

DBIS Project: Airline Management System

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Overview of the project

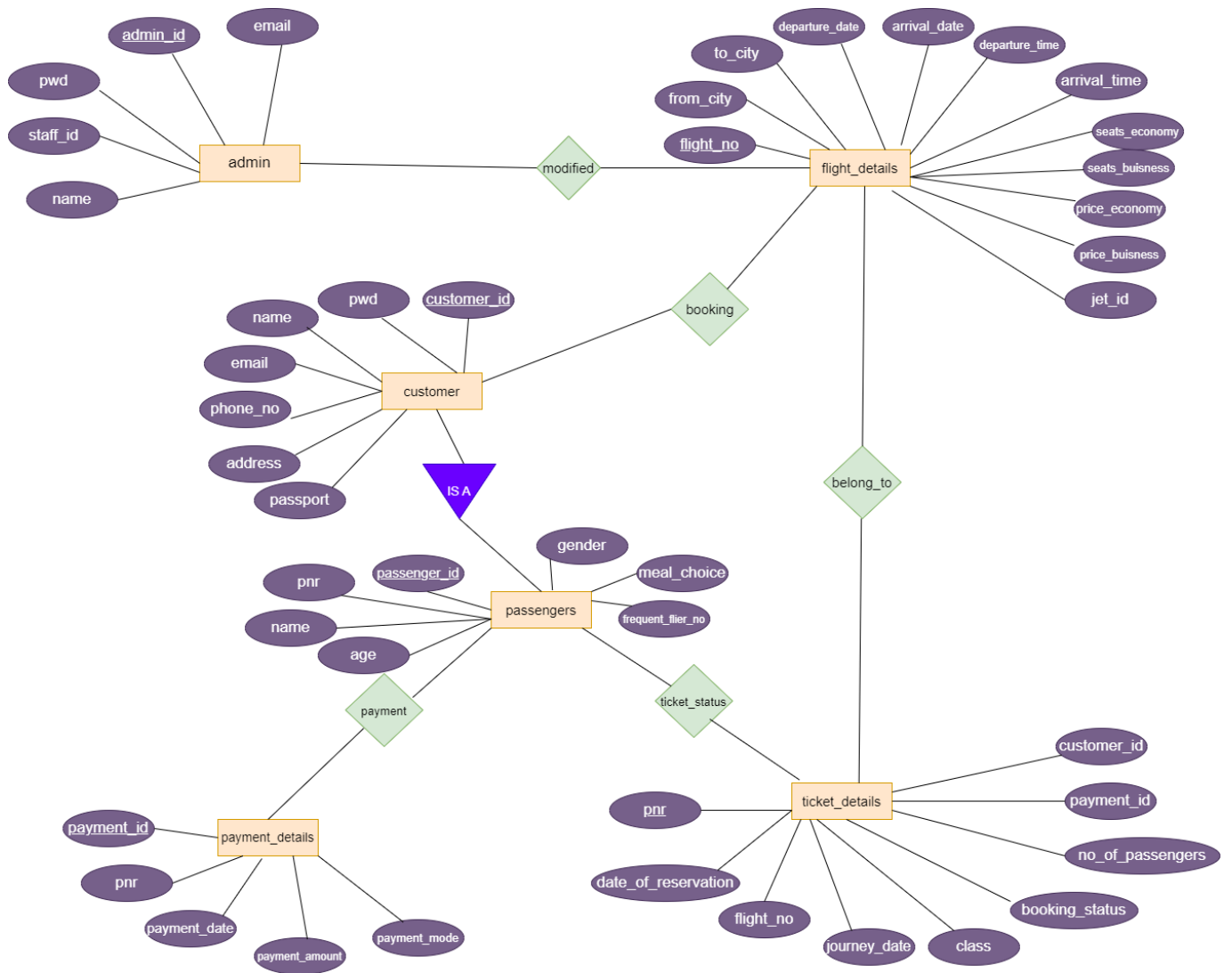
Airline Management System is a dedicated and highly configurable system for all airlines, which can be easily accessed by all users. It helps the users to book flights without visiting offline booking counters. This system can be accessible by any user from any location at any time. So in this project we will make such a system in which a passenger would be able to view the availability of flights' details, as per their requirement as well as they can book the flights online and can also cancel the reservation. The administrator manages the passenger booking system and updates the reservation status.

Database schema, ER Model, Integrity Constraints and views, Users

Schemas :

```
admin (admin_id, name, email, pwd, staff_id)
flight_details (flight_no, from_city, to_city, departure_date, arrival_date, departure_time,
arrival_time, seats_economy, seats_business, price_economy, price_business, jet_id)
customer (customer_id, pwd, name, email, phone_no, address, passport)
ticket_details (pnr, date_of_reservation, flight_no, journey_date, class, booking_status,
no_of_passenger, payment_id, customer_id)
payment_details (payment_id, pnr, payment_date, payment_amount, payment_mode)
passengers (passenger_id, pnr, name, age, gender, meal_choice, frequent_flier_no)
modified (admin_id, flight_no,
    foreign key admin_id references admin,
    foreign key flight_no references flight_details)
booking(customer_id, flight_no,
    foreign key customer_id references customer,
    foreign key flight_no references flight_details)
belong_to (flight_no, pnr,
    foreign key flight_no references flight_details,
    foreign key pnr references ticket_details)
ticket_status (passenger_id, pnr,
    foreign key passenger_id references passengers,
    foreign key pnr references ticket_details)
payment(passenger_id, payment_id,
    foreign key passenger_id references passengers,
    foreign key payment_id references payment_details)
```

