# COSC 333 – Web Programming

# Assignment 7

## Dynamic Flight Cards with fetch and jQuery

### Spring 2025


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## Objective

In this lab, you will:

1. Build a complete, responsive web page to display flight information.
2. Create a JSON file to represent flight data.
3. Use jQuery only to fetch and display the data dynamically.
4. Dynamically generate flight cards based on JSON data.
5. Implement a real-time search feature to filter flights by destination.

## Tasks

### Task 1: Create Your Project Folder

- Create a folder named flight-lab (or any name of your choice).
- Inside this folder, create the following files:
  - index.html
  - style.css
  - flights.json
  - script.js

### Task 2: Build the HTML Structure (index.html)

Your HTML must include:

- A <section> element to hold the entire flight search area.
- A heading with the title of the page.
- A search input field to allow users to filter flights by destination.
- A container  where flight cards will be dynamically inserted.
- A script tag linking to jQuery (CDN).
- Links to your CSS and JavaScript files.

**Task 3: Style the Page (style.css)**

Your CSS should:

- Set a full-page background image for the section.
- Style the input field (width, padding, border-radius).
- Style the title and layout of the section (centered elements, spacing).
- Design flight cards that include:
  - An image container (background image).
  - Text fields showing destination, departure, arrival, and price.
  - A visually distinct "Book Now" button.

Make sure the layout is responsive and cards are displayed in a flexible grid.

**Task 4: Create the JSON File (flights.json)**

Create an array of at least five flight objects. Each object should include the following properties:

- destination: e.g., "Tokyo, Japan"
- departure: e.g., "8:00 AM"
- arrival: e.g., "6:00 PM"
- price: e.g., "$900"
- image: A link to a destination image (use any valid image URL)

Make sure your JSON file is syntactically correct.

**Task 5: Write JavaScript Using jQuery Only (script.js)**

Use only jQuery to complete the following logic:

1. Wait for the DOM to load
    - Use the appropriate jQuery function to ensure your code runs after the HTML is fully loaded.
2. Fetch the flight data from flights.json
    - Use jQuery's $.getJSON() to load the data.
    - Handle loading errors using .fail() or error callbacks.
3. Generate flight cards dynamically
    - Loop over the JSON data.
    - For each flight object, create a card that includes:
        - Background image.

        - Destination, departure, arrival, and price information.
        - A "Book Now" button.
    - Append the card to the designated HTML container.

4. Implement the search functionality

    - As the user types in the search input:
        - Filter the flight cards in real-time based on the destination text.
        - Display only those flights that match the user's input.
        - Make the search case-insensitive and responsive as the user types.

Hint: How to Fetch JSON Data Using jQuery (with Error Handling)

You can use the following pattern to load and handle flight data from `flights.json`:

```
$.getJSON('flights.json')
    .done(function(data) {
        // Data is successfully loaded
        console.log(data); // Explore the
structure
    })
    .fail(function(jqxhr, textStatus, error) {
        // Handle errors here
        console.error("Error loading data:",
textStatus, error);
```

```
});
```

This structure helps you:

- Load JSON data asynchronously.
- Debug or inspect the data using console.log.
- Gracefully handle cases where the file is missing or there's a network issue.

