

GLOBEETTER a travel website

DT100G

Title

GLOBEETTER

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Introduction

Background and problem motivation

In today's fast-paced world, travel has become an integral part of our lives, be it for leisure, work, or exploration. Recognizing the need for an immersive and user-friendly online travel booking experience, the inception of this project was motivated by a clear gap in the market - the lack of a comprehensive platform that not only inspires travelers through captivating visuals and engaging content but also offers a seamless booking experience directly connected to a real-time database. The project's cornerstone lies in addressing the cumbersome process often associated with travel planning and booking. Traditional travel websites fall short in providing a holistic and interactive user experience, limiting users' exploration and discovery potential.

Delimitation

The development process, though guided by best practices in web design and user experience principles, encountered several challenges. These included time constraints, limited technical skills in advanced programming, and reliance on external libraries. The following sections will discuss the project's scope, methodologies employed, the challenges faced, and the solutions implemented to overcome these challenges. This report aims to provide a comprehensive overview of the project's execution and deliverables, alongside reflections on potential improvements for future iterations.

Detailed problem statement

This project sets out to solve several intricate problems within the domain of online travel booking platforms. Firstly, the project aims to develop a visually appealing and intuitive website that encourages exploration and discovery among users. Utilizing technologies like HTML, CSS for styling, JavaScript for dynamic content, and incorporating third-party libraries such as Swiper for responsive sliders, the website promises an engaging user interface that showcases various travel destinations and packages.

Secondly, the project addresses the technical challenge of integrating a live booking system. By employing PHP and SQL databases, the website facilitates real-time booking functionalities. Users can easily book travel packages, providing essential information through a streamlined form, which is then securely processed and stored in a database. This backend integration not only enhances user experience by providing instant feedback and confirmation but also ensures data integrity and security.

Lastly, the project focuses on scalability and user engagement. Through meticulous planning and design, the website is structured to easily accommodate additional features, such as user reviews and ratings, personalized recommendations, and interactive travel itineraries. By solving these problems, the project not only aims to offer a solution to existing market gaps but also sets a foundation for future enhancements that could redefine how we perceive and engage with online travel booking platforms.

Theory

HTML Basics:

HTML (HyperText Markup Language) is the foundation of web page creation. It provides a structure to web content through elements marked by tags. In the provided code, HTML is used to define the structure of web pages such as headers, sections, images, and links. Tags like `<html>`, `<head>`, `<body>`, `<header>`, `<section>`, and `<div>` organize content and elements in a structured layout. [1]

CSS for Styling:

CSS (Cascading Style Sheets) is utilized to enhance the visual appearance of web pages. It allows web developers to style HTML elements with colors, layouts, and fonts. In the code, CSS is linked both externally and internally. External links to stylesheets such as Swiper's stylesheet for sliders and Font Awesome for icons demonstrate the use of third-party CSS frameworks. [2]

JavaScript and DOM Manipulation:

JavaScript is used for interactive features in web pages. It interacts with the DOM (Document Object Model) to manipulate webpage elements dynamically. The provided JavaScript code handles menu visibility toggles, form validation, and slider functionality using Swiper—a popular JavaScript library for interactive sliders. [3]

Responsive Design:

Responsive web design ensures that web applications work well on a variety of devices and window or screen sizes. Media queries, a technique in responsive design, are not directly shown in the snippet but are likely used in the linked CSS files. The use of percentages for widths and responsive units like `vw` (viewport width) would typically be seen in such files. [4]

PHP and Server-Side Processing:

PHP (Hypertext Preprocessor) scripts are used for handling data submissions from forms, interacting with a database, and performing server-side logic. In the example, PHP scripts manage form data from contact and booking forms, inserting data into a MySQL database using SQL queries. [5]

SQL and Database Interaction:

SQL (Structured Query Language) is used within PHP scripts to interact with databases. The code includes SQL commands to insert submitted form data into a MySQL database, demonstrating basic CRUD (Create, Read, Update, Delete) operations. [6]

Web Accessibility:

This refers to making web content accessible to people with disabilities. While not explicitly detailed in the code, using semantic HTML elements (like `<nav>`, `<header>`, and `<footer>`), proper alt attributes for images, and ARIA roles can enhance accessibility. [7]

Web Security:

Basic security considerations include sanitizing data to prevent SQL injection, which is addressed in the PHP code through the use of `mysqli_real_escape_string`. Proper error handling and script responses help maintain the robustness of web applications against malicious inputs. [8]

Methodology

Project Approach

For the development of the travel website, a hybrid approach combining Agile methodologies with a User-Centered Design (UCD) process was adopted. This approach facilitated rapid iteration based on user feedback and the ability to adapt to changing requirements.

