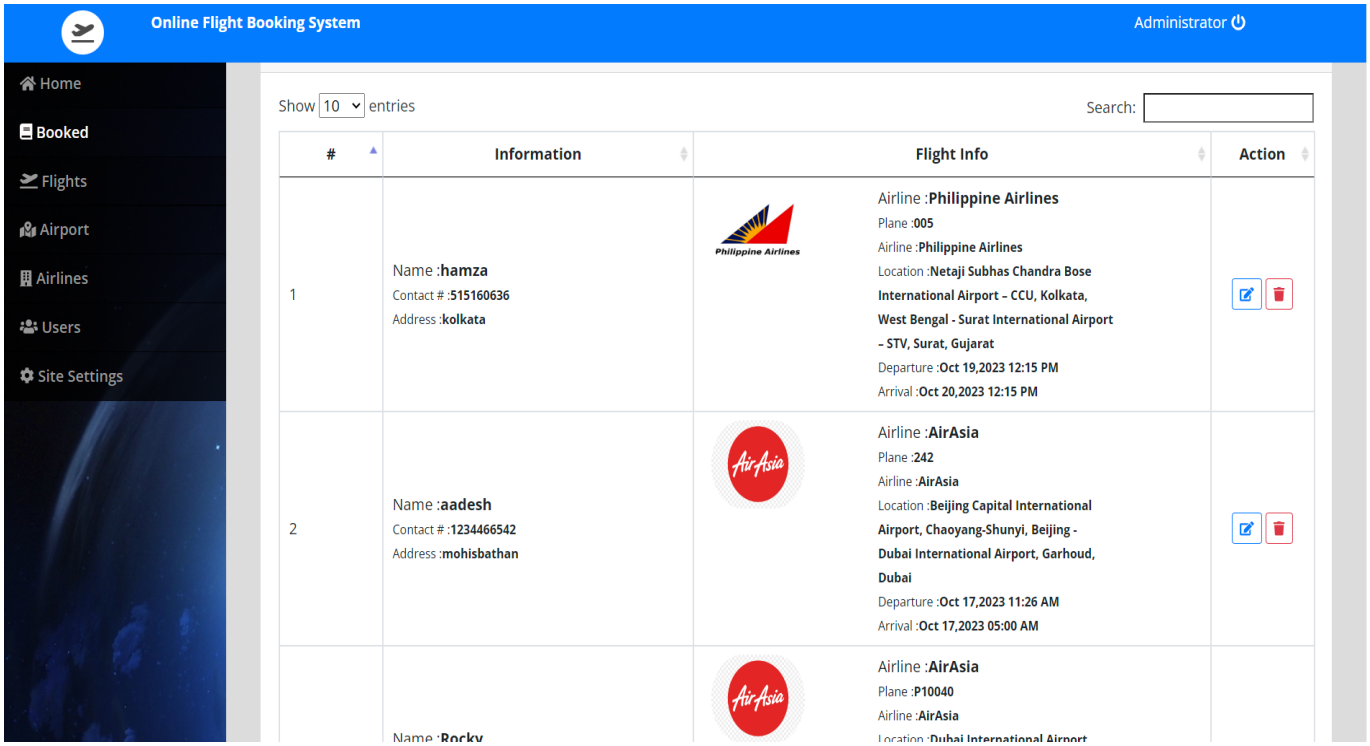


2.8.2 Backend

Admin Login page



CHECKING PASSENGER LIST



ADDING NEW FLIGHT