ER Model :



User and Flight information :

inputs :

- User Information
 - Passenger (Name, Email id, Password, Passport No, Passenger ID, Flight No, Source, Destination, Date, Time)
 - Administration (Admin ID, Name, Email id, Contact no, Password).
- Flight Information
 - Domestic Flight (Type of Flight, Flight No, Source, Destination, In between stations, Date, Time, Type of class, Meal, Amount)
 - International Flight (Type of Flight, Flight No, Source, Destination, In between stations, Date, Time, Type of class, Meal, Amount)

Constraints for booking system :

- All the passengers must register themselves into the system.
 - Login information contains only passenger id and password.
 - To view the available flight details, passenger has to give source, destination, and date and time.
 - After confirmation of reservation request, passenger can see the status.
-

Relational Database design

The database and tables are created in PHP. The code snippets are as follows :

Database Creation

```
8  //----- DATABASE CREATION -----
9
10 $sql = "CREATE DATABASE flightjet";
11 $x = mysqli_query($connect,$sql);
12 // if(!$x){
13 //     echo "Database was not created successfully because of this error: ".mysqli_error($connect);
14 // }
15 $db='flightjet';
16 $conn =mysqli_connect($servername,$username,$password,$db);
17
```

Flight Table

```
64
65 //----- flight details CREATION -----
66
67
68 $flightDet =" CREATE TABLE IF NOT EXISTS `flight_details` (
69     `flight_no` varchar(10) NOT NULL,
70     `from_city` varchar(20) DEFAULT NULL,
71     `to_city` varchar(20) DEFAULT NULL,
72     `departure_date` date NOT NULL,
73     `arrival_date` date DEFAULT NULL,
74     `departure_time` time DEFAULT NULL,
75     `arrival_time` time DEFAULT NULL,
76     `seats_economy` int(5) DEFAULT NULL,
77     `seats_business` int(5) DEFAULT NULL,
78     `price_economy` int(10) DEFAULT NULL,
79     `price_business` int(10) DEFAULT NULL,
80     `jet_id` varchar(10) DEFAULT NULL
81 );
82
83 $result3 = mysqli_query($conn,$flightDet);
84 if(!$result3){
85     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
86 }
87
```

Passenger Table

```
203
204
205 //----- passenger details CREATION -----
206
207 $tablepassengers = "CREATE TABLE IF NOT EXISTS `passengers` (
208     `passenger_id` int(10) NOT NULL,
209     `pnr` varchar(15) NOT NULL,
210     `name` varchar(20) DEFAULT NULL,
211     `age` int(3) DEFAULT NULL,
212     `gender` varchar(8) DEFAULT NULL,
213     `meal_choice` varchar(5) DEFAULT NULL,
214     `frequent_flier_no` varchar(20) DEFAULT NULL
215 );";
216 $result7 = mysqli_query($conn,$tablepassengers);
217 if(!$result7){
218     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
219 }
```

Payment Table

```
284
285
286 //----- payment details CREATION -----
287
288 $payment_detailsTable = "CREATE TABLE IF NOT EXISTS `payment_details` (
289     `payment_id` varchar(20) NOT NULL,
290     `pnr` varchar(15) DEFAULT NULL,
291     `payment_date` date DEFAULT NULL,
292     `payment_amount` int(6) DEFAULT NULL,
293     `payment_mode` varchar(15) DEFAULT NULL
294 );";
295 $result9 = mysqli_query($conn,$payment_detailsTable);
296 if(!$result9){
297     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
298 }
299
```

Ticket Details Table

```
172
173 //----- ticket details CREATION -----
174
175 $ticketDet =" CREATE TABLE IF NOT EXISTS `ticket_details` (
176     `pnr` varchar(15) NOT NULL,
177     `date_of_reservation` date DEFAULT NULL,
178     `flight_no` varchar(10) DEFAULT NULL,
179     `journey_date` date DEFAULT NULL,]
180     `class` varchar(10) DEFAULT NULL,
181     `booking_status` varchar(20) DEFAULT NULL,
182     `no_of_passengers` int(5) DEFAULT NULL,
183     `payment_id` varchar(20) DEFAULT NULL,
184     `customer_id` varchar(20) DEFAULT NULL
185 );";
186
187 $result5 = mysqli_query($conn,$ticketDet);
188 if(!$result5){
189     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
190 }
191
192 $var1 ='yes';
193 $var2 = 'no';
194 $addtickets = "INSERT INTO `ticket_details` (`pnr`, `date_of_reservation`, `flight_no`, `journey_date`, `class`, `booking_status`, `no_of_passe
195 SELECT * FROM (SELECT '1669050', '2021-11-25', 'AA104', '2021-12-04', 'business', 'CONFIRMED', 3,'620041544', 'harryroshan') AS tmp
196 WHERE NOT EXISTS(
197     SELECT `pnr` FROM `ticket_details` WHERE pnr = '1669050'
198 )LIMIT 1";
199 $ticketsresult = mysqli_query($conn,$addtickets);
200 if(!$ticketsresult){
201     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
202 }
203
```