Initial Planning and Design

The project kicked off with an intensive planning phase, where the scope, objectives, and requirements of the travel website were defined. Wireframes and mood boards were utilized extensively during this phase to visually conceptualize the layout and aesthetic appeal of the website, ensuring that the design was both intuitive and engaging for the target audience.

Development Tools and Technologies

- Front-End Development: HTML5, CSS3, and JavaScript were chosen for their robustness and flexibility in creating responsive and dynamic user interfaces. SwiperJS was integrated to enhance the user experience with interactive sliders, showcasing travel destinations and client reviews in a visually appealing manner. FontAwesome was used for scalable vector icons, enriching the UI without compromising on load times.
- Back-End Development: PHP and MySQL formed the backbone of the server-side scripting and database management, allowing for efficient handling of booking forms and user data storage. This choice was driven by their widespread support and compatibility across hosting platforms.

Responsive Design

A mobile-first design approach was taken, recognizing the growing trend of users accessing websites on mobile devices. CSS media queries were employed to ensure the website's layout and content scaled seamlessly across different screen sizes, from smartphones to desktops.

Construction

Responsive Web Design:

The travel website achieves a seamless user experience across various devices through meticulous use of CSS3 and media queries. This library is crucial for creating responsive sliders in the "home", "packages", and "reviews" sections. Which directly enhances the site's mobile responsiveness and interactivity, allowing users to navigate through content with ease.

UI/UX Considerations:

Focusing on user interface and experience, the website's navigation bar is a prime example of thoughtful UI/UX design. The navigation bar is made responsive and user-friendly on mobile devices, which toggles the menu visibility. This functionality, implemented via JavaScript underscores the site's adaptability to user interactions. Moreover, the use of Font Awesome icons, enriches the interface with intuitive visual cues, contributing to a minimalistic yet informative design approach.

Content Presentation:

The strategic layout of content within the "services" and "packages" sections emphasizes user engagement through well-organized presentations. Content is laid out in a grid format, making information accessible and easy to browse. The implementation of the 'load more' feature in the packages section, managed by a button and supported by JavaScript, illustrates a thoughtful design choice. This feature incrementally reveals content, enhancing the user experience by preventing overwhelming amounts of information while also improving page load performance.

Back-end Integration

Booking Form Processing:

PHP scripts were developed to handle the booking and messages form submission. The scripts connect to a MySQL database (travelbook_db), inserting the submitted data into the tables. This process involves sanitizing and validating input data to prevent SQL injection attacks and ensure data integrity.

Database Design:

The MySQL database was designed to efficiently store and manage booking and messages information. The schema includes tables for user information and booking details, with appropriate data types and constraints to ensure reliability and performance.

Dynamic Content Management

JavaScript Interactivity:

Custom JavaScript was utilized to add interactivity to the website. Features such as the toggleable menu and input length validation enhance the user experience by providing immediate feedback and convenient navigation.

Swiper Integration for Dynamic Sliders:

Swiper was again leveraged beyond responsive sliders to enable dynamic content presentation in the reviews section. Custom configurations were used to adapt the slider's behavior and appearance based on the viewport, demonstrating an advanced use of third-party libraries to create a compelling user experience.

Results

The project aimed to create a visually appealing, user-friendly travel website that not only showcases various travel packages but also enables users to book their trips conveniently. The website includes several key features: a home page with a slider showcasing different destinations, a services section, package offerings, an about us section, customer reviews, and a booking form connected to an SQL database for real-time booking capabilities. This Results section will objectively assess how well these elements have been implemented and whether the project's initial goals have been met.

Home Page and Navigation

The implementation of the Swiper library for the home page slider successfully highlights featured destinations, providing users with an engaging introduction to what the website offers.

