



Inspiring Excellence

**CSE370 : Database Systems**  
**Project Report**  
**Project Title : Flight Reservation System**

Group No : 08 , CSE370 Lab Section : 03 , Spring2023		
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## **Introduction**

Flight reservation system is a process where people can buy their airplane ticket online. In this modern civilization people can go to as many countries as they want, by the invention of the airplane. Nowadays people go to different countries not for travel, they go abroad for job purposes, study purposes etc. So airplanes are a very necessary vehicle to us. So for this ride in an airplane we must buy a ticket. For this reason people have to go to the counter or agent to buy the ticket. To make it easier we built a system where people can buy their tickets online. Now people don't have to go to the counter or agent, he/she can buy a ticket at home. This system doesn't kill the user's valuable time. Furthermore our system can save the users money.

## **Why We Have Intended to Build This System**

We build this system for the betterment of the people. We have many reasons to build this system. First of all to buy an airplane ticket people have to go to the ticket counter or agent. It creates problems for the countryside people. Because to buy a ticket they have to come to the city. And this process creates a wastage of money. It's a point that we think about building this system. Again people suffer from fraud tickets. People go to third parties to buy tickets. Because of its necessity, people buy the tickets from third parties by giving extra money. So to prevent this situation and sufferings of the people we decided to create an online database system that has the data of the airplanes. People can buy the tickets with logical money and not be afraid of fraudulent tickets.

## **Project Description**

We would like to design and develop a database for a flight reservation system. Our product will be a well-managed database that might help the customer to achieve their desire.

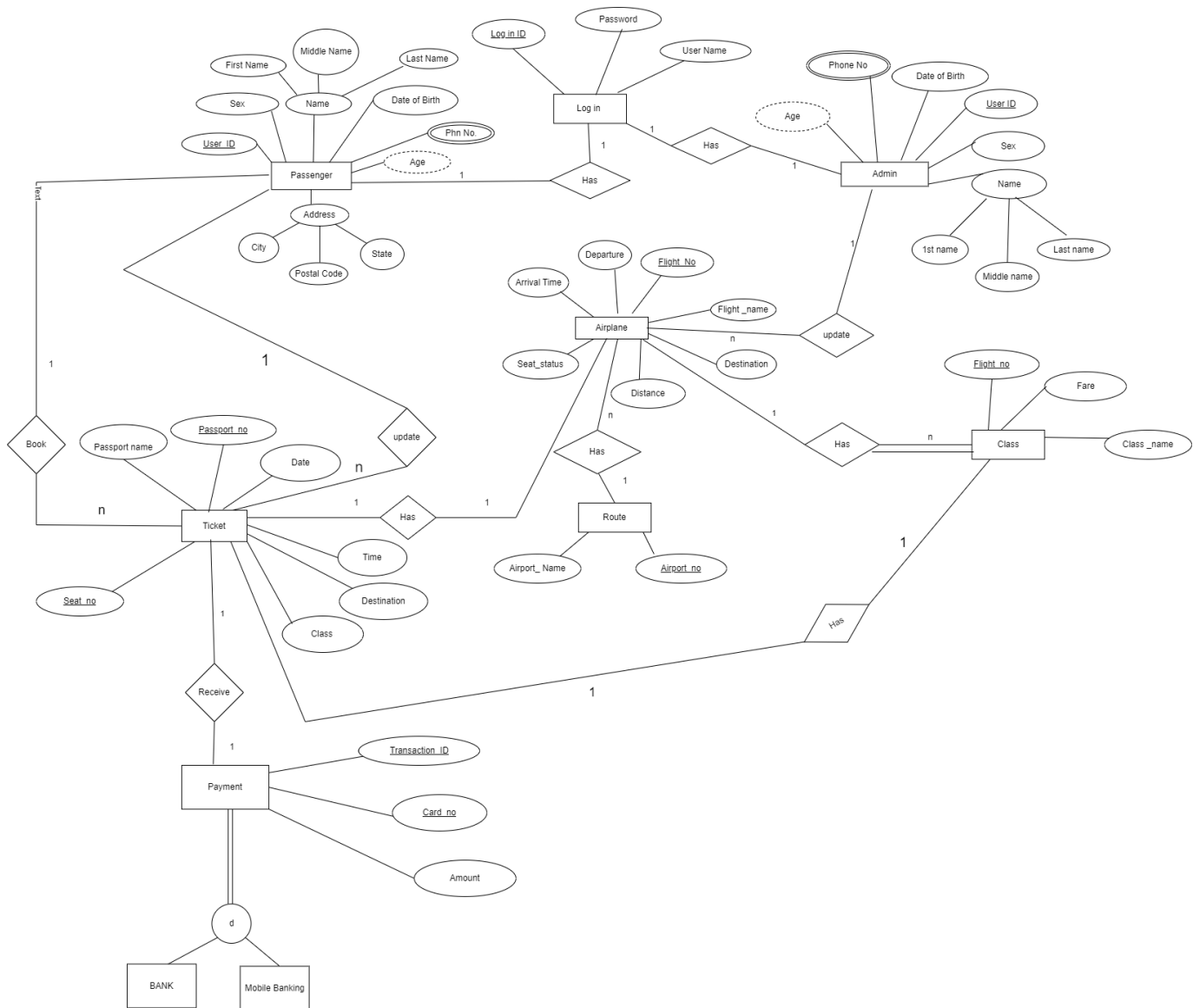
- a. The purpose of this system is to make it easier for people to book a flight. Before the internet to book a flight, people go to the agent and book the flight. It's a kind of hassle. Because of the internet we made a simple way to book a flight. Because nowadays everyone is using smartphones. So our project will make it easier for people to book a flight.
- b. In our project customers can book any airline seat and buy a ticket to go to his destination. Customers can see the departure time of the airplane. Customers will make their choice in what kind of seat they want. Customers can change their flight. In this system if a customer doesn't want to go to their destination but they already bought the ticket, in this case they can easily return the ticket and refund the money.
- c. The system has a strong security database. Every customer has to log in the system then they can buy the tickets. The process of buying tickets is quite easy. Customers can buy tickets so easily and it does not kill so much time.

