**Final Project - Proposal**

## Introduction

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Course: Web development II

**LOCAL NEWS API PROJECT (**CityPulse API )

To ensure that my local news API project meets the specified requirements, I´ll implement the following strategies:

**1. Use an External Data Source:**

- Fetch news data from a local JSON file or, if available and permissible, from a 3rd party API. Your API should be designed to handle data from either source.

**2. All Exposed Features Should Work:**

- Ensure that all API endpoints work correctly. This includes fetching news articles, filtering by categories or locations, and searching. Test each feature thoroughly during development.

**3. Combination of Static and Dynamically Generated Markup:**

- Create a static HTML structure for my frontend, including placeholders for news articles and filters. Dynamically populate these elements with data from your API using JavaScript.

**4. Incorporate Animation:**

- Add animations to the user interface to make it more engaging. For instance, I will use CSS animations or JavaScript libraries like GreenSock Animation Platform (GSAP) for smoother transitions and effects.

**5. Code Organization:**

- Organize the JavaScript code into ES modules to improve maintainability. Create separate modules for handling API requests, rendering UI elements, and managing user interactions. Utilize classes and functions for clear code structure.

**6. Error-Free Code (ESLint):**

- Enforce ESLint rules to ensure error-free code. Configure ESLint to catch common coding issues and maintain code consistency. Address any linting errors or warnings as you develop.

**Here's a breakdown of how each requirement is addressed:**

* **External Data Source:** By fetching data from either a local JSON file or a 3rd party API, I meet the requirement for an external data source.
* **Exposed Features:** Ensuring that all API features work correctly, including fetching data, filtering, and searching, meets the requirement for exposed features.
* **Combination of Static and Dynamically Generated Markup:** I´ll create a static HTML structure for my frontend and dynamically populate it with data, fulfilling the requirement for a combination of static and dynamic markup.
* **Incorporate Animation:** Adding animations to my user interface satisfies the animation requirement, making the user experience more engaging.
* **Code Organization:** By using ES modules, classes, and functions for structured code, I´ll demonstrate a good level of organization in this project.
* **Error-Free Code (ESLint):** Enforcing ESLint rules and addressing any linting errors or warnings ensures that your code is error-free according to the specified guidelines.

To meet these requirements successfully, it's essential to plan my project well, adhere to best coding practices, and thoroughly test my API and frontend to verify that all features work as expected.

**Required sections in the proposal document:**

**Overview:**

* **Problem:** The problem we are trying to solve is the need for a user-friendly and accessible local news platform. Many people are interested in staying updated on local news, but existing platforms may not offer a convenient and customizable way to access this information.
* **Why:** We are building this project to provide a solution that aggregates and presents local news articles in a user-friendly manner. Our goal is to empower users to easily access and stay informed about news relevant to their local communities.
* **Audience:** The primary audience for this application includes residents of various localities who want to stay informed about local news. It can also be useful for travelers looking for news in specific areas.

**Major Functions:**

1. **View News Articles:** Users can view a list of news articles, each displaying the title, publication date, and a brief summary.
2. **Filter by Category:** Users can filter news articles by categories such as politics, sports, entertainment, etc.
3. **Search News:** Users can search for specific news articles by entering keywords or phrases.
4. **Read Full Article:** Users can click on a news article to read the full content.
5. **Save Articles:** Registered users can save articles to their profiles for later reading.
6. **User Authentication:** Users can create accounts, log in, and personalize their news feed.
7. **Responsive Design:** The application will be responsive, providing a seamless experience on both mobile and desktop devices.

**Wireframes**:

* Mobile Wireframe: <https://www.figma.com/community/file/1291530877670932452/city-pluse-app>
* Desktop Wireframe: <https://www.figma.com/community/file/1291530877670932452/city-pluse-app>

**Data Sources:**

* External API for real-time news data.
* Local JSON file for testing and as a fallback data source.

**Initial Module List:**

1. News API Module: Handles API requests and data retrieval.
2. UI Renderer Module: Renders news articles and user interface components.
3. Filter Module: Manages category filtering.
4. Search Module: Implements the search functionality.
5. Authentication Module: Manages user registration and login.
6. Local Storage Module: Handles saving articles locally (for registered users).

**Colors/Typography/Specific Element Styling:**

* Colors: The color scheme will consist of muted tones for a professional and easy-to-read design. Primary colors include shades of blue and gray.
* Typography: A clean and legible sans-serif font (e.g., Roboto) will be used for content. Headers will have larger, bolder fonts for emphasis.
* Specific Element Styling: Buttons, input forms, and navigation elements will be styled for a modern and intuitive user experience. Animations will be used for smooth transitions and feedback.

**Schedule**:

**1. Define Requirements (2 days):**

* Clearly define the scope of the local news API. Decide on the features and functionalities I want to include.

**2. Data Sources (2 days):**

* Identify reliable sources for local news data. I may need to negotiate access to these sources or find publicly available news feeds.

3**. Data Extraction (3 days):**

* Develop scripts or tools to extract news data from my chosen sources. This may involve web scraping, using RSS feeds, or working with APIs provided by news outlets.

**4. Data Storage (2 days):**

* Set up a database to store the news data. Choose a database system (e.g., MySQL, PostgreSQL) and design an appropriate schema for storing articles, categories, dates, and other relevant information.

**5. API Development (5 days):**

* Create the API using JavaScript (Node.js is a popular choice). I'll need to build endpoints for retrieving news articles, filtering by categories or locations, and searching. Use the Express.js framework for efficient API development.

**6. JSON Formatting (1 day):**

* Ensure that the API returns news data in a structured JSON format. Consider using a consistent schema for articles with fields like title, content, author, publication date, and category.

**7. Frontend (2 days):**

* Develop a simple frontend interface to consume the API. Use HTML, CSS, and JavaScript to display news articles. I can also create filters for categories or locations if desired.

**8. User Authentication (1 day, optional):**

* Implement user authentication if I want to allow users to customize their news preferences, save articles, or leave comments.

**9. Testing (1 day):**

* Thoroughly test the API and frontend to ensure they function correctly. Test various scenarios, including different types of news articles and user interactions.

Link to Trello: <https://trello.com/invite/b/H5zp05sg/ATTIc28a9168c5f27671c63a62015426695394FDD9AB/city-pulse-api>