

**DATABASE MANAGEMENT
SYSTEM
MINI PROJECT ON AIRTICKET
BOOKING SERVICES**

SUBMITTED BY-

- 1. HARSHIT SHARMA RA1611003010855**

ABSTRACT

Airline reservation System is a computerized system used to store and retrieve information and conduct transactions related to air travel. The project is aimed at exposing the relevance and importance of Airline Reservation Systems. It is projected towards enhancing the relationship between customers and airline agencies through the use of ARSs, and thereby making it convenient for the customers to book the flights as when they require such that they can utilize this software to make reservations.

This software has two parts. First is user part and the administrator part. User part is used as a front end and administrator is the back end. Administrator is used by airline authority. It will allow the customers to access database and allow new customers to sign up for online access.

The system allows the airline passenger to search for flights that are available between the two travel cities, namely the “Departure city” and “Arrival city” for a particular departure and arrival dates. The system displays all the flight’s details such as flight no, name, price and duration of journey etc.

After search the system display list of available flights and allows customer to choose a particular flight. Then the system checks for the availability of seats on the flight. If the seats are available then the system allows the passenger to book a seat. Otherwise it asks the user to choose another flight.

To book a flight the system asks the customer to enter his details such as name, address, city, state, and credit card number and contact number. Then it checks the validity of card and book the flight and update the airline database and user database. The system also allows the customer to cancel his/her reservation, if any problem occurs.

The main purpose of this software is to reduce the manual errors involved in the airline reservation process and make it convenient for the customers to book the flights as when they require such that they can utilize this software to make reservations, modify reservations or cancel a particular reservation.

INTRODUCTION

Airline reservation systems incorporate airline schedules, fare tariffs, passenger reservations and ticket records. An airline's direct distribution works within their own reservation system, as well as pushing out information to the GDS. The second type of direct distribution channel are consumers who use the internet or mobile applications to make their own reservations. Travel agencies and other indirect distribution channels access the same GDS as those accessed by the airline reservation systems, and all messaging is transmitted by a standardized messaging system that functions on two types of messaging that transmit on SITA's high level network (HLN). These messaging types are called Type A [usually EDIFACT format] for real time interactive communication and Type B for informational and booking type of messages. Message construction standards set by IATA and ICAO, are global, and apply to more than air transportation. Since airline reservation systems are business critical applications, and they are functionally quite complex, the operation of an in-house airline reservation system is relatively expensive.

In the airline industry, available seats are commonly referred to as inventory. The inventory of an airline is generally classified into service classes (e.g. first, business or economy class) and up to 26 booking classes, for which different prices and booking conditions apply. Inventory data is imported and maintained through a schedule distribution system over standardized interfaces. One of the core functions of inventory management is inventory control. Inventory control steers how many seats are available in the different booking classes, by opening and closing individual booking classes for sale. In combination with the fares and booking conditions stored in the Fare Quote System, the price for each sold seat is determined. In most cases, inventory control has a real time interface to an airline's Yield management system to support a permanent optimization of the offered booking classes in response to changes in demand or pricing strategies of a competitor.

