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**SAVITRIBAI PHULE PUNE UNIVERSITY
MASTER OF COMPUTER APPLICATION**

**Project Report on
“Airline Reservation System”**

**Under The Guidance Of
“Prof. Urmila Kadam”**

BY

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Class: MCA-I (Sem-II)

Year: 2022-2023



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Certificate

This is to certify that Mr. Suraj Shinde (244) Student of the class MCA-I (Sem-II) has successfully completed the Mini Project entitled “**Airline Reservation System**” during the academic year 2022-2023

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Project Guide

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Place : Pune

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1. Introduction

1.1 Abstract

Airline reservation system is a modern way and improved method in which clients can easily access all information about flights without manual efforts. Most people now days travel by means of air, hence this project aims at simplifying their needs by offering a wide range of airlines and timings where they can choose from and book their travels. The online reservation system gives all details of flight schedules, cost, time, seats and check-in details making it easier for the traveler. The outcome was implemented using programming languages like PHP, html, and database management system {MySQL}, this improved method will help solve the manual system drawbacks which included time consuming and other manual errors. Hence it is more efficient

1.2 Existing System and need for System

Existing System:

The existing system for airlines reservation typically involves manual processes, such as calling or physically visiting the airline ticket office to book a ticket, which can be time-consuming and inefficient. In addition, traditional airline reservation systems may have limited availability of seats and flight information, which can result in missed opportunities for customers to book preferred flights.

Need for System:

The need for a modern, automated airline reservation system has become increasingly important as the demand for air travel has grown. A new system can offer real-time updates and availability of flights, allowing customers to quickly and easily book flights from the convenience of their computer or mobile device. Such a system can also provide airlines with important insights and data on customer behavior and preferences, enabling them to optimize pricing and flight schedules to meet demand.

1.3 Scope of System

- **Flight information:** The system should provide real-time information about flight schedules, availability of seats, and pricing.
- **Booking and reservation:** Customers should be able to make reservations and book flights easily through the system. The system should be able to handle a large volume of transactions efficiently and accurately.
- **Payment processing:** The system should support various payment options and ensure secure and reliable processing of transactions.
- **Customer management:** The system should be able to manage customer profiles, including personal and contact information, booking history, and preferences.
- **Flight management:** The system should allow airlines to manage their flights, including scheduling, seat allocation, and pricing.

1.4 Operating Environment-Hardware and Software

Hardware (Ram 8GB, storage 500GB)

Software (XAMPP server, Browser, MySQL, VS Code)

1.5 Brief Description of Technology Used

1.5.1 Operating System- windows 10

1.5.2 Languages- PHP, HTML, CSS

1.5.3 Database- MySQL

Front end:

- **HTML**

HTML stands for Hypertext Markup Language, and it is the most widely used language on Web Pages, Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext. As its name suggests, HTML. is a Markup Language which means you use

HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

- **CSS**

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and 5 screen sizes as well as a variety of other effects CSS provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML

- **JavaScript**

JavaScript is light weight, JIT [Just-in-Time] compiled programming language. JavaScript is used mainly for enhancing the interaction of a user with the webpage. In other words, you can make your webpage livelier and more interactive, with the help of JavaScript. JavaScript is also being used widely in game development and Mobile application development.

Backend:

- **PHP (Hypertext Preprocessor)**

PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. Instead of lots of commands to output HTML (as seen in C or Perl), PHP pages contain HTML with embedded code that does "something" (in this case, output "Hi, I'm a PHP script!"). The PHP code is enclosed in special start and end processing instructions `<? php` and `?>` that allow you to jump into and out of "PHP mode."

- **MYSQL**

In this project, MySQL is used as the backend database. MySQL is an open source database management system. MySQL is a relational database management system. A relational database stores information in different tables, rather than in one giant table . MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. It is a very powerful program. It handles a large subset of the functionality of the most expensive and powerful database packages. It uses a standard form of the well-known SQL data language. It works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc. It works very quickly and works well even with large data sets. It is very friendly to PHP, the most appreciated language for web development, MySQL is open source database system.

2. Proposed System

2.1 Study of similar system

A study of similar systems for an airline reservation system project can provide valuable insights into existing solutions, best practices, and potential challenges. By examining similar systems, you can gather ideas, learn from their strengths and weaknesses, and make informed decisions for your own project. Here are some steps you can take to conduct a study of similar systems

- **Define the Scope:** Start by clearly defining the scope and objectives of your airline reservation system project. Understand the specific features, functionalities, and requirements you need to fulfill.
- **Identify Similar Systems:** Research and identify existing airline reservation systems that are similar in nature or have comparable features. Look for systems used by major airlines, online travel agencies, or other industry players.
- **Evaluate Features and Functionalities:** Analyze the features and functionalities offered by each identified system. Pay attention to key components such as flight search, seat selection, booking and payment processes, reservation management, and integration with other systems (e.g., airline inventory management, payment gateways).
- **User Experience Analysis:** Study the user interface and user experience (UX) of the identified systems. Consider factors such as ease of navigation, intuitive design, responsiveness, accessibility, and personalization options. Note any unique or innovative approaches to enhance the user experience.

2.2 Feasibility Study

- **Technical feasibility:** The system should be technically feasible, meaning that it can be developed and implemented with the available technology and resources. This includes evaluating the hardware and software requirements, system scalability, and security considerations.