For instance, the figures 1, 2 illustrate the Swipers arrows to the left and right to let the user interact with the page and navigate.



Figure 1: shows the Swiper at the right bottom that swipes to the right

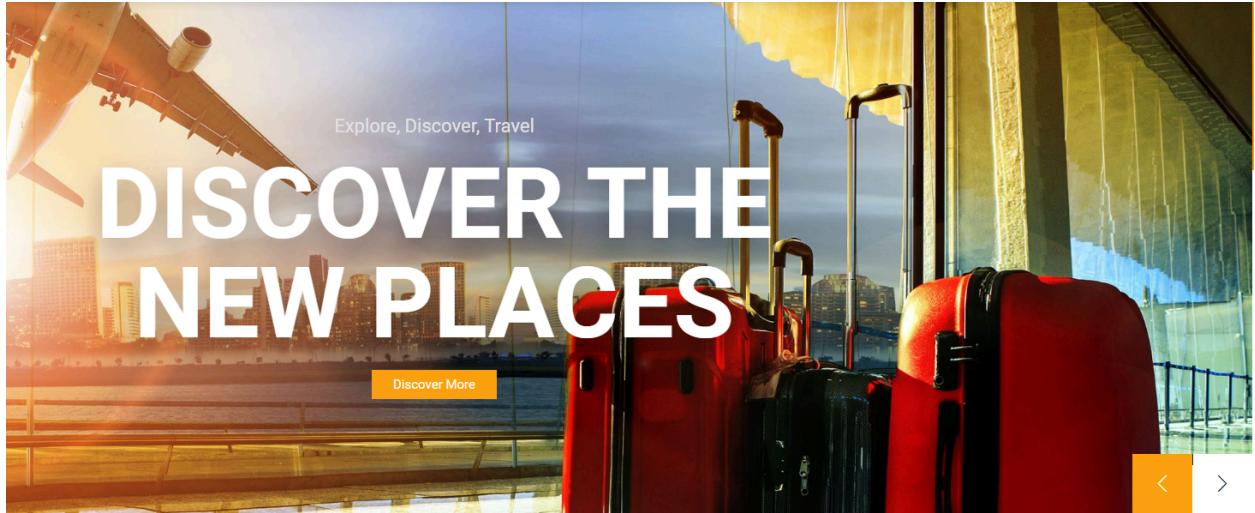


Figure 2: shows the Swiper at the right bottom that swipes to the left

The smooth transition effects and the ability to navigate through different slides enhance the user experience. The clear and accessible navigation menu, which remains consistent across different pages, effectively guides users to key sections of the website, such as Home, About, Package, Reviews, Book and Contact pages, ensuring easy navigation. As shown in Figures 3 and 4 the menu at the top of the website and in the following figure hover over the “About” item which becomes yellow to give the user a feedback.



