

CSE370 : Database Systems Project Report Project Title : Online Flight Reservation

Group No : _5_, CSE370 Lab Section : _5_, Spring 2024					
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Introduction

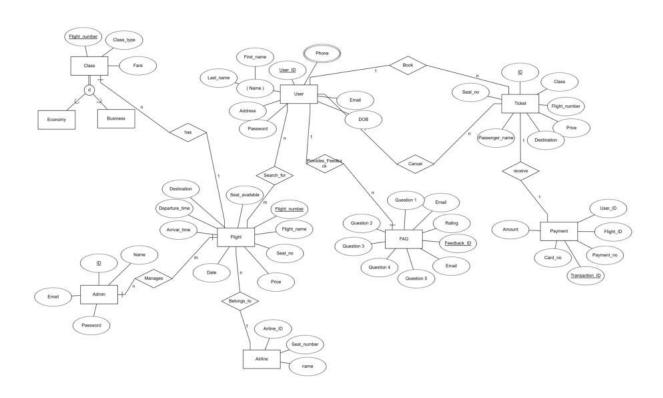
Our project intends to launch a cutting-edge online travel booking platform that provides customers with a smooth and effective booking experience.

The main goal of our project is to create an advanced online application that uses state-of-the-art technology to give consumers a full range of options for looking through, choosing, and booking flights. Our website provides a safe and dependable platform for passengers to look through flight alternatives, compare costs, and complete transactions with confidence because it is built upon strong frameworks and industry-standard procedures.

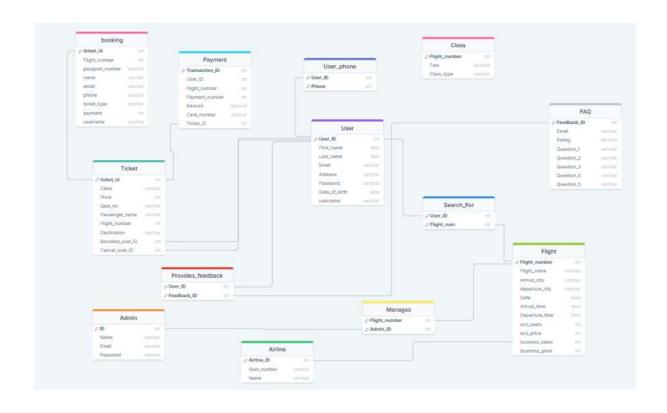
Project Features

- 1. **Different Homepage for admins and users :** When users and admins log in to the website, they see different homepages according to their respective needs.
- 2. **Modifying and deleting flight schedules (Admin Panel):** This feature enables admins to change or remove flight details, ensuring the accuracy and currency of flight schedules.
- 3. **User registration:** Users can register accounts securely, enabling personalized experiences and streamlined booking processes through login authentication.
- 4. **Flight schedules in 24hrs format:** Displaying flight schedules in 24-hour format enhances clarity and avoids confusion, providing users with easily understandable time representations.
- 5. **Payment Methods:** Simplifying transactions by accepting payments in dollars for all customers ensures consistency and convenience across international users, reducing currency exchange complexities.
- 6. **Customer Services and FAQ for Feedback:** Provide a seamless flight booking experience with user-friendly interfaces and secure payment processing, ensuring customer satisfaction at every step. Also feedback option is added to collect users suggestions, and experiences to help us continuously improve and tailor our services to meet your needs better.