Bonus Task (Optional): Booking Confirmation Modal

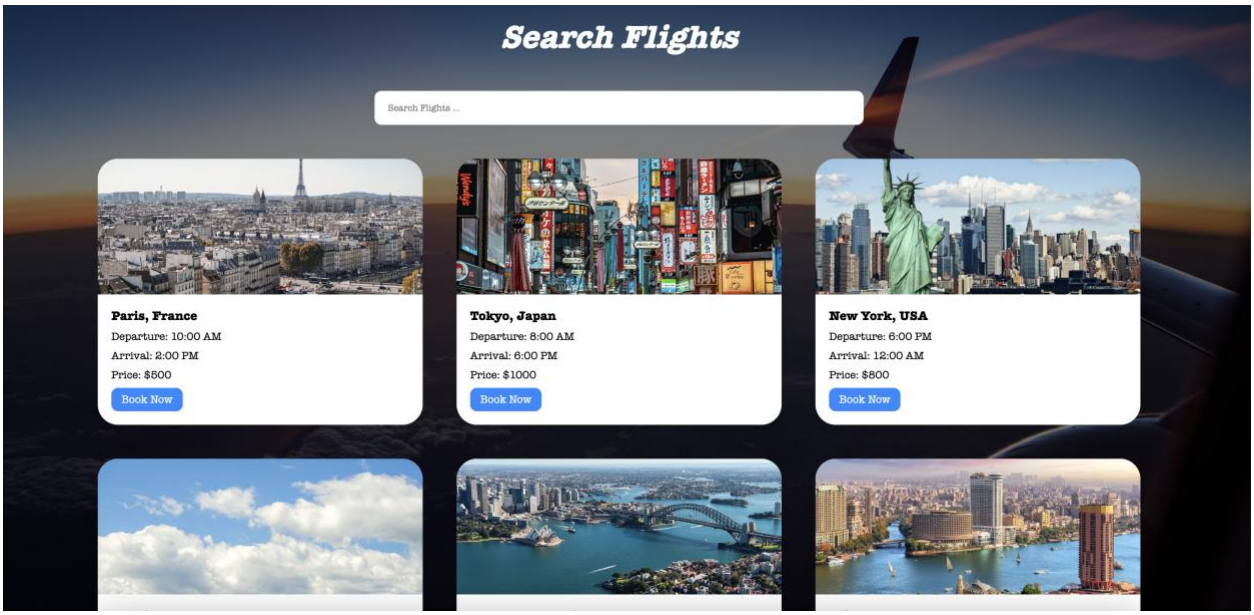
Enhance your flight booking interface by implementing a modal confirmation feature:

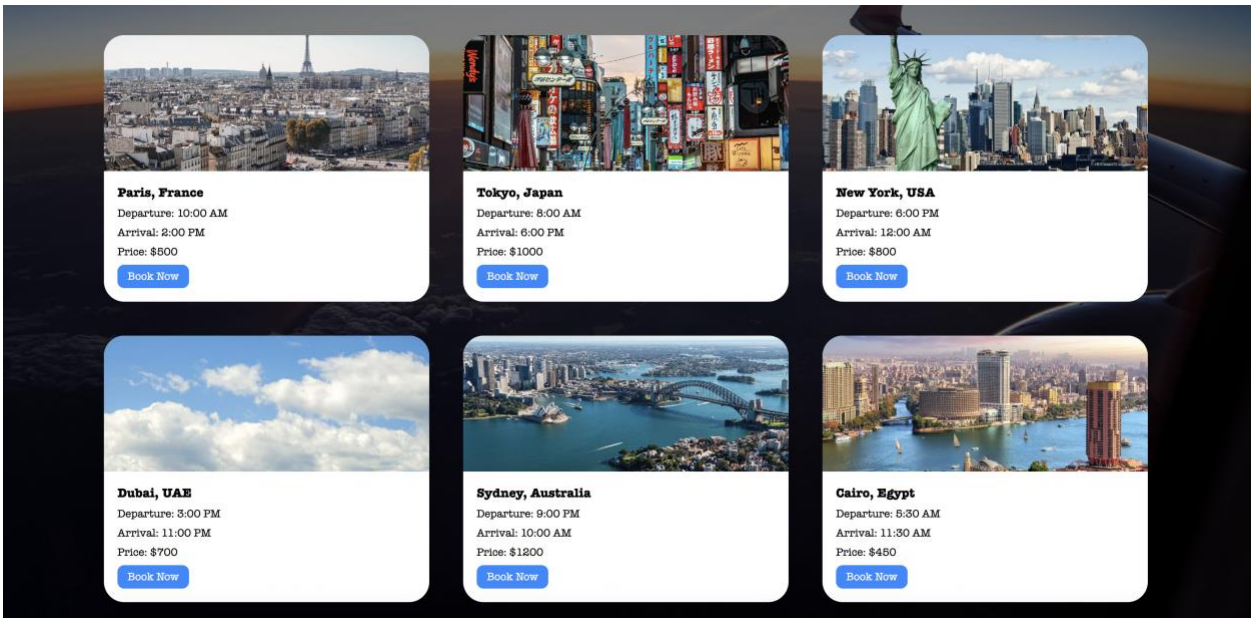
- When the **"Book Now"** button is clicked, display a **modal window** that asks the user:
  - *"Do you want to proceed to checkout?"*
- The modal should contain two buttons:
  - **Proceed**: When clicked, display a message such as:
    - *"Congratulations! Your flight has been reserved."* **With the name of the chosen city**
  - The message should hide after 2 seconds
  - **Cancel**: When clicked, simply close the modal without taking further action.