Figure 3: illustrates the navigation menu



Figure 4: navigation menu where the user hovers over “About” item

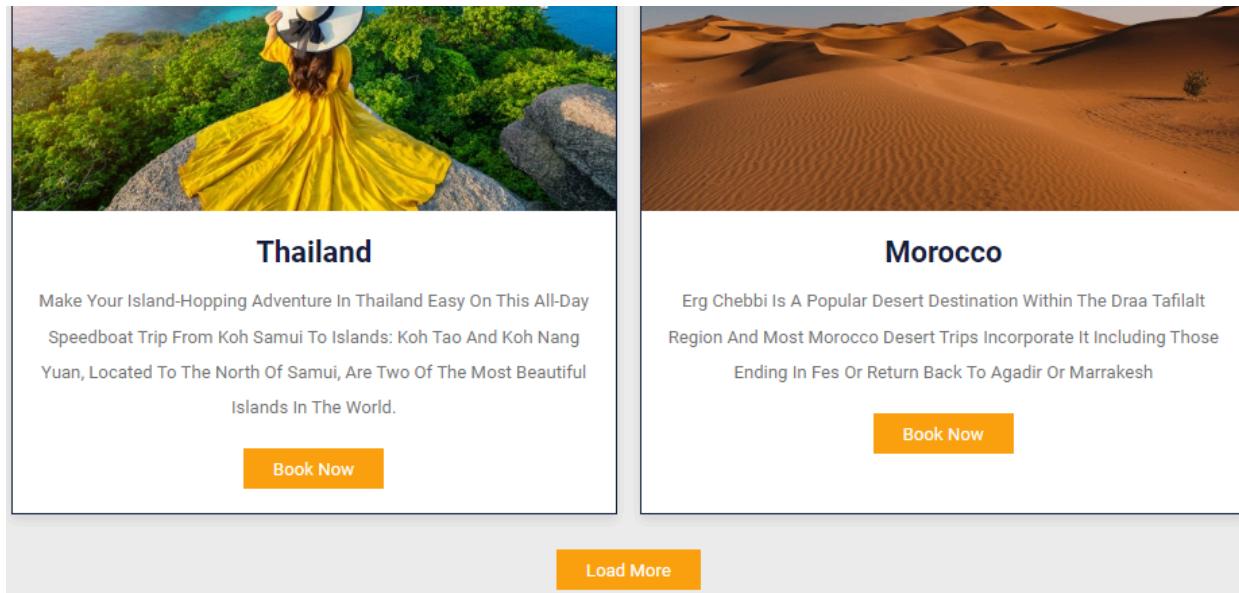


Figure 5: at the bottom of the image “Load More” button

Services and Packages Offered

The services section comprehensively outlines the variety of experiences available, such as adventure tours and guided tours. This section, supported by relevant icons and brief descriptions, efficiently communicates the range of services to potential customers. As in figure 6, where the services of the travelling website are shown and it shows how the “Adventure” item becomes blue when hovering over it.

OUR SERVICES



Figure 6: illustrates the services in the website

Similarly, the packages section displays various travel packages with appealing images, descriptions, and a clear call-to-action for booking, fulfilling the goal of showcasing available travel options attractively.

TOP DESTINATIONS

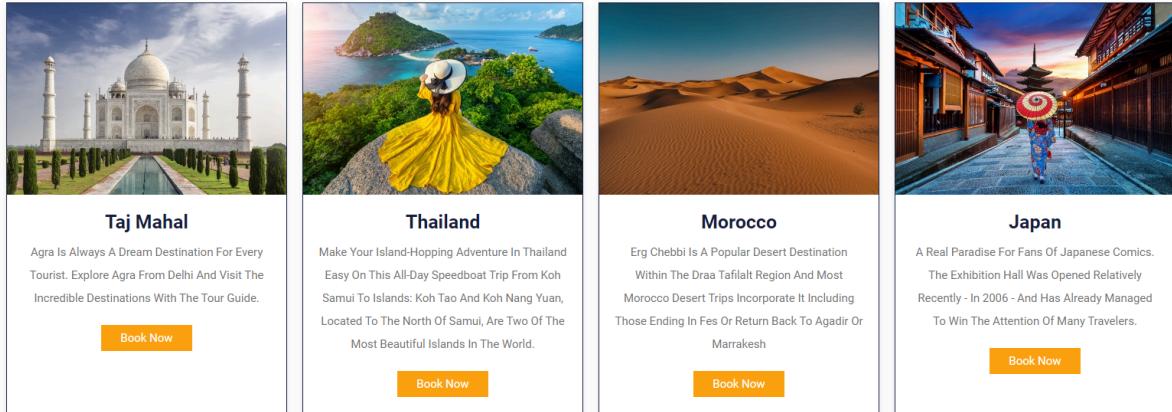


Figure 7: is an image of the “Packages”

The previous figure 7, shows a list of top destinations in the Packages and the “Book Now” button at the bottom directs the user to the Booking page.

Booking and messages Functionalities

The booking form is a critical component of the website, allowing users to enter their details and trip preferences. The connection to an SQL database for processing and storing these details is crucial for real-time booking capabilities. The form fields cover essential information needed for booking, such as name, email, phone number, address, destination, number of guests, and dates

of arrival and departure.

BOOK YOUR TRIP!

Name: Email:

Enter your name 

Phone: Address:

Enter your number Enter your address

Where To: How Many:

Place you want to visit Number of guests

Arrivals: Leaving:

aaaa-mm-dd aaaa-mm-dd

Figure 8: is a Booking form for trips

In the previous figure 8, there is a form for users to fill their information and the trip details.