ER/EER Diagram



Schema Diagram



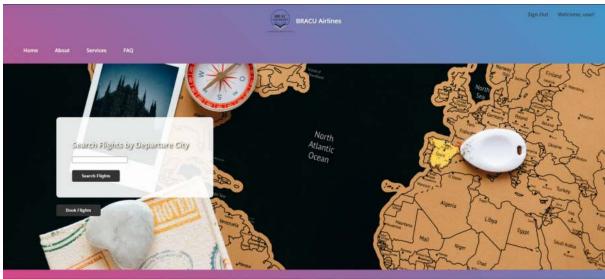
Frontend	De	velo	pm	ent
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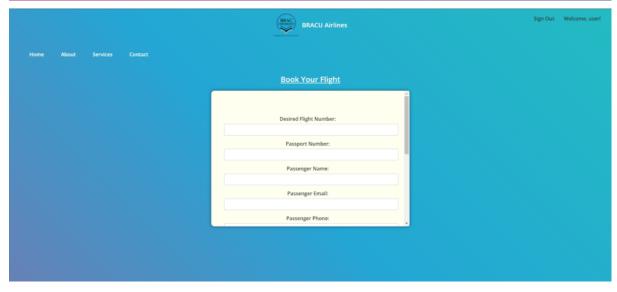
Briefly discuss about Frontend Development and add Screenshots by mentioning Individual Contributions

Contribution of ID: 21201558, Name: Md. Rashed Fahim Chowdhury

- I have used CSS to style your HTML elements and create a visually appealing layout. This includes setting background images, defining fonts, colors, padding, margins, and borders to make the content visually appealing and readable.
- created forms for user interaction, such as User home, Admin Panel, ,Book Ticket now, Delete Flight,Feedback and Payment. These forms include various input fields for submitting the form data. Also included navigation elements like buttons or links to navigate between different pages of the website.





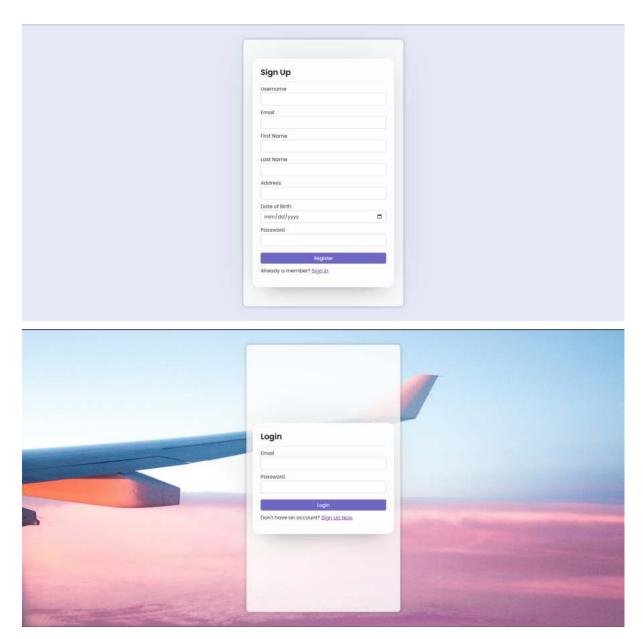






Contribution of ID: 20301389, Name: Ashiqur Rahman Turzo

Worked On: User registration and login page. Also, on the "Show Flight Bookings" Page.

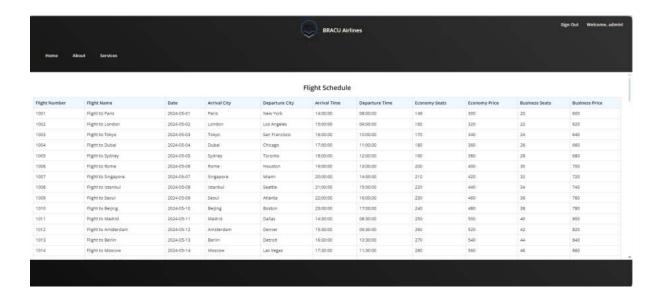




Contribution of ID: 23241054, Name: Juaria Tashin

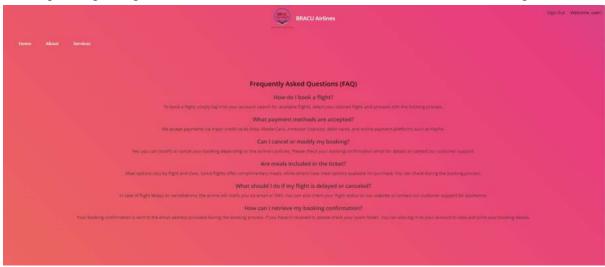
 I have used CSS to style HTML elements and create a visually appealing layout.

