Development team log

Carlos J. Zepeda
Martín G. Torres
Andrés G. Gómez

School of engineering

Universidad Panamericana De Guadalajara

DAW2: Web Development

Eng. Gabriel C. Cortés

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The Prototype

28/08/24

Tasks Completed

- **Creation of the project's basic structure**: Designed and organized the main structure of the project, including fundamental sections and divisions, providing a solid foundation for future development.
- **Initial CSS styling**: Implemented basic styles using CSS to create a consistent appearance across the project's sections.

Challenges Faced

- **Organizing the site structure**:
  - **Problem**: Arranging elements in a way that was both functional and user-friendly.
  - **Solution**: Conducted research on the original website to establish a coherent structure.
- **Dropdown menu**:
  - **Problem**: Difficulty implementing a functional dropdown menu.
  - **Solution**: Reviewed documentation, consulted ChatGPT, and watched tutorials to successfully implement it.
- **Overlaying an image with text**:
  - **Problem**: Applying a blur effect to the image while keeping text legible.
  - **Solution**: Resolved by consulting documentation and videos, successfully achieving the desired effect.

29/08/24

Tasks Completed

- **First log update**.

Challenges Faced

- **Writing logs**:
  - **Problem**: Uncertainty about structuring project logs due to lack of experience.
  - **Solution**: Researched online for high-quality log formats to use as references.

30/08/24

Tasks Completed

- **Image carousel implementation**.

Challenges Faced

- **Bootstrap carousel**:
  - **Problem**: Attempted to simplify the process with Bootstrap but encountered limitations.
  - **Solution**: Adjusted the approach and created a custom carousel.

03/09/24

Tasks Completed

- **Palette color change**.
- **Download button creation**.
- **Navbar implementation**.

Challenges Faced

- **Finding an agreed color scheme**: Required extensive discussions to finalize.
- **Fixed download button issues**: Resolved challenges related to its behavior.

04/09/24

Task Failed

- **Bootstrap for image deployment**: Attempt to use Bootstrap to display additional information for images about Lake Chapala.

Challenges Faced

- **Bootstrap code adjustments**:
  - **Problem**: Difficulty adapting Bootstrap components to images.
  - **Solution**: Attempted code modifications but faced time constraints.

Migration to Node.js

07/10/24

Tasks Completed

- **Integration of Node.js and Express**: Migrated the backend to Node.js and Express, ensuring a functional routing system and preparing for EJS and MongoDB integration.

Challenges Faced

- **Routing adjustments**:
  - **Problem**: Conflicts arose during routing setup.

- ○ **Solution**: Reviewed documentation and resolved conflicts through structured debugging.

08/10/24

Tasks Completed

- **Added MongoDB**: Enabled efficient management of large datasets.
- **Bootstrap enhancement**: Improved layout design while resolving compatibility issues with older Bootstrap versions.
- **Implemented pagination**: Handled 12,000 records efficiently.

Challenges Faced

- **Bootstrap version conflicts**:
  - ○ **Solution**: Reverted to compatible Bootstrap components and adjusted styling.
- **Table pagination**:
  - ○ **Solution**: Researched and implemented best practices for handling large datasets.

09/10/24

Tasks Completed

- **Log updates**: Reflected all tasks and challenges in detailed logs.

Challenges Faced

- **Delayed updates**:
  - ○ **Solution**: Compiled accurate information by reflecting on past tasks.

24/10/24

Tasks Completed

- **Improved table design**: Enhanced responsiveness and download button validation.

Challenges Faced

- **MongoDB connection issue**:
  - ○ **Solution**: Used a personal MongoDB Atlas database for functionality testing.

Migration to React

15/11/24

Tasks Completed

- **Initial migration to React**: Migrated content from EJS to React, including the Navbar and index sections.
- **Dynamic rendering with JSON**: Ensured reusable components and structured data.
- **Custom CSS styling**: Adjusted existing styles for React compatibility.

Challenges Faced

- **Dynamic data handling**:
  - **Solution**: Organized project files for structured JSON data rendering.
- **Bootstrap integration**:
  - **Solution**: Verified imports and resolved conflicts between styles.

16/11/24

Tasks Completed

- **Migrated Data and Graph sections**: Ensured responsiveness and functionality with dynamic data rendering.
- **Compact pagination**: Designed navigation for large datasets.
- **Enhanced navigation**: Implemented smooth scrolling and route transitions.

Challenges Faced

- **Dynamic table and pagination**:
  - **Solution**: Optimized data handling for performance.

17/11/24

Tasks Completed

- **Download button**: Enabled CSV downloads with dynamic naming.
- **Graph visualizations**: Initial tests with Chart.js for dynamic rendering.

Challenges Faced

- **File encoding issues**:
  - **Solution**: Added UTF-8 BOM for proper character rendering.

20/11/24

Tasks Completed

- **Weather API integration**: Retrieved real-time temperature data using OpenWeatherMap.
- **Dynamic weather display**: Styled and made responsive for all devices.

Challenges Faced

- **API authorization**:
  - **Solution**: Corrected environment variables and redeployed.

21/11/24

Tasks Completed

- **Error handling page**: Created a custom error page with a test button.
- **Dynamic graphs**: Rendered backend data for last year's records.

Challenges Faced

- **Backend-frontend connection**:
  - **Solution**: Improved context functions and data handling.