Customer Table

```
50
51 //----- customerlogins CREATION -----
52
53 $y1 = "CREATE TABLE IF NOT EXISTS `customer` (
54     `customer_id` varchar(20) NOT NULL,
55     `pwd` varchar(20) DEFAULT NULL,
56     `name` varchar(20) DEFAULT NULL,
57     `email` varchar(35) DEFAULT NULL,
58     `phone_no` varchar(15) DEFAULT NULL,
59     `address` varchar(35) DEFAULT NULL,
60     `passport` varchar(35) DEFAULT NULL
61 );";
62
63 $result2 = mysqli_query($conn,$y1);
64
```

Admin Details Table

```
17
18 //----- adminlogins CREATION -----
19
20
21 $y="CREATE TABLE IF NOT EXISTS `admin` (
22     `admin_id` varchar(20) NOT NULL,
23     `pwd` varchar(30) DEFAULT NULL,
24     `staff_id` varchar(20) DEFAULT NULL,
25     `name` varchar(20) DEFAULT NULL,
26     `email` varchar(35) DEFAULT NULL
27 );";
28
29 $result = mysqli_query($conn,$y);
30 if(!$result){
31     echo "The authors table was not created successfully because of this error ---> ". mysqli_error($conn);
32 }
33
34 $addtoAdmin = "INSERT INTO `admin` (`admin_id`, `pwd`, `staff_id`, `name`, `email`)
35 SELECT * FROM(SELECT 'admin', 'Admin#123', 'adminID', 'AdminName', 'admin1234@gmail.com' ) As tmp
36 WHERE NOT EXISTS(
37     SELECT `pwd` FROM `admin` WHERE pwd = 'Admin#123'
38 ) LIMIT 1";
39
40 $result1 = mysqli_query($conn,$addtoAdmin);
41
42 $addFliDet = "INSERT INTO `Flight_details` (`flight_no`, `from_city`, `to_city`, `departure_date`, `arrival_date`, `de
43 SELECT * FROM (SELECT 'AA101', 'bangalore', 'mumbai', '2021-11-01', '2021-12-02', '21:00:00', '01:00:00', '195', '96'
44 WHERE NOT EXISTS(
45     SELECT `flight_no` FROM `Flight_details` WHERE flight_no = 'AA101'
46 )LIMIT 1";
47 $result4 = mysqli_query($conn,$addFliDet);
48
```

Languages and Technologies used

- Frontend - HTML, CSS, JavaScript
 - Backend - PHP
 - Database - MySQL
 - Query Language - SQL
-

Interface Designs

The UI was designed using HTML, JS, and CSS, and the numerous screenshots that are provided later in the report depict the end product.

The Screenshot of the CSS design's source code is as follows:

```
29
30 /*----- skeleton -----
31
32 * {
33     box-sizing: border-box !important;
34 }
35
36 html {
37     scroll-behavior: smooth;
38 }
39
40 body {
41     color: #666666;
42     font-size: 14px;
43     font-family: 'Raleway', sans-serif;
44     line-height: 1.80857;
45     font-weight: normal;
46 }
47
48 a {
49     color: #1f1f1f;
50     text-decoration: none !important;
51     outline: none !important;
52     -webkit-transition: all .3s ease-in-out;
53     -moz-transition: all .3s ease-in-out;
54     -ms-transition: all .3s ease-in-out;
55     -o-transition: all .3s ease-in-out;
56     transition: all .3s ease-in-out;
57 }
58
```

```
139     text-decoration: none;
140     outline: none !important;
141 }
142
143 a,
144 .btn {
145     text-decoration: none !important;
146     outline: none !important;
147     -webkit-transition: all .3s ease-in-out;
148     -moz-transition: all .3s ease-in-out;
149     -ms-transition: all .3s ease-in-out;
150     -o-transition: all .3s ease-in-out;
151     transition: all .3s ease-in-out;
152 }
153
154 img {
155     max-width: 100%;
156     height: auto;
157 }
158
159 :focus {
160     outline: 0;
161 }
162
163 .btn-custom {
164     margin-top: 20px;
165     background-color: transparent !important;
166     border: 2px solid #ddd;
167     padding: 12px 40px;
168     font-size: 16px;
169 }
170
```

```

    .lead {
      font-size: 18px;
      line-height: 30px;
      color: #767676;
      margin: 0;
      padding: 0;
    }

    .form-control:focus {
      border-color: #ffffff !important;
      box-shadow: 0 0 0 .2rem rgba(255, 255, 255, .25);
    }

    .navbar-form input {
      border: none !important;
    }

    .badge {
      font-weight: 500;
    }

    .blockquote {
      margin: 20px 0 20px;
      padding: 30px;
    }

```

```

203
204 .full {
205   float: left;
206   width: 100%;
207 }
208
209 .layout_padding {
210   padding-top: 90px;
211   padding-bottom: 90px;
212 }
213
214 .layout_padding_2 {
215   padding-top: 75px;
216   padding-bottom: 75px;
217 }
218
219 .light_silver {
220   background: #f9f9f9;
221 }
222
223 .theme_bg {
224   background: #38c8a8;
225 }
226
227 .margin_top_30 {
228   margin-top: 30px !important;
229 }
230
231 .full {
232   width: 100%;
233   float: left;
234   margin: 0;
235   padding: 0;
236 }

