## **Flight Ticket Booking**

### Frontend:

- 1. HTML
- 2. CSS
- 3. JavaScript

#### Backend:

- 1. NodeJS
- 2. Express.Js
- 3. MongoDB

#### **Backend Code:**

#### app.js

```
const
    express = require("express"),
    alert = require("alert"),
    path = require("path"),
    app = express(),
    { FlightList, LogInCollection, bookedList } = require("./mongo"),
    bodyParser = require('body-parser'),
    port = process.env.PORT || 3000,
    hostname = '127.0.0.1',
    methodOverride = require('method-override'),
    session = require('express-session'),
    flash = require('connect-flash')
// Use the method-override middleware
app.use(session({
    secret: 'flight-ticket-booking',
   saveUninitialized: true,
    resave: true
}));
app.use(flash())
app.use(express.json())
```

```
app.use(express.urlencoded({ extended: false }))
app.use(methodOverride('_method'));
app.use(bodyParser.json())
    tempelatePath = path.join(__dirname, '/views'),
    publicPath = path.join(__dirname, '/public')
console.log(publicPath);
app.set('view engine', 'ejs')
app.set('views', tempelatePath)
app.use(express.static(publicPath))
// Routes
app.get('/signup', (req, res) => {
    res.render('signup')
app.get('/', (req, res) => {
    res.render('login')
app.get('/home', (req, res) => {
    res.render('home')
app.get('/admin', (req, res) => {
    res.render('admin')
})
app.get('/user', (req, res) => {
    res.render('user')
})
//Admin Routes
app.get('/admin/add', (req, res) => {
    res.render('add')
})
app.get('/admin/remove', (req, res) => {
    res.render('remove')
3)
app.get('/admin/booked', (req, res) => {
    bookedList.find({})
        .then((x) \Rightarrow {}
            res.render('booked', { x });
            console.log(x);
```

```
.catch((y) => {
            console.log(y);
        })
})
// User Routes
app.get('/user/flights', (req, res) => {
    FlightList.find({})
        .then((x) \Longrightarrow \{
            res.render('flights', { x });
            console.log(x);
        })
        .catch((y) => {
            console.log(y);
        })
})
app.get('/user/bookTicket', (req, res) => {
    res.render("bookTicket");
3)
app.get('/user/mybooking', (req, res) => {
    res.render("mybooking");
3)
app.get('/user/contact-input', (req, res) => {
    res.render("contact-input")
})
app.get('/logout', (req, res) => {
    req.session.destroy();
    res.redirect('/');
})
// Login and Signup
app.post('/signup', async (req, res) => {
    const data = new LogInCollection({
        name: req.body.name,
        password: req.body.password,
        role: req.body.role
    })
    await data.save()
    if (req.body.role === "admin" || req.body.role === "Admin") {
        res.status(201).render("admin", {
            naming: req.body.name
```

```
})
    }
    else {
        res.status(201).render("user", {
            naming: req.body.name
        })
    }
})
app.post('/login', async (req, res) => {
    try {
        const check = await LogInCollection.findOne({ name: req.body.name })
        if (check.password === req.body.password && check.role ===
req.body.role) {
            if (req.body.role === "admin" || req.body.role === "Admin") {
                res.status(201).render("admin", { naming: `${req.body.password}}
+ ${req.body.name}` });
            }
            else {
                res.status(201).render("user", { naming:
`${req.body.password}+${req.body.name}` })
        }
        else {
            res.send("incorrect password or role")
    catch (e) {
        res.send(e);
})
//Admin Components
app.post('/admin/add', async (req, res) => {
    const data = new FlightList({
        airline: req.body.airline,
        source: req.body.source,
        destination: req.body.destination,
        flightNumber: req.body.flightNumber,
        departure: req.body.departure,
        arrival: req.body.arrival,
        seats: req.body.seats
    })
    await data.save();
```

```
try {
        const results = await FlightList.find().sort({ flightNumber: 'asc'
}).exec();
        res.render("admin")
    } catch (error) {
        console.error('Error retrieving documents:', error);
        res.status(404).send()
    }
3);
//Deleting Flight From FlightList
app.post('/admin/remove', async (req, res) => {
    const flight = req.body.flightNumber
    try {
        const query = { flightNumber: flight };
        const result = await FlightList.deleteMany(query);
        console.log("Deleted " + result.deletedCount + " documents");
        if (result.deletedCount == 0) {
            alert('No Flight Exist With Flight Number as ${flight}')
        }
        res.render("admin");
    } catch (error) {
        res.status(500).send(error);
        return;
})
//User Components
app.post('/user/bookTicket', async (req, res) => {
    const data = new bookedList({
        source: req.body.source,
        destination: req.body.destination,
        flightNumber: req.body.flightNumber,
        departure: req.body.departure,
        arrival: req.body.arrival,
        seatCount: req.body.seatCount,
        contact: req.body.contact
    })
    let flight;
    try {
        flight = await FlightList.findOne({ flightNumber: data.flightNumber });
        if (!flight) {
```

```
console.log('Flight not found')
            res.render("user")
            return
        const seatCnt = data.seatCount;
        console.log(`${flight.seats} and ${seatCnt}`)
        if (flight.seats >= seatCnt) {
            flight.seats = flight.seats - seatCnt;
            flight.save();
            console.log(`Successfully booked ${seatCnt} tickets on flight
${flight}');
            await data.save()
            res.render("user")
        } else {
            console.log('Insufficient seats available');
            res.render("bookTicket");
    } catch (error) {
        console.log('Error booking tickets:', error);
        res.status(404).send();
});
//Search
app.post('/user/search', async (req, res) => {
    const source = req.body.source;
    const destination = req.body.destination;
    let exist = await FlightList.find({ source } || {destination});
    if (!exist) {
        alert("Sorry Flight Doesn't exist");
        res.status(404).send();
        return;
    FlightList.find({source} || {destination})
        .then((x) \Rightarrow \{
            res.render('flights', { x });
            console.log(x);
        })
        .catch((y) => {
            console.log(y);
        })
3)
//My Bookings
```

```
app.post('/user/contact-input', async (req, res) => {
    const contact = req.body.contact;
    let exist = await bookedList.findOne({ contact });
    if (exist) {
        bookedList.find({ contact })
            .then((x) \Longrightarrow \{
                res.render('mybooking', { x });
                 console.log(x);
            })
            .catch((y) => {
                 console.log(y);
            })
    } else {
        req.flash('messsge', "You Don't have any booking")
        res.render("user");
        return;
    }
})
app.listen(port, () => {
    console.log(`port connected at : http://${hostname}:${port}`);
```