## **Project Features**

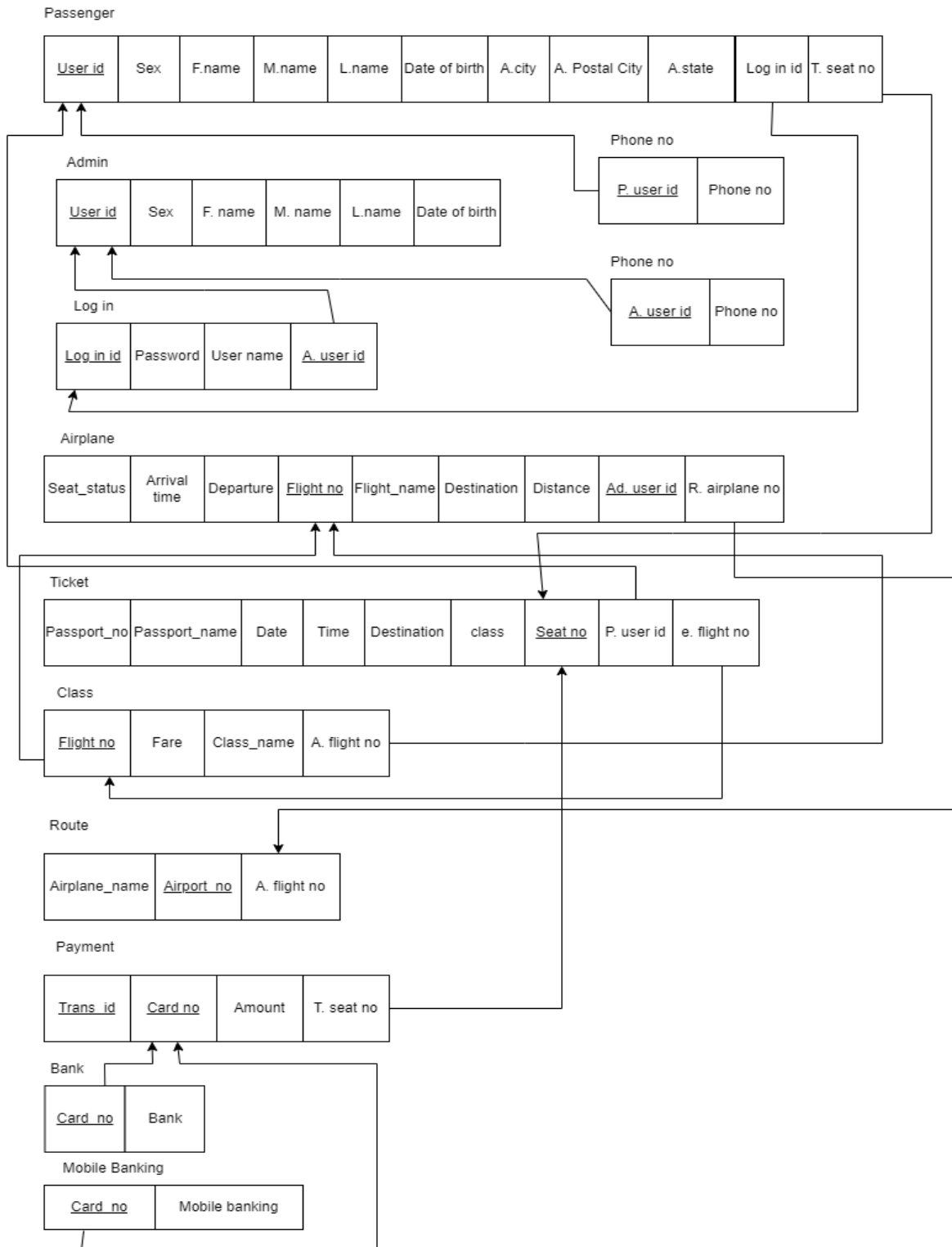
In our project only buying tickets is not the main function. We also added some features that will be very helpful for the users. Such as:

- 1. User can see the available airlines at the same route
- 2. See the time schedule and which airport the airline is waiting for.
- 3. Users can cancel his ticket.
- 4. Users can get the refund money if he/she cancel the ticket.

# ER/EER Diagram



## Schema Diagram



## Frontend Development

<Briefly discuss about Frontend Development and add Screenshots  
by mentioning Individual Contributions>

**Frontend Development** : The process of creating HTML, CSS, and JavaScript for a website or Web application so that a user can see and interact with them directly is known as front-end web development, sometimes known as client-side development. The difficulty with front end development is that the methods and technologies used to build a website's front end are continually changing, necessitating constant monitoring of the industry's advancements. The goal of website design is to present the content in an understandable and pertinent manner to users as soon as they access the site. This is made much more difficult by the fact that customers today utilize a wide range of devices with different screen sizes and resolutions, prompting the site's designer to take these factors into account. They must make sure that their website functions properly across a variety of browsers (cross-browser), operating systems (cross-platform), and devices (cross-device), which necessitates considerable preparation on the part of the developer.

**Contribution of ID : 21101010, Name : Kamran Hassan Shomrat**

**Set up the Background,color and interface of the passenger form and flight list.**

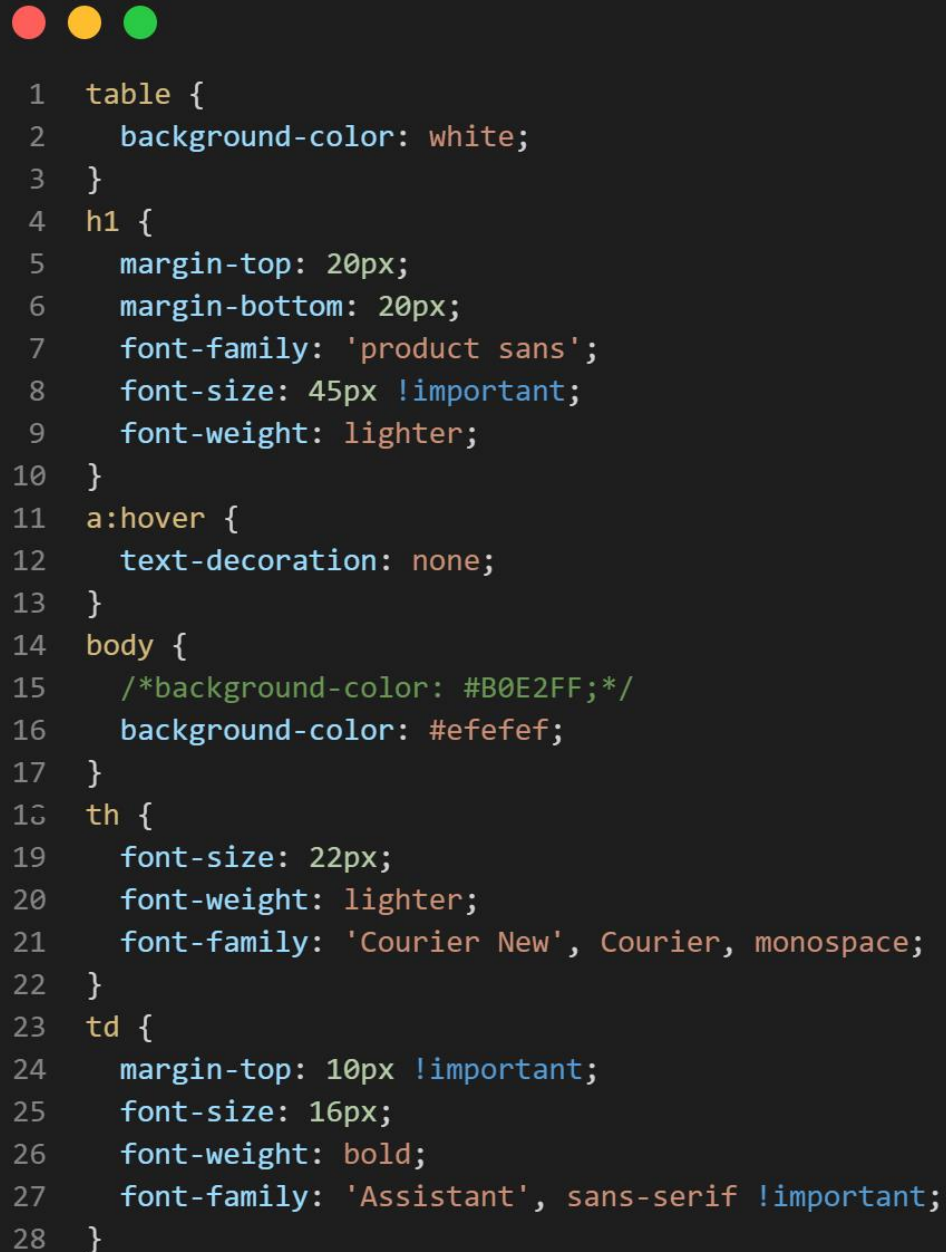