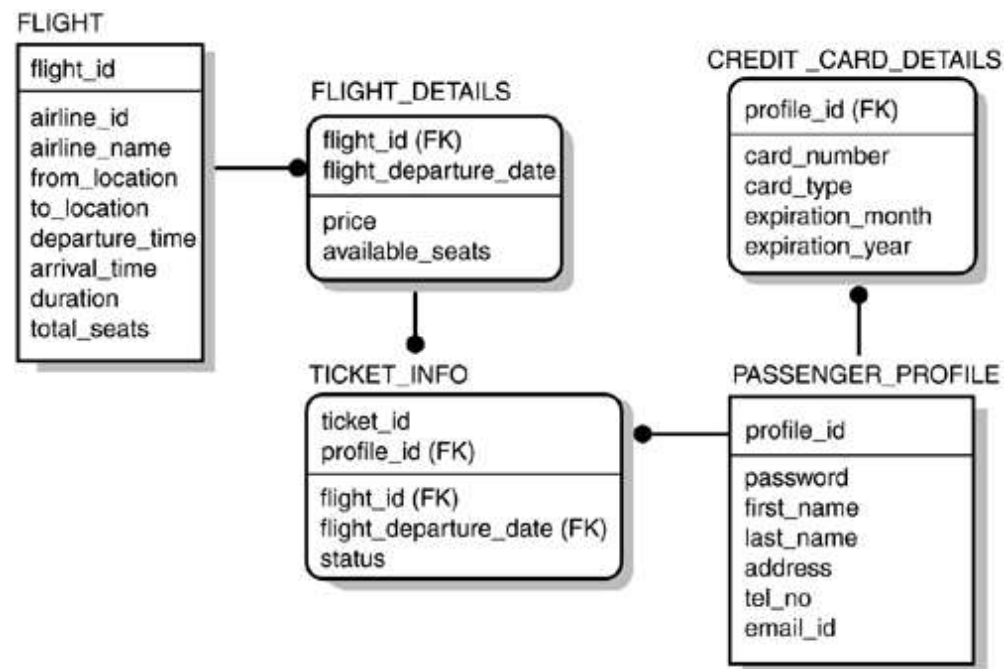
SYSTEM DESCRIPTION

In this project, we implement an airline reservation website which is similar to Priceline.com. We assume that all of the flights are daily flights. A new user can create an account first, then search and add flights to his/her cart. There are two flight options provided for searching: one-way and round-trip, users can also filter the results according to whether or not there is an intermediate stop. An admin user can add, delete and update any flights. We make an assumption that all of the operations are cascading.

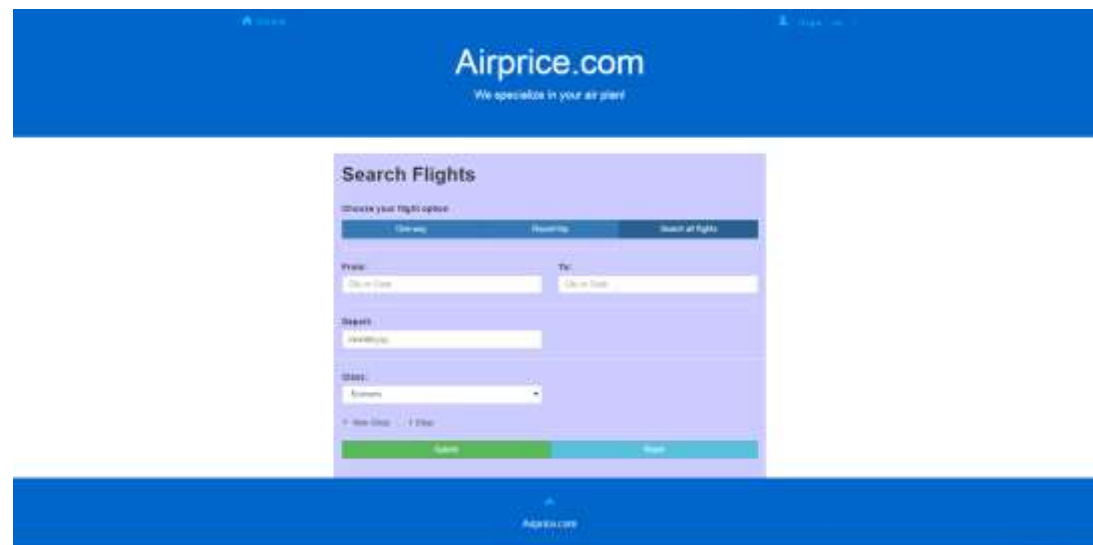
Languages Used for Implementation:

- PHP 5 - for server side scripting.
- Javascript/JQuery/Ajax - for client side scripting.
- Bootstrap/CSS - for design the web pages.

ENTITY RELATIONSHIP DIAGRAM:



OUTPUT SCREENSHOTS:



Sign Up

Gender:

☐ Female☐ Male

Welcome , please sign-in.

We want your visit to be fast and easy. Please enter your username and password to get started. If you need to set up your profile, please [register now](#).

Your username:

Your password:

☐ Remember my username when I return

Admin Sign In

Username:

Password:

[Back to home](#)

Search Results

Search Result: 10 results

Flight	Aircraft	Date	Departure	Departure Time	Arrival	Arrival Time	Class	Capacity	Price	Remain Seats	Reserve
A3200	AIRINDIA A320	2019-10-20	GCI	17:00:00	ICR	21:00:00	Economy	80	80	80	Add to Cart
A3200	AIRINDIA A320	2019-10-20	GCI	17:00:00	ICR	21:00:00	Business	5	200	5	Add to Cart
A3201	AIRINDIA A320	2019-10-20	HYD	18:20:00	ICR	21:00:00	Business	5	300	5	Add to Cart
A3201	AIRINDIA A320	2019-10-20	HYD	18:20:00	ICR	21:00:00	Economy	200	100	200	Add to Cart
A3203	AIRINDIA A320	2019-10-20	JAI	07:20:00	DEL	10:30:00	Business	15	300	15	Add to Cart
A3203	AIRINDIA A320	2019-10-20	JAI	07:20:00	DEL	10:30:00	Economy	100	200	100	Add to Cart
A3203	AIRINDIA A320	2019-10-20	ICR	20:00:00	GCI	23:00:00	Economy	80	80	80	Add to Cart
A3203	AIRINDIA A320	2019-10-20	ICR	20:00:00	GCI	23:00:00	Business	5	300	5	Add to Cart
A3204	AIRINDIA A320	2019-10-20	DEL	11:00:00	ICR	13:00:00	Economy	100	40	100	Add to Cart

