IST 363

# Project 2

## Objective

Students will work individually to create one web home page that dynamically integrates data from at least two different APIs. This assignment will build on your knowledge of HTTP requests, status codes, and JSON parsing while adding key JavaScript concepts such as promises, the Fetch API, async/await, and error handling. This project is designed to help you develop critical web development skills, including working with real-world APIs and handling asynchronous data fetching.

## Your Task

1. **Learn More about Async JavaScript**In class, we started learning about async JavaScript but there’s more! In this project you will be required to engage in independent learning to further your knowledge of async JavaScript. Web developers have to consistently learn because technology changes quickly. This project is designed to test your skills at independent learning.  
     
   You must utilize the following in your project:

* The Fetch API to retrieve data.
* Promises, async/await, and proper error handling to manage API responses.
* JSON parsing and JavaScript to dynamically populate content on the page.
* CSS for layout and styling (You may use a framework like Bootstrap, but it is not required).

You can do this by:

* + Reading the async section in your “Elequent JavaScript” textbook
  + This fabulous YouTube tutorial: <https://www.youtube.com/watch?v=ZcQyJ-gxke0&list=PL4cUxeGkcC9jx2TTZk3IGWKSbtugYdrlu>.
  + The W3Schools tutorial, the first page of it is here: <https://www.w3schools.com/js/js_asynchronous.asp>.
  + Many other tutorials if these don’t work for you.

1. **Select a Topic and APIs**

Choose a topic of personal interest. Your APIs should align with your topic to create a cohesive and meaningful home page. You must use at least two APIs relevant to your chosen topic. Note that a weather API **cannot be used** as one of your two APIs for this project since we have already explored it in class.

Example Topics and API Combinations:

* Movie Fans: Use The Movie Database API for movie details and the YouTube API for related trailers.
* Music Enthusiasts: Use the Spotify API for song recommendations and the Genius API for lyrics.
* Travel Buffs: Use the Unsplash API for travel photos and the Wikipedia API for destination details.
* Gaming Fans: Use the RAWG API for game details and Twitch API for live streams.
* Etc.

1. **Web Page Creation**  
   Develop a single web home page that pulls in real-time data from your chosen APIs. Your page must be fully responsive, working at both desktop and mobile sizes. The content must be meaningful and relevant—no placeholder text or “greeking.” Your page must include:

* A header with a title and navigation.
* A main content area displaying data from your two APIs.
* This should include images, text, or other relevant elements retrieved from the APIs.
* A section featuring at least three data elements in a structured layout (e.g., a grid of movie posters, a list of books with descriptions, etc.).
* A footer with your name and project information.
* You must utilize:
* The Fetch API to retrieve data.
* Promises, async/await, and proper error handling to manage API responses.
* JSON parsing and JavaScript to dynamically populate content on the page.
* CSS for layout and styling (You may use a framework like Bootstrap, but it is not required).

## What to Submit

1. URL to your web page
2. A brief written summary answering the following:
   1. What APIs did you use, and what data did they provide?
   2. Describe how you handled promises and async operations.
   3. How did you structure the data on your page?
   4. What challenges did you encounter, and how did you solve them?

## Evaluation

Proper integration of at least two APIs.

Effective use of Fetch, promises, async/await, and error handling.

Clear and logical organization of content.

Responsive design and visual appeal.

Presentation clarity and demonstration of learning.