```

```

243
244 .loader_bg {
245     position: fixed;
246     z-index: 9999999;
247     background: #fff;
248     width: 100%;
249     height: 100%;
250 }
251
252 .loader {
253     height: 100%;
254     width: 100%;
255     position: absolute;
256     left: 0;
257     top: 0;
258     display: flex;
259     justify-content: center;
260     align-items: center;
261 }
262
263 .loader img {
264     width: 280px;
265 }
266
267
268 /*-- navigation--*/
269
270 .navigation.navbar {
271     float: right;
272     padding: 0px;
273 }
274

```

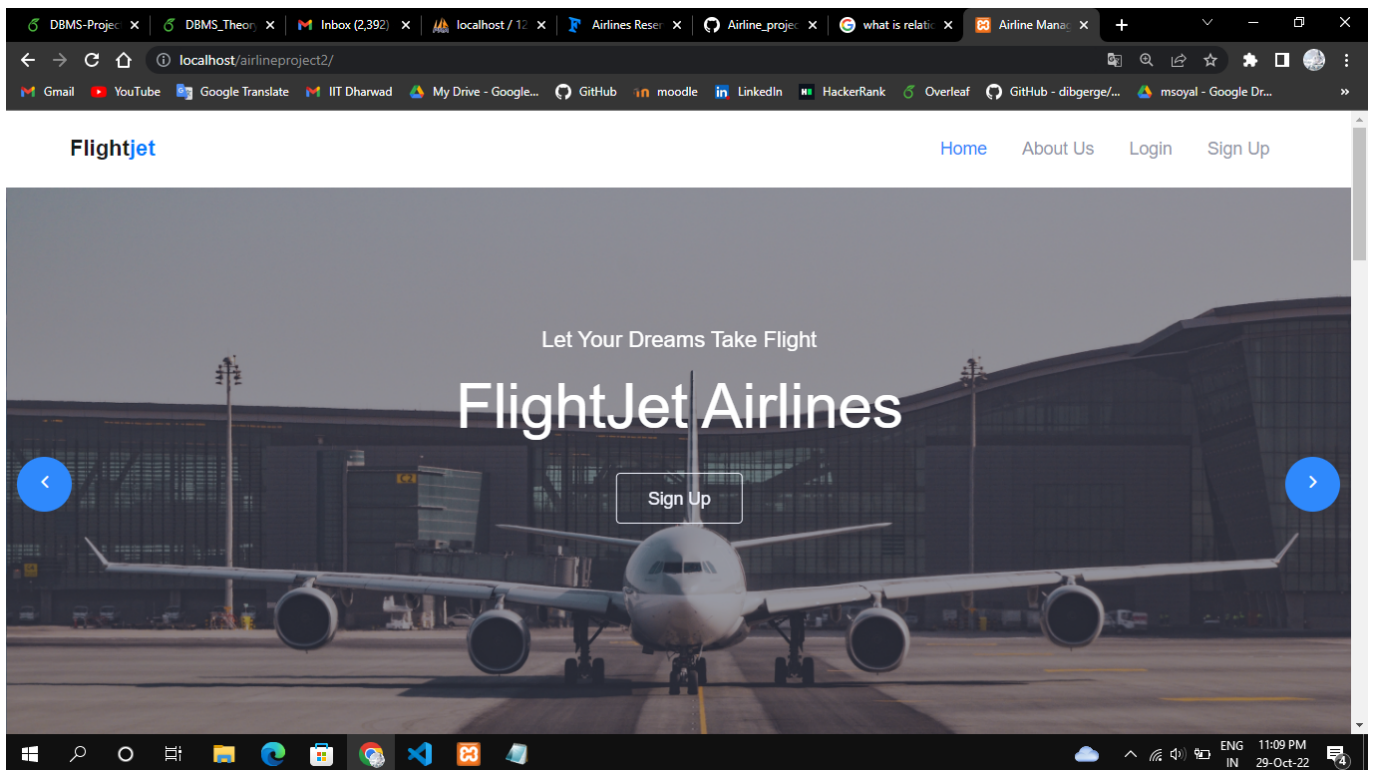
Workflow and Pages

The opening of the site occurs from a home page containing login and sign up options. We provided sign up and login option for admin and customer where the facilities and works are follow-