**#Pass Form**



```
1  table {
2    background-color: white;
3  }
4  h1 {
5    margin-top: 20px;
6    margin-bottom: 20px;
7    font-family: 'product sans';
8    font-size: 45px !important;
9    font-weight: lighter;
10 }
11 a:hover {
12   text-decoration: none;
13 }
14 body {
15   /* background-color: #B0E2FF; */
16   background-color: #efefef;
17 }
18 th {
19   font-size: 22px;
20   /* font-weight: lighter; */
21   /* font-family: 'Courier New', Courier, monospace; */
22 }
23 td {
24   margin-top: 10px !important;
25   font-size: 16px;
26   font-weight: bold;
27   font-family: 'Assistant', sans-serif !important;
28 }
```

## #Flight List





```
1  table {
2    background-color: white;
3  }
4  h1 {
5    margin-top: 20px;
6    margin-bottom: 20px;
7    font-family: 'product sans';
8    font-size: 45px !important;
9    font-weight: lighter;
10 }
11 a:hover {
12   text-decoration: none;
13 }
14 body {
15   /*background-color: #B0E2FF;*/
16   background-color: #efefef;
17 }
18 th {
19   font-size: 22px;
20   font-weight: lighter;
21   font-family: 'Courier New', Courier, monospace;
22 }
23 td {
24   margin-top: 10px !important;
25   font-size: 16px;
26   font-weight: bold;
27   font-family: 'Assistant', sans-serif !important;
28 }
```