### mongo.js

```
const mongoose = require("mongoose")
const url = "mongodb://localhost:27017/LoginFormPractice";
mongoose.connect(url)
.then(()=>{
    console.log('mongoose connected');
})
.catch((e)=>{
    console.log('failed');
})

const logInSchema = new mongoose.Schema({
    name: String,
    password: String,
    role: String
},{collection: 'LoginFormPractice'});

const flightListSchema = new mongoose.Schema({
```

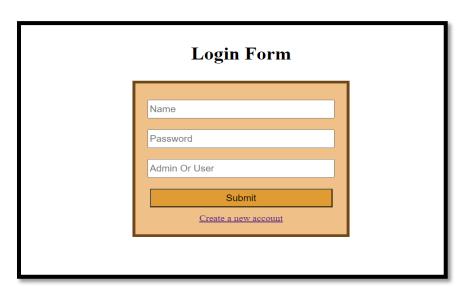
```
airline: String,
    source: String,
    destination: String,
    flightNumber: Number,
    departure: String,
    arrival: String,
    seats: {
        type: Number,
        default: 60,
}, {collection: 'LoginFormPractice'});
const bookSchema = new mongoose.Schema({
    source: String,
    destination: String,
    flightNumber: Number,
    departure: String,
    arrival: String,
    seatCount: {
        type: Number,
    },
    contact: Number
}, {collection: 'LoginFormPractice'});
const LogInCollection = new mongoose.model('Login',logInSchema,
'LogInCollection')
const FlightList = new mongoose.model('flightList',flightListSchema,
'FlightList')
const bookedList = new mongoose.model('bookingList',bookSchema, 'bookedList')
module.exports = {
    FlightList: FlightList,
    LogInCollection: LogInCollection,
    bookedList: bookedList
```