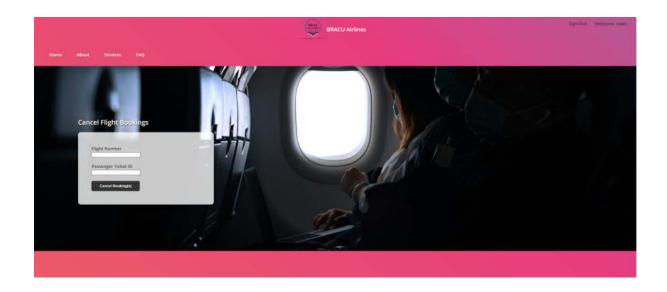




Contribution of ID: 20201032, Name: Sumaiya Hossain

The HTML elements have been styled and a visually pleasing layout has been created using CSS. To make the information aesthetically pleasing and understandable, I defined fonts, colors, padding, margins, and borders. This is for the FAQ section and Cancel Flight section.





Contribution of ID: 21201366, Name: Muhammad Tasib Ahasan

I have worked on "Modify Flight Schedule" and "Add Flight Schedule page". With HTML,CSS and JavaScript I have added layout, colors, fonts, animations and created dynamic tables.







Backend Development

Briefly discuss about Backend Development and add Screenshots by mentioning Individual Contributions

Contribution of ID: 21201558, Name: Md. Rashed Fahim Chowdhury

• Used HTML, PHP, SQL Queries for Booking Ticket in User panel bookticketsnow.php file. Also created the Payment page payment.php. Used SQL to store the information when user books a ticket. Also worked on delete.php file. When the admin tries to delete a flight from Admin Panel I made sure that it gets delete from the both flight table and the booking table. Created feedback.php file to store the feedbacks from the users and their ratings to know about experiences with the online flight reservation system.

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Contribution of ID: 20101998, Name: Ashiqur Rahman Turzo.

- I worked on the flight_bookings.php("Show Flight Bookings" on the admin homepage). For that I incorporated HTML and, mainly PHP and MySQL queries.
- Also, I worked on register.php and index.php these files are for User Registration and Login. Similar to "Show Flight Bookings", I used HTML, PHP and MySQL queries here as well.

flight_bookings.php

```
c?php
session_start();
$servername = "localhost"; // for the database server name
$username = "root"; // the database username
$password = ""; // the database password
$dbname = "database"; // the database name

// Connection creation
$conn = new mysqli($servername, $username, $password, $dbname);

// Connection checking
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
}
```

```
} else {
    echo "No bookings found for Flight Number $Flight_number.";
    }
}

}

}
```

index.php

```
<?php
   session_start();
?>
```

```
}else{
?>
```

register.php

Contribution of ID: 23241054, Name: Juaria Tashin

- I have used PHP code to create a connection to the database.
- I Also used a SQL query for constructing to retrieve flight booking information for the logged-in user. This query typically involves joining the Flight and Booking tables based on the flight number.
- Handling user authentication (\$_SESSION['username']) to ensure that only authenticated users can access the flight schedule page.
- The flight details are usually displayed in HTML tables, where each row is corresponding to a reservation. Dynamic HTML markup with flight information can be generated using PHP echo statements.