**Contribution of ID : 20201117, Name : Sanjida Tamanna**

**Set up the Background,color and interface of admin and user login.**

**#Admin Login**



```
1  input {
2    border :0px !important;
3    border-bottom: 2px solid #424242 !important;
4    color :#424242 !important;
5    border-radius: 0px !important;
6    font-weight: bold !important;
7    background-color: whitesmoke !important;
8  }
9  *:focus {
10   outline: none !important;
11 }
12 label {
13   color : #828282 !important;
14   font-size: 19px;
15 }
16 h5.form-name {
17   color: #424242;
18   font-family: 'Courier New', Courier, monospace;
19   font-weight: 50;
20   margin-bottom: 0px !important;
21   margin-top: 10px;
22 }
23 h1 {
24   font-size: 45px !important;
25   margin-bottom: 20px;
26   font-family : 'product sans';
27   font-weight: bolder;
28 }
29 div.form-out {
30   /* border-radius: 40px; */
31   box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.1);
32   background-color: whitesmoke !important;
33   padding: 40px;
34   margin-top: 80px;
35 }
36 .input-group {
37   position: relative;
38   display: inline-block;
39   width: 100%;
40 }
41 select {
42   float: right;
43   font-weight: bold !important;
44   color :#424242 !important;
45 }
46 @media screen and (max-width: 900px){
47   body {
48     background-color: lightblue;
49     background-image: none;
50   }
51   div.form-out {
52     padding: 20px;
53     background-color: none !important;
54     margin-top: 20px;
55   }
56 }
```

**#User Login**



```
1  input {
2    border :0px !important;
3    border-bottom: 2px solid #838383 !important;
4    color :#838383 !important;
5    border-radius: 0px !important;
6    font-weight: bold !important;
7    background-color: whitesmoke !important;
8    border: none;
9    border-bottom: 2px solid #838383;
10 }
11 *:focus {
12   outline: none !important;
13 }
14 label {
15   color : #838383 !important;
16   font-size: 19px;
17 }
18 h5.form-name {
19   color: #838383;
20   font-family: 'Courier New', Courier, monospace;
21   font-weight: 50;
22   margin-bottom: 0px !important;
23   margin-top: 10px;
24 }
25 h5 {
26   color: #ffffff;
27   font-weight: bold;
28   font-size: 22px ;
29   font-family: 'Montserrat', sans-serif;
30 }
31 a:hover {
32   text-decoration: none;
33 }
34 /* .btn-outline-light {
35   color :#0275d8;
36   border-color: #0275d8 !important;
37 }
38 .btn-outline-light:hover {
39   color: white !important;
40   background-color: #0275d8 !important;
41 } */
42 @font-face {
43   font-family: 'product sans';
44   src: url('assets/css/Product Sans Bold.ttf');
45 }
46 h1 {
47   font-size: 46px !important;
48   margin-bottom: 20px;
49   font-family : 'product sans' !important;
50   font-weight: bolder;
51 }
52 div.form-out {
53   box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
54   background-color: whitesmoke !important;
55   padding: 40px;
56   margin-top: 60px;
57 }
58 .input-group {
59   position: relative;
60   display: inline-block;
61   width: 100%;
62 }
63 select {
64   float: right;
65   font-weight: bold !important;
66   color :#838383 !important;
67 }
```

**Contribution of ID : 20201050, Name : Sabuz Ahmed**

**Set up the Background,color and interface of ticket status and**

**#Ticket Status**

```

1  table {
2    background-color: white;
3  }
4  @font-face {
5    font-family: 'product sans';
6    src: url('assets/css/Product Sans Bold.ttf');
7  }
8  h1{
9    font-family : 'product sans' !important;
10   color: #424242 ;
11   font-size: 40px !important;
12   margin-top: 20px;
13   text-align: center;
14 }
15 body {
16   background: #bdc3c7; /* fallback for old browsers */
17   background: -webkit-linear-gradient(to right, #2c3e50, #bdc3c7); /* Chrome 10-25, Safari 5.1-6 */
18   background: linear-gradient(to right, #2c3e50, #bdc3c7); /* W3C, IE 10+/ Edge, Firefox 16+, Chrome 26+, Opera 12+, Safari 7+ */
19 }
20 }
21 th {
22   font-size: 22px;
23   /* font-family: 'Courier New', Courier, monospace; */
24 }
25 td {
26   margin-top: 10px !important;
27   font-size: 16px;
28   font-weight: bold;
29   /* color: #3931af; */
30   color: #424242;
31 }