#### **Source Code with Visualization:**

## 1. Login and signup Page:

Source code:

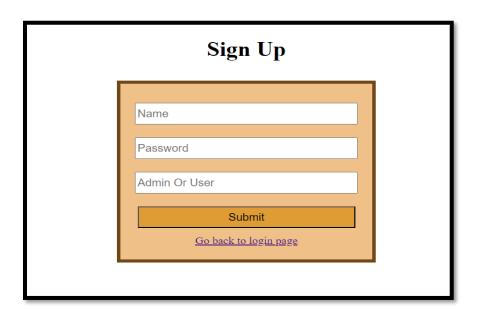
## (a) Login.ejs



```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
   <link rel="stylesheet" href="/login.css">
</head>
<body>
   <h1>Login Form</h1>
   <form action="/login" method="post" >
        <input placeholder="Name" name="name" type="text">
       <br>>
        <input placeholder="Password" name="password" type="password">
        <input placeholder="Admin Or User" name="role" type="text">
        <input class="sub" type="submit">
```

```
<a href="/signup">Create a new account</a>
</form>
</body>
</html>
```

## (b) Signup.ejs

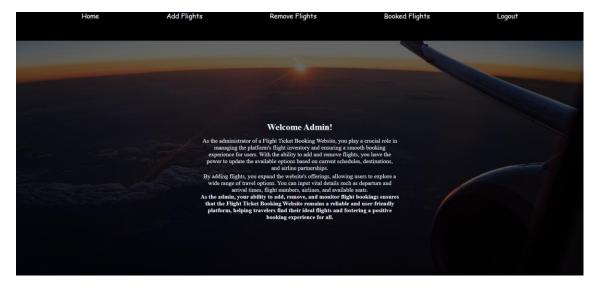


```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
       <link rel="stylesheet" href="/login.css">
</head>
<body>
<h1>Sign Up</h1>
   <form action="/signup" method="post" >
       <input placeholder="Name" name="name" type="text">
       <br>>
       <input placeholder="Password" name="password" type="password">
        <input placeholder="Admin Or User" name="role" type="text">
```

### **Admin Use Cases:**

1. Home Page – admin.ejs

## Simple admin page

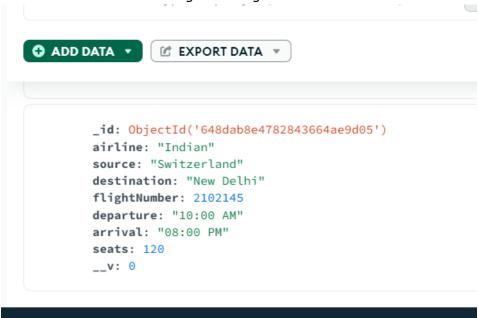


```
<header class="header">
          <l
              <a href="">Home</a>
              <a href="/admin/add">Add Flights</a>
              <a href="/admin/remove">Remove
Flights</a>>
              <a href="/admin/booked">Booked
Flights</a>
              <a href="/">Logout</a>
           </nav>
   </header>
   <section id="home">
       <div class="card">
          <h2 style="margin: 10px;">Welcome Admin!</h2>
          As the administrator of a Flight Ticket Booking Website, you
play a crucial role in managing the
              platform's flight inventory and ensuring a smooth booking
experience for users. With the ability to add
              and remove flights, you have the power to update the available
options based on current schedules,
              destinations, and airline partnerships.
            By adding flights, you expand the website's offerings, allowing
users to explore a wide range of travel
              options. You can input vital details such as departure and
arrival times, flight numbers, airlines, and
              available seats.
          <g\>
           <b>As the admin, your ability to add, remove, and monitor flight
bookings ensures that the Flight Ticket
              Booking Website remains a reliable and user-friendly platform,
helping travelers find their ideal
              flights and fostering a positive booking experience for all.
       </div>
   </section>
</body>
</html>
```