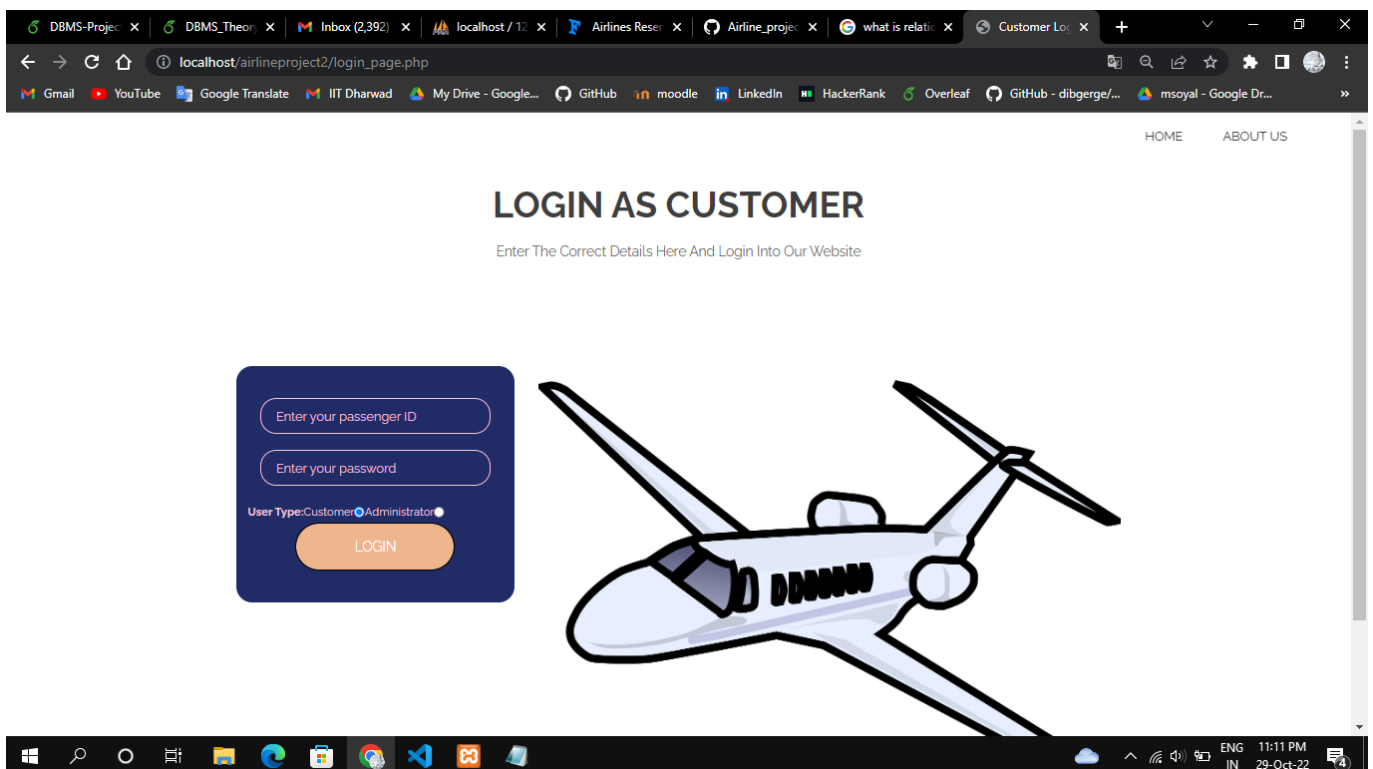
- Administrator
 - Login
 - Manage the passenger's booking status
 - Add a new flight
 - Delete the existing flight
 - Logout
- Passenger
 - Login
 - Edit Profile
 - Request to view the available flights as per requirement
 - Ticket Booking
 - View Booked Flight Tickets
 - Ticket cancellation
 - Print the ticket
 - Logout
- Dashboard
 - Home
 - About Us
 - Login
 - SignUp

ScreenShots

1. Home Page



2. Customer Login



3. Customer Signup

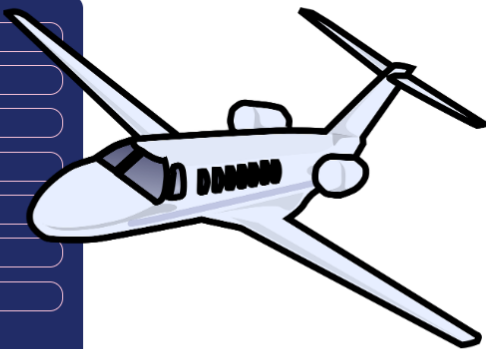
DBMS-Projec x DBMS_Theor x Inbox (2,392) x localhost / 12 x Airlines Reser x Airline_projec x what is relati x Customer Sig x

localhost/airlineproject2/new_user.php

HOME ABOUT US LOGIN

SIGNUP AS CUSTOMER

Fill Both The Forms And SignUp Into Our Website
(Passenger ID is nothing but Username)



Windows taskbar: 11:10 PM 29-Oct-22

4. Customer Home Page

DBMS-Projec x DBMS_Theor x Inbox (2,392) x localhost / 12 x Airlines Reser x Airline_projec x what is relati x Customer Ho x