```

**Contribution of ID :19101405 , Name : Tawsif Mahamud Sajid**

**Set up the Background,color and interface of the index of the admin panel and airlines list.**

**#Admin Panel**



```
1  body {
2      /* background-color: #B0E2FF; */
3      background-color: #efefef;
4  }
5  td {
6      /* font-family: 'Assistant', sans-serif !important; */
7      font-size: 18px !important;
8  }
9  p {
10     font-size: 35px;
11     font-weight: 100;
12     font-family: 'product sans';
13 }
14
15 .main-section{
16     width:100%;
17     margin:0 auto;
18     text-align: center;
19     padding: 0px 5px;
20 }
21 .dashbord{
22     width:23%;
23     display: inline-block;
24     background-color:#34495E;
25     color:#fff;
26     margin-top: 50px;
27 }
28 .icon-section i{
29     font-size: 30px;
30     padding:10px;
31     border:1px solid #fff;
32     border-radius:50%;
33     margin-top:-25px;
34     margin-bottom: 10px;
35     background-color:#34495E;
36 }
37 .icon-section p{
38     margin:0px;
39     font-size: 20px;
40     padding-bottom: 10px;
41 }
42 .detail-section{
43     background-color: #2F4254;
44     padding: 5px 0px;
45 }
46 .dashbord .detail-section:hover{
47     background-color: #5a5a5a;
48     cursor: pointer;
49 }
50 .detail-section a{
51     color:#fff;
52     text-decoration: none;
```



## **#Airline List**



```
1  table {
2    background-color: white;
3  }
4  h1 {
5    margin-top: 20px;
6    margin-bottom: 20px;
7    font-family: 'product sans';
8    font-size: 45px !important;
9    font-weight: lighter;
10 }
11 a:hover {
12   text-decoration: none;
13 }
14 body {
15   /* background-color: #B0E2FF; */
16   background-color: #efefef;
17 }
18 th {
19   font-size: 22px;
20   /* font-weight: lighter; */
21   /* font-family: 'Courier New', Courier, monospace; */
22 }
23 td {
24   margin-top: 10px !important;
25   font-size: 16px;
26   font-weight: bold;
27   font-family: 'Assistant', sans-serif !important;
28 }
```

## **Backend Development**

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

**Backend Development** : Working on server-side software, or what you can't see on a website, is what back-end development entails. By concentrating on databases, back-end logic, application programming interfaces (APIs), architecture, and servers, back-end developers make sure the website functions properly. They employ programming that facilitates database communication, data storage, comprehension, and deletion for browsers. To create the framework of a website or mobile app, back-end developers work in tandem with front-end developers, product managers, primary architects, and website testers. Back-end engineers need to be knowledgeable on a wide range of frameworks and tools, including Python, Java, and Ruby. They guarantee that the back end responds promptly and effectively to user queries on the front end.

**Contribution of ID : 21101010, Name : Kamran Hassan Shomrat**


**Connect the css file with the passenger form for purchasing tickets and connect the sql file with the flight list observed by the admin.**

**#Pass\_form**



```
1 <?php include_once 'helpers/helper.php'; ?>
2 <?php subview('header.php'); ?>
3 <link rel="stylesheet" href="assets/css/form.css">
4 <style>
5 .main-col {
6     padding: 30px;
7     background-color: whitesmoke;
8     box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
9     margin-top: 50px;
10 }
```

## #Flight List



```

1  <?php include_once 'header.php'; ?>
2  <?php include_once 'footer.php';
3  require '../helpers/init_conn_db.php';?>
4  <?php
5  if(isset($_POST['del_flight']) and isset($_SESSION['adminId'])) {
6      $flight_id = $_POST['flight_id'];
7      $sql = 'DELETE FROM One_Way_Flight WHERE flight_id=?';
8      $stmt = mysqli_stmt_init($conn);
9      if(!mysqli_stmt_prepare($stmt,$sql)) {
10         header('Location: ../index.php?error=sqlerror');
11         exit();
12     } else {
13         mysqli_stmt_bind_param($stmt,'i',$flight_id);
14         mysqli_stmt_execute($stmt);
15         mysqli_stmt_close($stmt);
16         mysqli_close($conn);
17         header('Location: all_flights.php');
18         echo("<script>location.href = 'all_flights.php';</script>");
19         exit();
20     }
21     $sql = 'DELETE FROM Round_Trip_Flight WHERE flight_id=?';
22     $stmt = mysqli_stmt_init($conn);
23     if(!mysqli_stmt_prepare($stmt,$sql)) {
24         header('Location: ../index.php?error=sqlerror');
25         exit();
26     } else {
27         mysqli_stmt_bind_param($stmt,'i',$flight_id);
28         mysqli_stmt_execute($stmt);
29         mysqli_stmt_close($stmt);
30         mysqli_close($conn);
31         header('Location: all_flights.php');
32         echo("<script>location.href = 'all_flights.php';</script>");
33         exit();
34     }
35 }
36 ?>
37 <style>