## 2. To Add Flights To FlightList Collection *add.ejs*



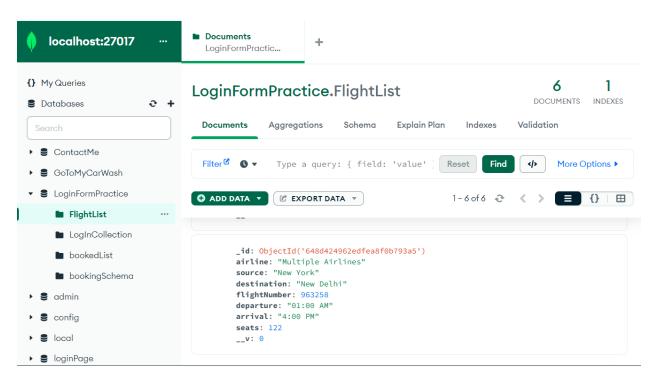
Flight is Being Added

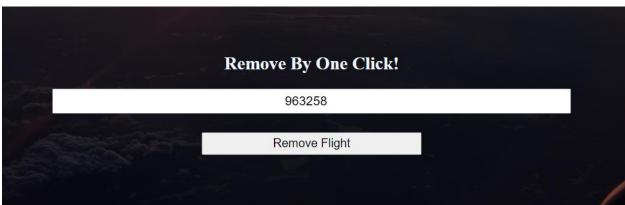


```
<!DOCTYPE html>
<html lang="en">
<head>
```

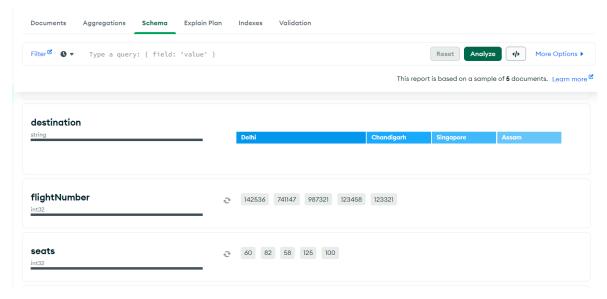
```
<meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="/admin.css">
   <title>Document</title>
</head>
<body>
   <header class="header">
           <l
               <a href="/admin">Home</a>
               <a href="">Add Flights</a>
               <a href="/admin/remove">Remove
Flights</a>
               <a href="/admin/booked">Booked
Flights</a>
               <a href="/logout">Logout</a>
           </nav>
   </header>
   <section id="home">
       <form action="/admin/add" method="post" id="addFlight">
           <h2>Add Flight By One Click!</h2>
           <input type="text" name="airline" placeholder="Airline" required>
           <input type="text" id="source" name="source" placeholder="Source"</pre>
required>
           <input type="text" name="destination" placeholder="Destination"</pre>
required>
           <input type="number" name="flightNumber" placeholder="Flight</pre>
Number" required>
           <input type="text" name="departure" placeholder="Departure Time"</pre>
required>
           <input type="text" name="arrival" placeholder="Arrival Time"</pre>
required>
           <input type="number" name="seats" placeholder="Number Of Seats">
           <button type="submit">Add Flight</button>
       </form>
   </section>
</body>
</html>
```