- **Economic feasibility:** The system should be economically feasible, meaning that the benefits of the system outweigh the costs of development, implementation, and maintenance. This includes evaluating the return on investment (ROI), cost-benefit analysis, and total cost of ownership (TCO) over the system's life cycle.
- **Operational feasibility:** The system should be operationally feasible, meaning that it can be effectively integrated into existing operations and processes. This includes evaluating the system's impact on the organization's workflow, staff training requirements, and potential risks and challenges.
- **Legal feasibility:** The system should be legally feasible, meaning that it complies with all relevant laws, regulations, and industry standards. This includes evaluating data privacy and security regulations, intellectual property rights, and contractual obligations.

2.3 Objective of Proposed system

- To provide a user-friendly interface that makes it easy for customers to book flights, access information.
- To simplify the process of booking flights and make it easy for customers to search for available flights.
- To automate many of the manual processes involved in airline reservations, such as ticketing.
- To improve the overall efficiency of airline operations.
- To provide real-time information about flight availability, pricing, and schedules.
- To provide airlines with detailed data and analytics about customer behavior and preferences.

2.4 Users of system

The users of an online book store project can be categorized into the following groups:

1. Admin:

These are the users who manage the Airline Reservation Management system website. They have access to the backend of the website and are responsible for updating airlines information, managing flights , and adding new flights and airlines to the system

2. Customers:

These are the primary users of Airline Reservation Management system who visit the website to browse, search, and book the flight online. They create an account on the system, to book flight, and make payments using various payment methods. Customers can also leave reviews and ratings about system they have used.

4.8. Data Dictionary Using Normalization:

Database Name: mydb

```
CREATE DATABASE mydb;
```

```
USE DATABASE mydb;
```

1. Table Name: Admin

```
CREATE TABLE `admin` ( `admin_id` int(11) PRIMARY KEY AUTO_INCREMENT ,  
`admin_urname` varchar(20) NOT NULL, `admin_email` varchar(50) NOT NULL,  
`admin_pwd` varchar(100) NOT NULL);
```

SR. No	Field	Type	Size	Constraint
1.	admin_id	Int	11	PRIMARY
2.	admin_urname	varchar	20	UNIQUE
3.	admin_email	varchar	50	UNIQUE
4.	admin_pwd	varchar	100	NOT NULL

2.Table Name: Airline

```
CREATE TABLE airline ( `airline_id` int(11) PRIMARY KEY AUTO_INCREMENT , `name`  
varchar(20) NOT NULL, `seats` int(11) NOT NULL );
```

SR. No	Field	Type	Size	Constraint
1.	airline_id	int	11	PRIMARY
2.	name	Varchar	20	UNIQUE
3.	seats	int	11	NOT NULL

3. Table Name: cities

```
CREATE TABLE cities ( `c_id` int(11) NOT NULL PRIMARY KEY , `city` varchar(20) NOT NULL );
```

SR. No	Field	Type	Size	Constraint
1.	c_id	int	11	PRIMARY
2.	city	varchar	20	UNIQUE

4. Table Name: feedback

```
CREATE TABLE feedback ( `feed_id` int(11) PRIMARY KEY AUTO_INCREMENT, `email`  
varchar(50) NOT NULL, `q1` varchar(250) NOT NULL, `q2` varchar(20) NOT NULL, `q3`  
varchar(250) NOT NULL, `rate` int(11) NOT NULL );
```

SR. No	Field	Type	Size	Constraint
1.	feed_id	int	11	PRIMARY
2.	email	varchar	50	UNIQUE
3.	q1	varchar	250	NOT NULL
4.	q2	varchar	20	NOT NULL
5.	q3	varchar	250	NOT NULL
6.	rate	int	11	NOT NULL

5. Table Name: Reservation

```
CREATE TABLE feedback ( `reser_id` int(11) PRIMARY KEY AUTO_INCREMENT, `user_id`  
int (11) NOT NULL, `flight_id` int(11) NOT NULL, `seat_no` varchar(10) NOT NULL,  
`cost` int(11) NOT NULL );
```

SR. No	Field	Type	Size	Constraint
1.	reser_id	int	11	PRIMARY
2.	user_id	int	11	FOREIGN
3.	flight_id	int	11	FOREIGN
4.	seat_no	varchar	10	NOT NULL
5.	cost	int	11	NOT NULL

6. Table Name: users

```
CREATE TABLE users ( `user_id` int(11) PRIMARY KEY AUTO_INCREMENT, `username`  
varchar(20) NOT NULL, `email` varchar(50) NOT NULL, `password` varchar(100) NOT NULL );
```

SR. No	Field	Type	Size	Constraint
1.	user_id	int	11	PRIMARY
2.	user_name	varchar	20	UNIQUE
3.	email	varchar	50	UNIQUE
4.	password	varchar	100	NOT NULL

7. Table Name: Flight

```
CREATE TABLE flight ( `flight_id` int(11) PRIMARY KEY AUTO_INCREMENT, `admin_id` int(11)  
NOT NULL, `arrivale` datetime NOT NULL, `departure` datetime NOT NULL, `Destination` varchar(20)  
NOT NULL, `source` varchar(20) NOT NULL, `airline` varchar(20) NOT NULL, `Seats` varchar(110)  
NOT NULL, `Price` int(11) NOT NULL );
```

SR. No	Field	Type	Size	Key
1.	flight_id	int	11	PRIMARY
2.	admin_id	int	11	FOREIGN
3.	arrival	datetime		NOT NULL
4.	departure	datetime		NOT NULL
5.	destination	varchar	20	NOT NULL
6.	source	varchar	20	NOT NULL
7.	airline	varchar	20	NOT NULL
8.	seats	varchar	110	NOT NULL
9.	price	int	11	NOT NULL