For "Show Flight Schedule":

```
<?php
require_once('db_connect.php');
?>
```

```
<?php
// Connect to the database
$mysqli = new mysqli("localhost", "root", "", "database");

// Check connection
if ($mysqli->connect_error) {
    die("Connection failed: " . $mysqli->connect_error);
}

// Fetch flight schedules from the database
$sql = "SELECT * FROM Flight";
$result = $mysqli->query($sql);
?>
```

For "My Flight Schedule":

```
<?php
require_once('db_connect.php');
?>
```

```
while ($row = mysqli_fetch_assoc($result)) {
    // Fetch flight details based on flight number
    $flightNumber = $row['Flight_number'];
    $flightQuery = "SELECT * FROM Flight WHERE Flight_number = $flightNumber";
    $flightResult = mysqli_query($conn, $flightQuery);
    $flight = mysqli_fetch_assoc($flightResult);
```

```
if (mysqli_num_rows($result) > 0) [
    // Display flight schedules in table
echo "";
    echo "<thead>";
    echo "Flight Number";
    echo "Flight Name";
    echo "Departure Time";
    echo "";
    while ($row = mysqli_fetch_assoc($result)) {
         $flightNumber = $row['Flight_number'];
         $flightQuery = "SELECT * FROM Flight WHERE Flight_number = $flightNumber";
         $flightResult = mysqli_query($conn, $flightQuery);
         $flight = mysqli_fetch_assoc($flightResult);
         // Display flight details in table rows
         echo "";
echo ""
         echo "" . $flight['Flight_number'] . "";
echo "" . $flight['Flight_name'] . "";
echo "" . $flight['Date'] . "";
         echo "" . $flight['Arrival_city'] . "";
echo "" . $flight['departure_city'] . "";
echo "" . $flight['Arrival_time'] . "";
echo "" . $flight['Departure_time'] . "";
```

Contribution of ID: 20201032, Name: Sumaiya Hossain

Did the backend for FAQ and for Cancel Flight.

For Cancel Flight: In order to connect to the database, I first created a connection using the code that has a `require_once('db_connect.php');` declaration.

```
<?php
require_once('db_connect.php');</pre>
```

I made sure that the script checks to see if the HTTP request type is POST, which indicates that the cancellation form has been submitted. The process of retrieving data involves obtaining the flight number ({\$Flight_number}) and ticket ID ({\$ticket_id}) that were entered through the form. Furthermore, the script verifies that the ticket ID and flight number are entered and are not blank.

Verified the booking by comparing it to the flight number and ticket ID that were provided and linked to the person who was logged in.

When a matched booking is discovered, the booking is also canceled and the seat availability is updated. The booking is then deleted from the database. If there are any problems during the cancellation procedure, the script gently resolves errors by displaying the relevant error messages.

```
// Update seat availability based on ticket type
    if ($ticket_type === 'economy') {
        mysqli_query($conn, "UPDATE Flight SET eco_seats = eco_seats + 1 WHERE Flight_number = '$Flight_number'";
    } elseif ($ticket_type === 'business') {
        mysqli_query($conn, "UPDATE Flight SET bus_seats = bus_seats + 1 WHERE Flight_number = '$Flight_number'";
    }
} else {
        $error_message = "Error deleting booking: " . mysqli_error($conn);
}
else {
        $error_message = "No matching booking found for the provided flight number and ticket ID.";
}
else {
        $error_message = "Please provide both Flight Number and Ticket ID for the delete operation.";
}
mysqli_close($conn);
}
```

For FAQ:

```
<?php
session_start();

// Check if the user is not logged in, redirect to login page
if (!isset($_SESSION['username']) || empty($_SESSION['username'])) {
    header("Location: login.php");
    exit;
}
?>
```

The session_start() function initiates or resumes a session. If the user is not logged in (i.e., \$_SESSION['username'] is empty), they're redirected to the login page (login.php) using header(), and the script stops executing with exit().

```
<?php
session_start();
if (isset($_SESSION['username']) && !empty($_SESSION['username'])) {
    echo "Welcome, " . $_SESSION['username'] . "!";
} else {
    echo "You are not logged in.";
}
</pre>
```