Shopping cart

In the shopping cart:

Time	Flight	Aircraft	Date	Departure	Departure Time	Arrival	Arrival Time	Class	Price	Pay
2019-10-01 07:12:21	9Q331	SpiceJet 9Q331	2019-01-01	MAA	11:20:00	JAI	14:15:00	Business	8007	Delete

Total: ₹8067

[Pay](#)

CODE:

Database Design:

```
CREATE TABLE `admin` (  
  `id` int(11) NOT NULL,  
  `UserName` varchar(100) NOT NULL,  
  `Password` varchar(100) NOT NULL );
```

```
CREATE TABLE `airplane` (  
  `ID` varchar(10) NOT NULL,  
  `type` varchar(10) NOT NULL,  
  `company` varchar(20) NOT NULL,  
  PRIMARY KEY (`ID`));
```

```
CREATE TABLE `airport` (  
  `code` varchar(10) NOT NULL,  
  `name` varchar(50) NOT NULL,  
  `city` varchar(20) NOT NULL,  
  `state` varchar(20) NOT NULL,  
  `country` varchar(20) NOT NULL,  
  PRIMARY KEY (`code`));
```

```
CREATE TABLE `book` (  
  `ID` int(11) NOT NULL AUTO_INCREMENT,  
  `time` datetime NOT NULL,  
  `date` date NOT NULL,  
  `flightno` varchar(10) NOT NULL,  
  `username` varchar(45) NOT NULL,  
  `classtype` varchar(20) NOT NULL,  
  `paid` int(1) DEFAULT '0',  
  PRIMARY KEY (`ID`, `flightno`),  
  KEY `username_idx` (`username`),
```



```

KEY `classname_idx` (`classtype`),
KEY `flightno_idx` (`flightno`,`classtype`),
CONSTRAINT `flightno` FOREIGN KEY (`flightno`, `classtype`) REFERENCES
`class` (`number`, `name`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `username` FOREIGN KEY (`username`) REFERENCES
`passanger` (`username`) ON DELETE NO ACTION ON UPDATE NO ACTION );

```

```

CREATE TABLE `class` (
`number` varchar(10) NOT NULL,
`name` varchar(20) NOT NULL,
`capacity` int(11) NOT NULL,
`price` float NOT NULL,
PRIMARY KEY (`number`,`name`),
KEY `number_idx` (`number`),
CONSTRAINT `number` FOREIGN KEY (`number`) REFERENCES `flight`
(`number`) ON DELETE CASCADE ON UPDATE CASCADE );

```

```

CREATE TABLE `flight` (
`number` varchar(20) NOT NULL,
`airplane_id` varchar(10) NOT NULL,
`departure` varchar(10) NOT NULL,
`d_time` time NOT NULL,
`arrival` varchar(10) NOT NULL,
`a_time` time NOT NULL,
PRIMARY KEY (`number`),
KEY `code_idx` (`departure`,`arrival`),
KEY `airplaneid_idx` (`airplane_id`),
KEY `arrival_idx` (`arrival`),
CONSTRAINT `airplaneid` FOREIGN KEY (`airplane_id`) REFERENCES
`airplane` (`ID`) ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `arrival` FOREIGN KEY (`arrival`) REFERENCES `airport` (`code`)
ON DELETE CASCADE ON UPDATE CASCADE,
CONSTRAINT `departure` FOREIGN KEY (`departure`) REFERENCES `airport`
(`code`) ON DELETE CASCADE ON UPDATE CASCADE );

```

```
CREATE TABLE `passanger` (  
  `username` varchar(30) NOT NULL,  
  `firstname` varchar(45) DEFAULT NULL,  
  `middlename` varchar(45) DEFAULT NULL,  
  `lastname` varchar(45) DEFAULT NULL,  
  `email` varchar(45) DEFAULT NULL,  
  `cellphone` varchar(15) DEFAULT NULL,  
  `gender` varchar(10) DEFAULT NULL,  
  `birthday` date DEFAULT NULL,  
  `password` varchar(45) NOT NULL,  
  PRIMARY KEY (`username`));
```

CONCLUSION

The project has been successfully completed and the result was received as expected. The Database, has got all the required provisions now to operate in real-life situations and can be implemented in any situation.

The final output was the addition of details by the Airprice_admin and the details getting added in the database. Further, if one wishes to work in the database, they may use various other SQL functions to work in the software. The main aim of the project has also been satisfied.