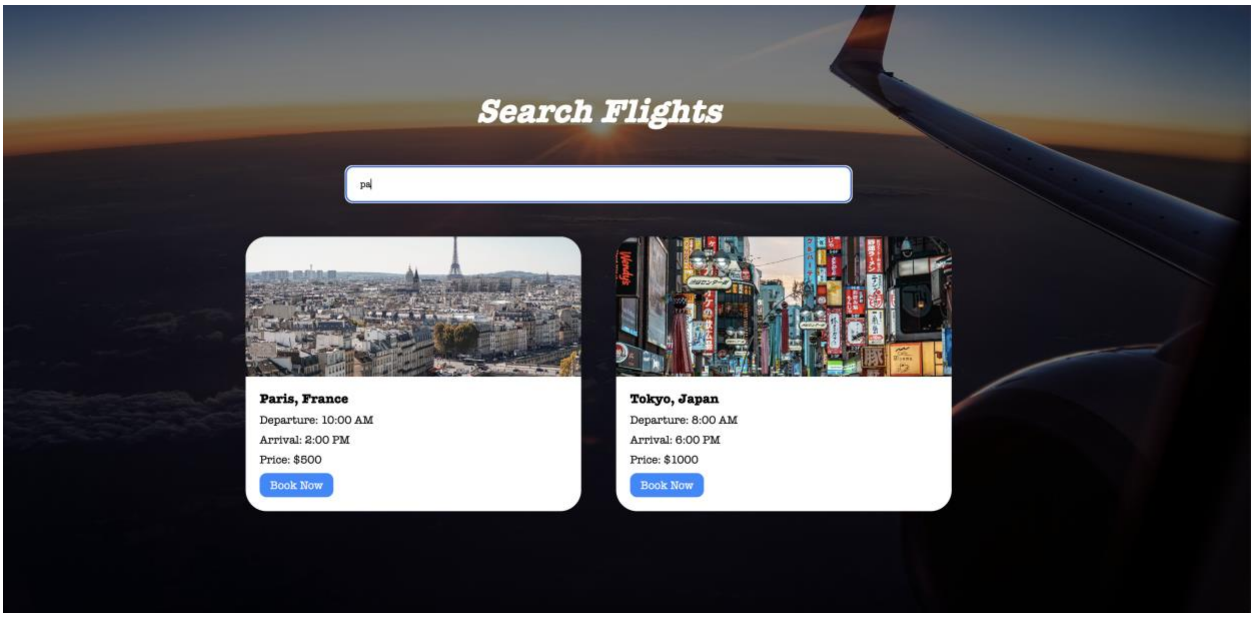
## Submission:

Submit your folder with all the files included as zip file: YourName-ID.zip

## Screenshots:


Search Flights
Search Flights ...
Paris, France
Departure: 10:00 AM
Arrival: 2:00 PM
Price: $500
Book Now
Tokyo, Japan
Departure: 8:00 AM
Arrival: 6:00 PM
Price: $1000
Book Now
New York, USA
Departure: 6:00 PM
Arrival: 12:00 AM
Price: $800
Book Now