```

Contribution of ID : 20201117, Name : Sanjida Tamanna

Connect the css file with admin/login.php to enter the login panel of admin and connect the sql and css file with login.php to enter the login panel of passengers.

## #Admin Login

```
1 <?php include_once 'header.php'; ?>
2 <?php
3 if(isset($_GET['pwd'])) {
4     if($_GET['pwd']=='updated') {
5         echo "<script>alert('Your password has been reset!!');</script>";
6     }
7 }
8 ?>
9 <link rel="stylesheet" href="../../assets/css/form.css">
10 <style>
11     body {
12         /* padding-top: 20px; */
13         background: #485563; /* fallback for old browsers */
14         background: -webkit-linear-gradient(to left, #29323c, #485563); /* Chrome 10-25, Safari 5.1-6 */
15         background: linear-gradient(to left, #29323c, #485563); /* W3C, IE 10+/ Edge, Firefox 16+, Chrome 26+, Opera 12+, Safari 7+ */
16     }
17 }
```

## #User Login

```

1  <?php include_once 'helpers/helper.php'; ?>
2
3  <?php subview('header.php'); ?>
4  <link rel="stylesheet" href="assets/css/form.css">
5  <?php
6  if(isset($_GET['pwd'])) {
7      if($_GET['pwd']=='updated') {
8          echo "<script>alert('Your password has been reset!!');</script>";
9      }
10 }
11 ?>
12 <?php
13 if(isset($_GET['error'])) {
14     if($_GET['error'] === 'invalidcred') {
15         echo '<script>alert("Invalid Credentials")</script>';
16     } else if($_GET['error'] === 'wrongpwd') {
17         echo '<script>alert("Wrong Password")</script>';
18     } else if($_GET['error'] === 'sqlerror') {
19         echo"<script>alert('Database error')</script>";
20     }
21 }
22 else if(isset($_COOKIE['Uname']) && isset($_COOKIE['Upwd'])) {
23     require 'helpers/init_conn_db.php';
24     $email_id = $_POST['user_id'];
25     $password = $_POST['user_pass'];
26     $sql = 'SELECT * FROM Users WHERE username=? OR email=?';
27     $stmt = mysqli_stmt_init($conn);
28     if(!mysqli_stmt_prepare($stmt,$sql)) {
29         header('Location: views/login.php?error=sqlerror');
30         exit();
31     } else {
32         mysqli_stmt_bind_param($stmt,'ss',$_COOKIE['Uname'],$_COOKIE['Upwd']);
33         mysqli_stmt_execute($stmt);
34         $result = mysqli_stmt_get_result($stmt);
35         if($row = mysqli_fetch_assoc($result)) {
36             $pwd_check = password_verify($_COOKIE['Upwd'],$row['password']);
37             if($pwd_check == false) {
38                 setcookie('Uname', '',time() - 3600);
39                 setcookie('Upwd', '',time() - 3600);
40                 header('Location: views/login.php?error=wrongpwd');
41                 exit();
42             }
43             else if($pwd_check == true) {
44                 session_start();
45                 $_SESSION['userId'] = $row['user_id'];
46                 $_SESSION['userId'] = $row['username'];
47                 $_SESSION['userMail'] = $row['email'];
48                 header('Location: views/index.php?login=success');
49                 exit();
50             } else {
51                 header('Location: views/login.php?error=invalidcred');
52                 exit();
53             }
54         }
55         header('Location: views/login.php?error=invalidcred');
56         exit();
57     }
58     header('Location: views/login.php?error=invalidcred');
59     exit();
60     mysqli_stmt_close($stmt);
61     mysqli_close($conn);
62 }