localhost/airlineproject2/customer_homepage.php

HOME BOOK TICKETS ABOUT US


Welcome To Our FlightJet Airline Management

Monu Kumar Soyal


YOU CAN DO THE FOLLOWING THINGS FROM HERE



See The Available Flights As Per Your Requirement

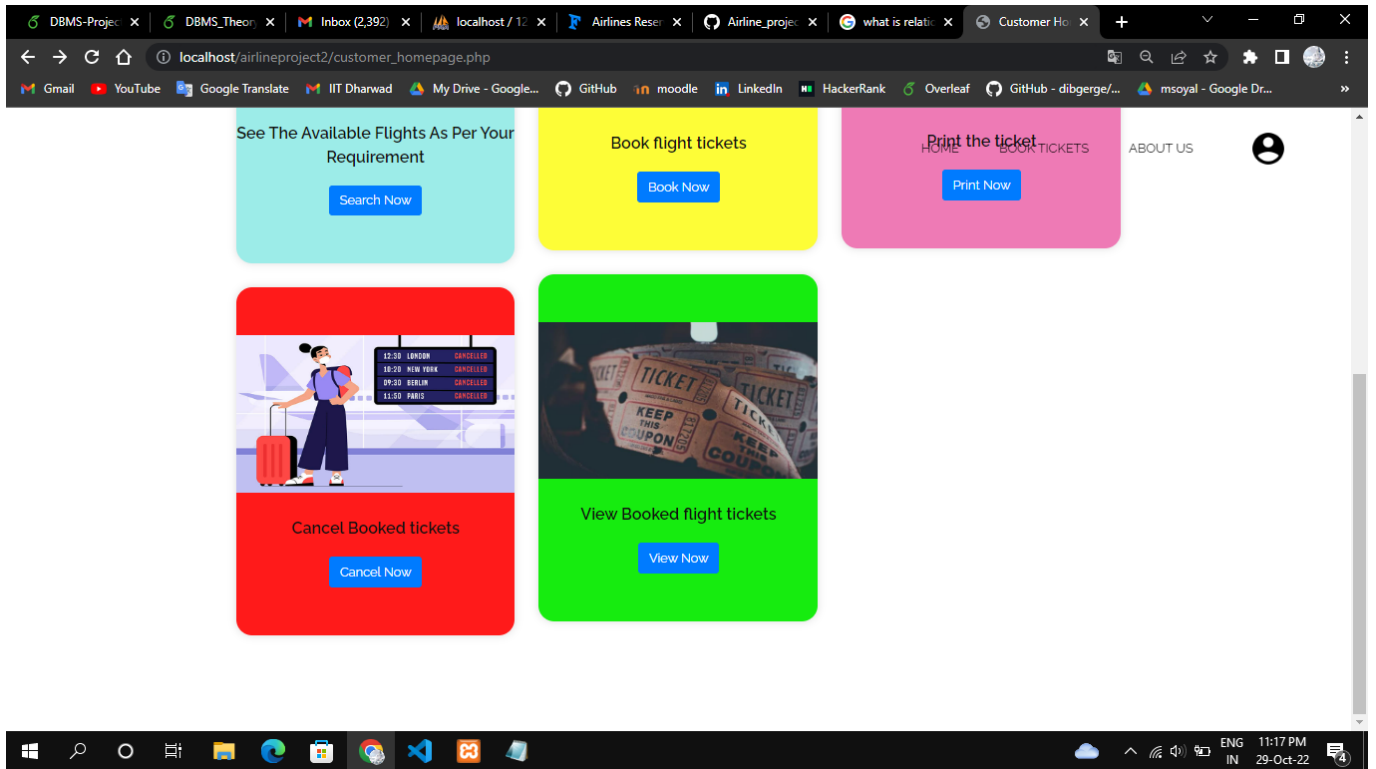


Book flight tickets



Print the ticket

Windows taskbar: 11:17 PM 29-Oct-22



5. Flight Details

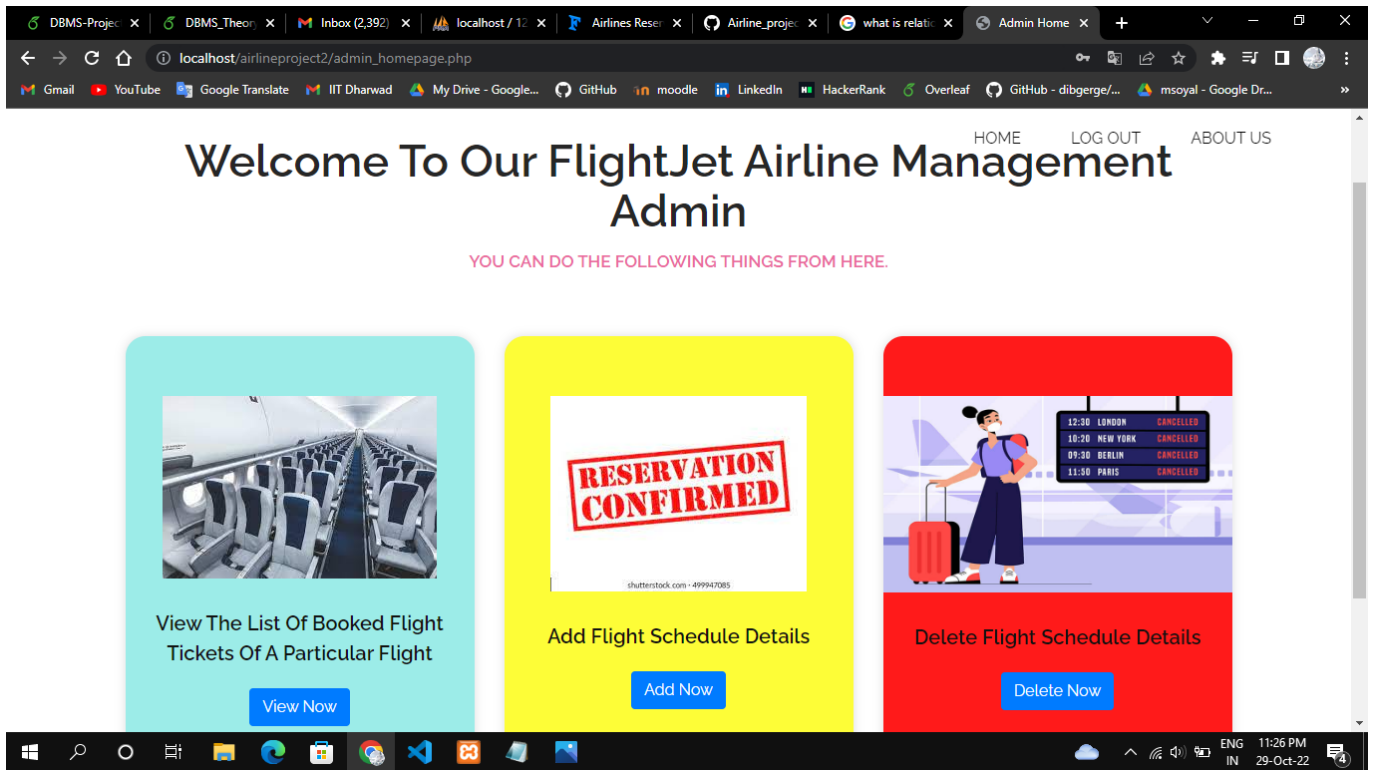
Flightjet [Home](#) [About Us](#)