Paris, France
Departure: 10:00 AM
Arrival: 2:00 PM
Price: $500
Book Now
Tokyo, Japan
Departure: 8:00 AM
Arrival: 6:00 PM
Price: $1000
Book Now
New York, USA
Departure: 6:00 PM
Arrival: 12:00 AM
Price: $800
Book Now
Dubai, UAE
Departure: 3:00 PM
Arrival: 11:00 PM
Price: $700
Book Now
Sydney, Australia
Departure: 9:00 PM
Arrival: 10:00 AM
Price: $1200
Book Now
Cairo, Egypt
Departure: 5:30 AM
Arrival: 11:30 AM
Price: $450
Book Now


Search Flights
pa
Paris, France
Departure: 10:00 AM
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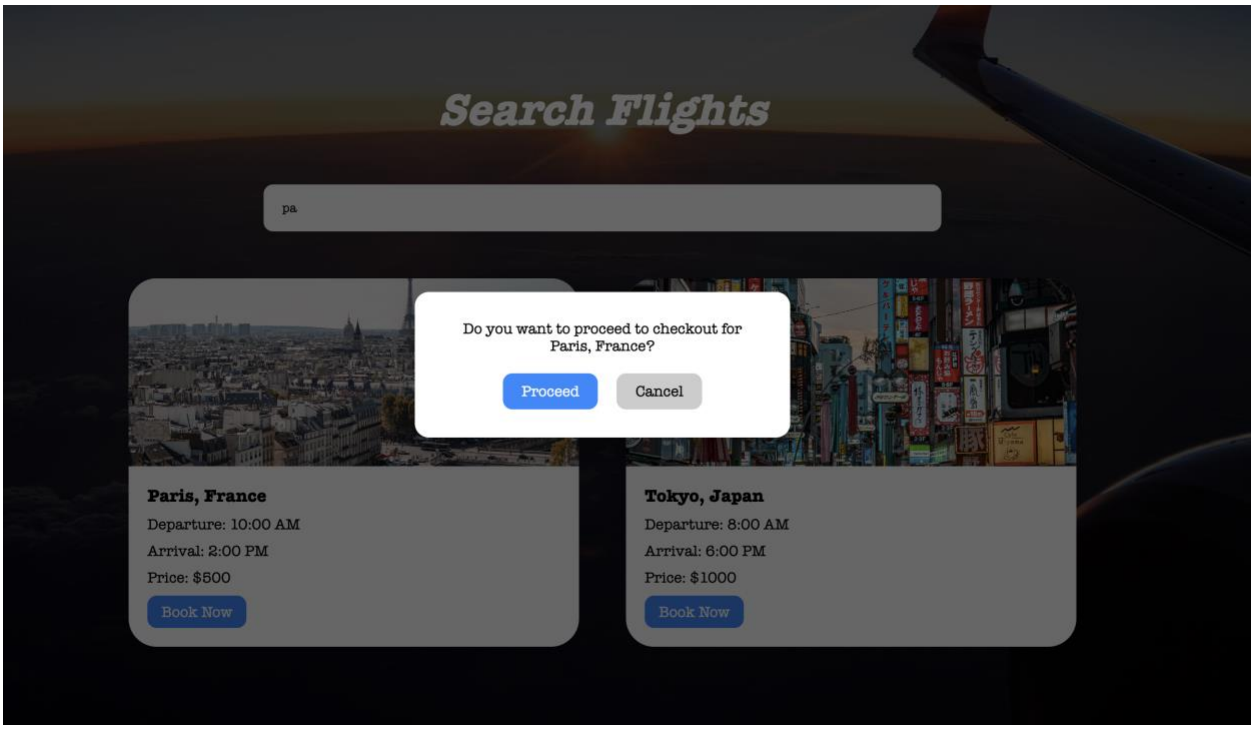