```

**Contribution of ID : 20201050, Name : Sabuz Ahmed**

**Connect the ttf file with the php of ticket to show the ticket status .**

### **# Ticket Status**

```
1 <?php include_once 'helpers/helper.php'; ?>
2 <?php subview('header.php'); ?>
3 <style>
4 body {
5     background: #bdc3c7; /* fallback for old browsers */
6     background: -webkit-linear-gradient(to right, #2c3e50, #bdc3c7); /* Chrome 10-25, Safari 5.1-6 */
7     background: linear-gradient(to right, #2c3e50, #bdc3c7); /* W3C, IE 10+/ Edge, Firefox 16+, Chrome 26+, Opera 12+, Safari 7+ */
8 }
9
10 @font-face {
11     font-family: 'product sans';
12     src: url('assets/css/Product Sans Bold.ttf');
13 }
```

**Contribution of ID :19101405 , Name : Tawsif Mahamud Sajid**

**Connect the css file admin/index.php and connect the header and sql file with airlines.**

### **#Admin Panel**

```
1 <?php include_once 'header.php';
2 require '../helpers/init_conn_db.php';?>
3
4 <link rel="stylesheet" href="../../assets/css/admin.css">
5 <link href="https://fonts.googleapis.com/css2?family=Assistant:wght@200;300&family=Poiret+One&display=swap" rel="stylesheet">
6 <link href="https://fonts.googleapis.com/css2?family=Cinzel&display=swap" rel="stylesheet">
7 <styl:>
```

### **# Airline List**





```
1  <?php include_once 'header.php'; ?>
2  <?php include_once 'footer.php';
3  require '../helpers/init_conn_db.php';?>
4  <?php
5  if(isset($_POST['del_airlines']) and isset($_SESSION['adminId'])) {
6      $airline_id = $_POST['airline_id'];
7      $sql = 'DELETE FROM airline WHERE airline_id=?';
8      $stmt = mysqli_stmt_init($conn);
9      if(!mysqli_stmt_prepare($stmt,$sql)) {
10         header('Location: ../index.php?error=sqlerror');
11         exit();
12     } else {
13         mysqli_stmt_bind_param($stmt,'i',$airline_id);
14         mysqli_stmt_execute($stmt);
15         mysqli_stmt_close($stmt);
16         mysqli_close($conn);
17         // header('Location: list_airlines.php');
18         echo("<script>location.href = 'list_airlines.php';</script>");
19         exit();
20     }
21 }
```

## **Future Plan**

Since myself and 3 other colleagues have worked tirelessly to build the system, we intend to do more work on this system in the future. Some of which we have already fixed. They are: -

1) Removing counter: Since we can book tickets online, we no longer have to go to the ticket counter or any agency. Due to which we hope that the ticket price will be several times more affordable. In addition, the amount of our suffering will be reduced because our system users will no longer have to go to a third party or agency. The amount of ticket fraud will also decrease because then we can see how many tickets are left.

2) Hotline Call: We understand that not all parts of the world are yet connected to the Internet. In all those cases we can provide emergency services. In that case we may serve the user through various phone calls. Through the services, the user can receive the services immediately.

3) Regular Updates: We will keep the system in regular updates. As a result we will be able to present the user with a nice simple and fast system.

## **Conclusion**

Our system is time-consuming and affordable. Because the user does not have to go out of the house. He can use his system at his/her residences. As a result, the user's time and financial wastage is decreasing. Just as every action has the opposite reaction, it can be a problem for us to face some problems in our system. For example, if the network is out of bounds and outside the internet service, the user may face some problems. Also, if multiple users want to take the same service at the same time, users may face problems. But we can say that this service will open up to many new and new possibilities for us.

## References

<https://codewithawa.com/posts/admin-and-user-login-in-php-and-mysql-database>

[https://www.w3schools.com/css/css\\_margin.asp](https://www.w3schools.com/css/css_margin.asp)

<https://www.onlinewebtoolkit.com/>

<https://stackoverflow.com/questions/54723699/admin-panel-on-my-domain-says-wrong-user-password-databsse-phpmyadmin-relat>