3. Remove Flight From Database: remove.ejs





Data is being deleted from database:



```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="/admin.css">
   <title>Document</title>
</head>
<body>
   <header class="header">
          ul>
              <a href="/admin">Home</a>
              <a href="/admin/add">Add Flights</a>
              <a href="">Remove Flights</a>
              <a href="/admin/booked">Booked
Flights</a>
              <a href="/logout">Logout</a>
          </nav>
   </header>
   <section id="home" style="border: none;">
       <form action="/admin/remove" method="post" id="removeFlight">
          <h2>Remove By One Click!</h2>
          <input type="number" name="flightNumber" placeholder="Flight</pre>
Number" required>
          <button type="submit">Remove Flight</button>
```

```
</form>
</div>
</body>
</html>
```

# 4. Booked Flights: booked.ejs

Display's all booked flights

Booked Flights List						
Contact	Source	Destination	Flight Number	Departure	Arrival	Seats
123456	Delhi	Singapore	123458	10:00 AM	4:00 PM	15
7986014725	New York	New Delhi	963258	01:00 AM	4:00 PM	3
123654	Sydney	Delhi	987321	01:00 AM	09:30 PM	2
7895461210	Chennai	Assam	142536	07:00 PM	09:30 PM	3

```
text-align: left;
      }
      table {
          border-collapse: collapse;
         width: 50%;
      }
      .table-data {
         position: relative;
         left: 50px;
         top: 50px;
      }
      th,
      td {
          padding: 15px;
      .card-body {
          align-items: center;
   </style>
</head>
<body>
   <header class="header">
         ul>
             <a href="">Home</a>
             <a href="/admin/add">Add Flights</a>
             <a href="/admin/remove">Remove
Flights</a>
             <a href="/admin/booked">Booked
Flights</a>
             <a href="/">Logout</a>
         </nav>
   </header>
   <section id="home">
      <div class="container-fluid">
         <div class="col-lg-12">
```

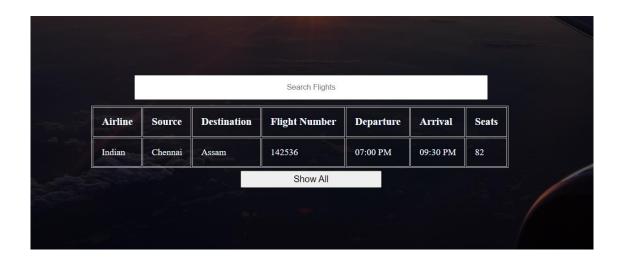
```
<h1 style="text-align: center; margin: 10px;">Booked
Flights List</h1>
         <div class="card-body">
            <thead>
                Contact
                   Source
                   Destination
                   Flight Number
                   Departure
                   Arrival
                   Seats
                </thead>
              <%x.forEach((y)=>{%>
                   <%=y.contact%>
                     <%=y.source%>
                     <%=y.destination%>
                     <%=y.flightNumber%>
                     <%=y.departure%>
                     <%=y.arrival%>
                     <%=y.seatCount%>
                     <%x})%>
              </div>
       </div>
```

## **User Use Cases:**

1. Home Page: user.ejs

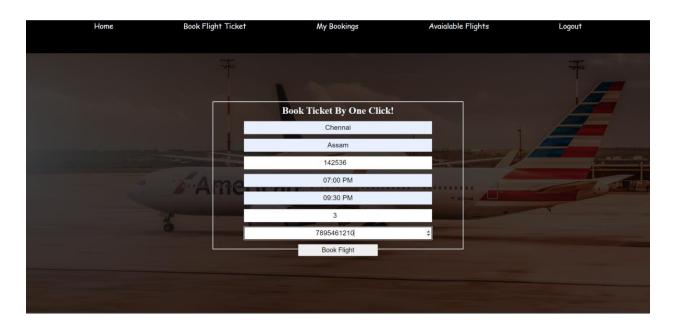
Work as a searching option for a user.





```
<!DOCTYPE html>
<html>
<head>
   <title>Flight Ticket Booking</title>
   <link rel="stylesheet" href="/user.css">
</head>
<body>
   <header class="header">
          ul>
             <a href="/user">Home</a>
             <a href="/user/bookTicket">Book Flight
Ticket</a>
             <a href="/user/contact-input">My
Bookings</a>
             <a href="/user/flights">Avaialable
Flights</a>
             <a href="/logout">Logout</a>
          </nav>
   </header>
   <section id="home">
      <div class="card">
          <h2 style="margin: 8px;">Welcome User!</h2>
          <div class="search-bar">
             <form action="/user/search" method="post">
                 <i class="fa fa-search"></i>
                 <input type="text" name="source" placeholder="Enter Source"</pre>
```