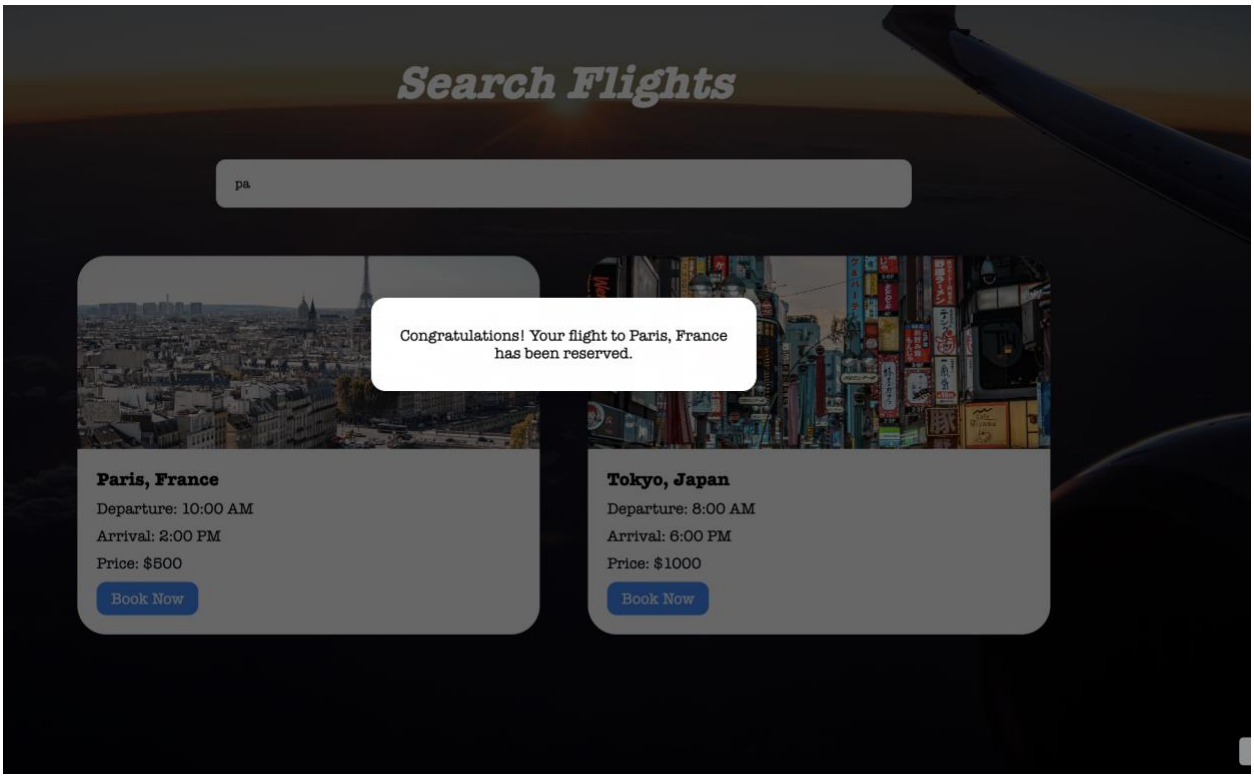
Book Now
Tokyo, Japan
Departure: 8:00 AM
Arrival: 6:00 PM
Price: $1000
Book Now


Search Flights
pa
Do you want to proceed to checkout for Paris, France?
Proceed
Cancel
Paris, France
Departure: 10:00 AM
Arrival: 2:00 PM
Price: $500
Book Now
Tokyo, Japan
Departure: 8:00 AM
Arrival: 6:00 PM
Price: $1000
Book Now


Search Flights
pa
Congratulations! Your flight to Paris, France has been reserved.
Paris, France
Departure: 10:00 AM
Arrival: 2:00 PM
Price: $500
Book Now
Tokyo, Japan
Departure: 8:00 AM
Arrival: 6:00 PM
Price: $1000
Book Now