Here you can see both domestic and international flights
Enter some words to search available flights

Search (Case-sensitive)

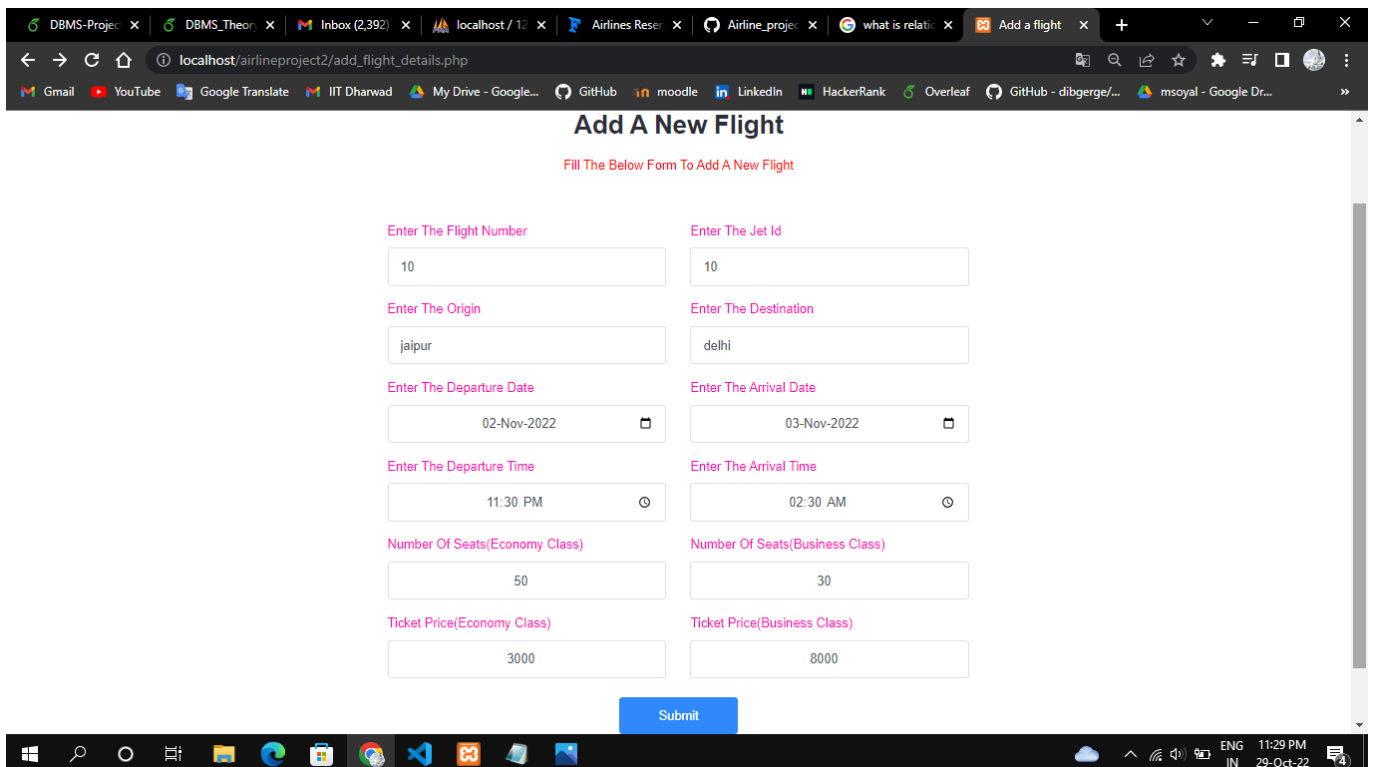
Flight No.	Origin	Destination	Departure Date	Departure Time	Arrival Date	Arrival Time	Seats Economy	Seats Business	Price Economy	Price Business	Jet ID
AA101	bangalore	mumbai	2021-12-01	21:00:00	2021-12-02	01:00:00	195	96	5000	7500	10001
AA111	chennai	rajahmundry	2021-12-26	21:00:00	2021-12-27	01:00:00	195	96	5000	7500	10001
AA102	bangalore	delhi	2021-12-01	10:00:00	2021-12-05	12:00:00	200	73	2500	3000	10002
AA103	bangalore	chennai	2021-12-03	17:00:00	2021-12-04	17:45:00	150	75	1200	1500	10004
AA104	bangalore	mysore	2021-12-04	09:00:00	2021-12-04	09:17:00	37	4	500	750	10003
AA106	bangalore	hyderabad	2021-12-	13:00:00	2021-	14:00:00	150	75	3000	3750	10004