# 2. Book Flight Ticket bookTicket.ejs

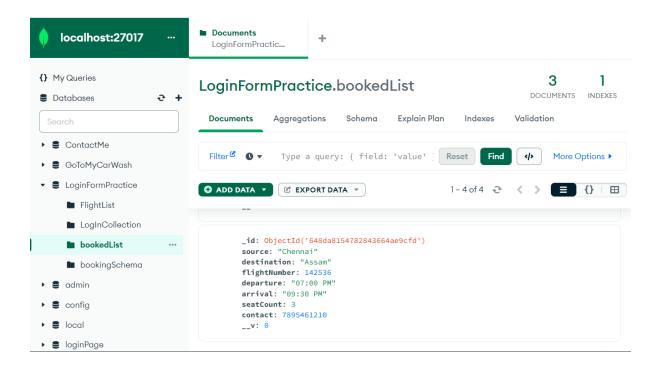


After clicking "Book Flight", it will look for flight:

If (available(seats)), then {

1. Store flight information In database

```
2. Subtract the number of seats occupied
}
Else {
    Display error
}
```



```
<!-- index.html -->
<!DOCTYPE html>
<html>
<head>
   <title>Flight Ticket Booking</title>
   <link rel="stylesheet" href="/user.css">
</head>
<body>
   <header class="header">
         ul>
            <a href="/user">Home</a>
            <a href="/user/bookTicket">Book Flight
Ticket</a>
            <a href="/user/contact-input">My
Bookings</a>
            <a href="/user/flights">Avaialable
Flights</a>
            <a href="/logout">Logout</a>
```

```
</nav>
    </header>
    <section id="home">
        <form action="/user/bookTicket" method="post" id="bookTicket">
            <h2>Book Ticket By One Click!</h2>
            <input type="text" id="source" name="source" placeholder="Source"</pre>
required>
            <br>
            <input type="text" name="destination" placeholder="Destination"</pre>
required>
            <br>
            <input type="number" name="flightNumber" placeholder="Flight</pre>
Number" required>
            <br>
            <input type="text" name="departure" placeholder="Departure Time"</pre>
required>
            <br>
            <input type="text" name="arrival" placeholder="Arrival Time"</pre>
required>
            <br>
            <input type="number" name="seatCount" placeholder="Number Of Seats</pre>
Required" required>
            <br>
            <input type="number" name="contact" placeholder="Contact Number"</pre>
required>
            <br>
            <button type="submit">Book Flight
        </form>
    </section>
</body>
</html>
```