Contribution of ID: 21201366, Name: Muhammad Tasib Ahasan

I used HTML, PHP and Mysql query. In the Modify Flight Schedule, First I used the php query to fetch the flight schedule tables from the database and to show them on the web.

```
$mysqli = new mysqli("localhost", "root", "", "database");

if ($mysqli->connect_error) {
    die("Connection failed: " . $mysqli->connect_error);
}

$sql = "SELECT = FROM flight";
$result = $mysqli->query($sql);

if ($result->num_rows > 0) {

    while ($row = $result->fetch_assoc()) {
        echo "ctr>";
        echo "ctd>" . $row["Flight_number"] . "";
        echo "ctd>" . $row["Flight_name"] . "";
        echo "ctd>" . $row["Date"] . "";
        echo "ctd>" . $row["Arrival_city"] . "";
        echo "ctd>" . $row["Arrival_city"] . "";
        echo "ctd>" . $row["Arrival_city"] . "";
        echo "ctd>" . $row["Parer ecity"] . "";
        echo "ctd>" . $row["Parer ecit
```

Added a button with every row to execute the edit operation.

```
echo "<button class='edit-btn' data-id='" . $row['Flight_number'] . "'>Edit</button>";
```

After getting the request, it takes all the updated parameters and uses sql query to update them in the database and show the updated message and updated table.

```
if ($ SERVER["REQUEST_METHOO"] == "POST" && isset($_POST['flight_number'])) []

$flight_number = $_POST['flight_number'];
$flight_number = $_POST['flight_number'];
$flight_name = $_POST['flight_name'];
$date = $_POST['otte'];
$arrival_city = $_POST['departure_city'];
$arrival_time = $_POST['departure_time'];
$departure_time = $_POST['eco_price'];
$eco_seats = $_POST['eco_price'];
$eco_seats = $_POST['eco_price'];
$business_seats = $_POST['business_price'];
$business_price = $_POST['business_price'];
$stmt = $_MYSQ1i - prepare($q1);
$stmt = $_MYSQ1i - prepare($q1);
$stmt - $_MYSQ1i - prepare($q1);
$stmt -
```

In the add flight schedule after it takes all the data it uses sql query to check if the flight number already exists. If it doesn't exist then another query inserts the data in the table.

Source Code Repository

https://github.com/RashedFahim/Online-Flight-Reservation

Conclusion

To sum up, the goal of our project is to completely transform the travel booking process by launching a state-of-the-art online platform that provides customers with a quick and easy way to book flights. Our team has put a lot of effort into integrating cutting-edge technology and industry-standard practices throughout the development process to guarantee a stable and secure platform for our clients.

A unique homepage for administrators and users, the capacity for administrators to add, edit, and remove flight schedules, user registration and login features, flight schedules presented in a 24-hour format, and uniform payment methods for all clients are just a few of the noteworthy features of our project.

Our team concentrated on developing aesthetically pleasing layouts with CSS styling, incorporating forms for user interaction, and establishing navigation features to improve the user experience in general during the frontend development stage. This part of the project required a lot of teamwork, and everyone delivered by making sure our frontend is both aesthetically beautiful and easy to use.

Our team used PHP and SQL on the backend to create database connections, get flight booking data, and create HTML markup dynamically for the flight details display. The backend development team put in a lot of effort to make sure the application integrated with the frontend and ran well

All things considered, our project is the result of teamwork to provide a cutting-edge travel booking platform that satisfies the demands of contemporary customers.

References

https://youtu.be/1zXqo2WcOew?si=hUwriwvggm-KTx5q

https://learn.shayhowe.com/html-css/setting-backgrounds-and-gradients/#:~:text=Linear%20gradients%20are%20identified%20by,be%20the%20ending%20color%20value.

https://www.youtube.com/watch?v=jLdG1xLdhpw https://www.youtube.com/watch?v=awKaV9jQPXs https://www.youtube.com/watch?v=jX_Q1qTYXy0

https://www.youtube.com/watch?v=zZ6vybT1HQs&t=12778s https://www.youtube.com/watch?v= TST9dVptls&t=241s