6. Admin Page



The screenshot shows the 'Admin Home' page of the FlightJet Airline Management system. The browser's address bar indicates the URL is `localhost/airlineproject2/admin_homepage.php`. The page features a navigation bar with 'HOME', 'LOG OUT', and 'ABOUT US' links. The main heading reads 'Welcome To Our FlightJet Airline Management Admin', followed by a sub-header 'YOU CAN DO THE FOLLOWING THINGS FROM HERE.' Below this, there are three prominent action cards: a light blue card for 'View The List Of Booked Flight Tickets Of A Particular Flight' with a 'View Now' button; a yellow card for 'Add Flight Schedule Details' with an 'Add Now' button; and a red card for 'Delete Flight Schedule Details' with a 'Delete Now' button. The red card also includes an illustration of a flight schedule board with destinations like London, New York, Berlin, and Paris, all marked as 'CANCELLED'.

7. Add a Flight



The screenshot displays the 'Add A New Flight' form in the FlightJet system. The browser's address bar shows the URL `localhost/airlineproject2/add_flight_details.php`. The form is titled 'Add A New Flight' and includes a red instruction: 'Fill The Below Form To Add A New Flight'. The form is organized into two columns of input fields. The left column contains fields for 'Enter The Flight Number' (value: 10), 'Enter The Origin' (value: jaipur), 'Enter The Departure Date' (value: 02-Nov-2022), 'Enter The Departure Time' (value: 11:30 PM), 'Number Of Seats(Economy Class)' (value: 50), and 'Ticket Price(Economy Class)' (value: 3000). The right column contains fields for 'Enter The Jet Id' (value: 10), 'Enter The Destination' (value: delhi), 'Enter The Arrival Date' (value: 03-Nov-2022), 'Enter The Arrival Time' (value: 02:30 AM), 'Number Of Seats(Business Class)' (value: 30), and 'Ticket Price(Business Class)' (value: 8000). A 'Submit' button is located at the bottom center of the form.

8. Delete Flight

DBMS-Projec x DBMS_Theor x Inbox (2,392) x localhost / 12 x Airlines Reser x Airline_projec x what is relati x Delete a Fligh x +

localhost/airlineproject2/delete_flight_details.php

Gmail YouTube Google Translate IIT Dharwad My Drive - Google... GitHub moodle LinkedIn HackerRank Overleaf GitHub - dibgerge/... msoyal - Google Dr...

Flightjet Home About Us Logout

Delete An Existing Flight Details

Fill The Below Form To Delete An Existing Flight Details

Enter A Valid Flight Number

Eg:AA101

Enter The Departure Date

dd-----yyyy

Delete

Windows taskbar: 11:26 PM 29-Oct-22

9. Available Flight

DBMS-Projec x DBMS_Theor x Inbox (2,392) x localhost / 12 x Airlines Reser x Airline_projec x what is relati x View Availabl x +

localhost/airlineproject2/view_flights_form_handler.php

Gmail YouTube Google Translate IIT Dharwad My Drive - Google... GitHub moodle LinkedIn HackerRank Overleaf GitHub - dibgerge/... msoyal - Google Dr...

Flightjet Home About Us

AVAILABLE FLIGHTS

Flight No.	Origin	Destination	Departure Date	Departure Time	Arrival Date	Arrival Time	Price(Economy)	Select
10	jaipur	delhi	2022-11-02	23:30:00	2022-11-03	02:30:00	₹ 2000	<input type="radio"/>

Select Flight

Windows taskbar: 11:34 PM 29-Oct-22

10. Cancel Booked Ticket

Flightjet Home About Us

CANCEL BOOKED TICKETS

Enter the PNR

Cancel Ticket

11. Payment

Payment Summary

Base Fare, Fuel and Transaction Charges (Fees & Taxes included): ₹ 0

Meal Combo Charges: ₹ 500

Discount: 0

Total: 500

Your Payment/Transaction ID is **777428339**. Please note it down for future reference.

Enter the Payment Mode:-

Credit Card ☒ Debit Card ☐ Net Banking ☐

Pay Now

12. Payment Message

Flightjet Home About Us

BOOKING SUCCESSFUL

Your payment of ₹ 500 has been received.

Your PNR is **4122353**. Your tickets have been booked successfully.

13. Print the Ticket

PNR :	5388855
Booking Status	CANCELLED
Flight Number	AIR707MXPA
Flight Number	economy
Date of Journey	2021-12-01
Passenger No :	2
Name	Anil Soyol
Age	20
Gender	male
Meal Choice	yes
Booked by (Username)	Monu Kumar Soyol
Payment Id	782054538
Frequent Flier No. (If any)	

Print

Check other PNR

Conclusion

Using the fundamental ideas and tools covered in class and in the lab, an airline management system is created to make managing the many aspects of flight details and booking easier. While working on the project, we were able to obtain a thorough understanding of database management systems and familiarity with the numerous languages and technologies needed for the job.