## 3. My Bookings *mybooking.ejs*



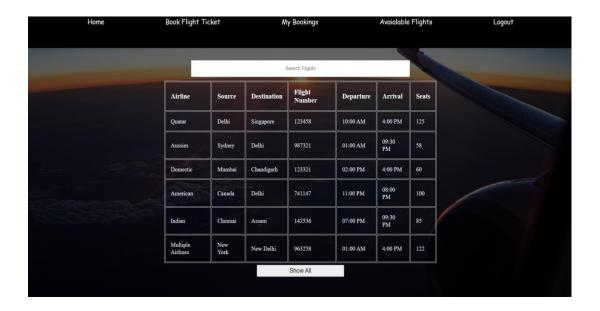


## Code:

```
}
      table {
         border-collapse: collapse;
         width: 50%;
      }
      .table-data {
         position: relative;
         left: 50px;
        top: 50px;
      }
      th,
      td {
         padding: 15px;
   </style>
</head>
<body>
   <header class="header">
         ul>
            <a href="/user">Home</a>
            <a href="/user/bookTicket">Book Flight
Ticket</a>
            <a href="/user/contact-input">My
Bookings</a>
            <a href="/user/flights">Avaialable
Flights</a>
            <a href="/logout">Logout</a>
         </nav>
   </header>
   <section id="home">
      <div class="mybooking">
         Source
               Destination
               Flight Number
               Departure
               Arrival
```

```
<%x.forEach((y)=>{%>
                 <%=y.source%>
                 <%=y.destination%>
                 <%=y.flightNumber%>
                 <%=y.departure%>
                 <%=y.arrival%>
                 <%x})%>
        </div>
  </section>
</body>
</html>
```

4. Available Flights *flights.ejs* 



### Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="/admin.css">
    <title>Flights</title>
    <style type="text/css">
        table,
        td,
        th {
            border: 1px solid #ddd;
            text-align: left;
        }
        .flights {
            border-collapse: collapse;
            width: 50%;
            text-align: center;
        }
        .flights input {
            text-align: center;
            width: 80%;
            height: 40px;
            margin: 10px;
```

```
}
      .table-data {
         position: relative;
         left: 50px;
         top: 50px;
      }
      th,
      td {
         padding: 15px;
   </style>
</head>
<body>
   <header class="header">
         ul>
            <a href="/user">Home</a>
            <a href="/user/bookTicket">Book Flight
Ticket</a>
            <a href="/user/contact-input">My
Bookings</a>
            <a href="/user/flights">Avaialable
Flights</a>
            <a href="/logout">Logout</a>
         </nav>
   </header>
   <section id="home">
      <div class="flights">
         <input type="text" id="myInput" placeholder="Search Flights"</pre>
onkeyup="searchFun()">
         <thead style="font-size: 18px; font-weight: 900;">
               Airline
               Source
               Destination
               Flight Number
               Departure
               Arrival
               Seats
            </thead>
```

```
<%x.forEach((y)=>{%>
                 <%=y.airline%>
                     <%=y.source%>
                     <%=y.destination%>
                     <%=y.flightNumber%>
                     <%=y.departure%>
                     <%=y.arrival%>
                     <%=y.seats%>
                     <%x})%>
          <form action="/user/flights" method="get" id="showBtn"</pre>
onclick="renderFun()">
             <button type="submit">Show All
          </form>
       </div>
   </section>
   <script>
       const renderFun = () => {
          let path = window.location.pathname;
          console.log(path);
          if (window.location.pathname === "/admin/flights") {
              document.getElementById("showBtn").style.display = "none";
          } else {
              document.getElementById("showBtn").style.display = "";
          }
      const searchFun = () => {
```

```
let filter =
document.getElementById('myInput').value.toUpperCase();
            let myTable = document.getElementById('myTable');
            let tr = myTable.getElementsByTagName('tr');
            for (var i = 0; i < tr.length; i++) {</pre>
                let td = tr[i].getElementsByTagName('td')[0];
                if (td) {
                    let textValue = td.textContent || td.innerHTML;
                    if (textValue.toUpperCase().indexOf(filter) > - 1) {
                        tr[i].style.display = "";
                    } else {
                        tr[i].style.display = "none";
                }
            }
        }
    </script>
</body>
</html>
```

#### **Result:**

Made a full stack application for flight ticket booking using HTML, CSS, JS, NodeJs, Express.Js and MongoDB.

### **Future Scope:**

- 1. Separate User Database can be formed for handling unique user for each server.
- 2. Application can be hosted to the browser.
- 3. Searching Flight can be done according to Time and Date.