The form is titled "Send Message". It contains three input fields: "Full Name" (text input), "Email" (text input), and "Type Your Message..." (text area). Below these fields is a large orange "Send" button.

Figure 9: has a form for users to send a message

In the contact page there is a form for the users to send a message and they can fill their name and email for the travel company to respond to them. This form helps for an interactive response between the user and travel page.

Handling Data Submission and Feedback in Web Forms

In the development of our travel agency's website, we have implemented two crucial forms that handle user interactions effectively—booking a trip and sending messages. These interactions are designed to be intuitive and user-friendly, ensuring that data is captured accurately and stored securely in our database.

Trip Booking Form:

- Users begin by filling out the trip booking form as depicted in the first figure. This form requires details such as name, email, phone number, address, destination, number of guests, arrival, and departure dates.
- Upon clicking the "Book" button, the data entered by the user is transmitted to our database. This process is executed through a PHP backend script which sanitizes and stores the information to prevent SQL injection and ensure data integrity.

BOOK YOUR TRIP!

The form consists of several input fields arranged in a grid-like layout. It includes fields for Name, Email, Phone, Address, Where To, How Many, Arrivals, Leaving, and a Submit button. The Name field contains 'Saly' and has a small profile icon next to it. The Email field contains 'salymas@gmail.com'. The Phone field contains '099999999'. The Address field contains 'Sundsvall'. The Where To field contains 'Stockholm'. The How Many field contains 'Number of guests'. The Arrivals field contains '2024-04-09'. The Leaving field contains '2024-04-10'. A 'Submit' button is located at the bottom left of the form area.

Name:	Email:
Saly	salymas@gmail.com
Phone:	Address:
099999999	Sundsvall
Where To:	How Many:
Stockholm	Number of guests
Arrivals:	Leaving:
2024-04-09	2024-04-10
Submit	

Figure 10: after filling up the booking form

Message Sending Form:

- The second figure illustrates the form used for sending messages. Users provide their full name, email address, and their message in the designated fields.

- When the "Send" button is clicked, the information is captured and sent to the same database, where it is stored in a messages table. This allows for efficient management and retrieval of user inquiries and feedback.

Send Message

Full Name

Saly

Email

Salymas@Gmail.Com

Type Your Message...

I Have Some Questions Regarding The Trip If You Could Contact Me Please

Send

Figure 11: after filling up the send message form

User Feedback Notification:

- After submitting either the booking or message forms, users are immediately shown a pop-up notification. This feedback mechanism, demonstrated in the third figure, confirms that their information has been successfully received and processed.
- The pop-up messages such as "Booking submitted successfully!" or "Message sent successfully!" reassure users of the successful interaction, enhancing user experience through immediate feedback.

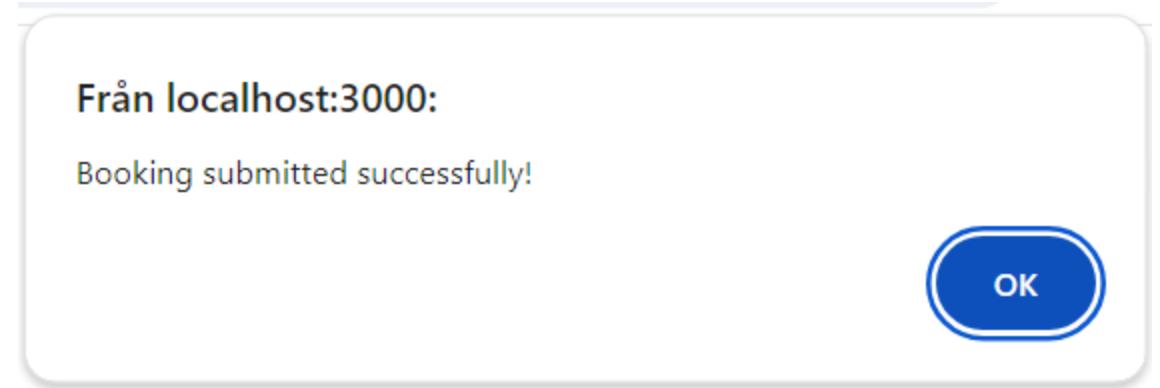


Figure 12: successful booking submission pop up message

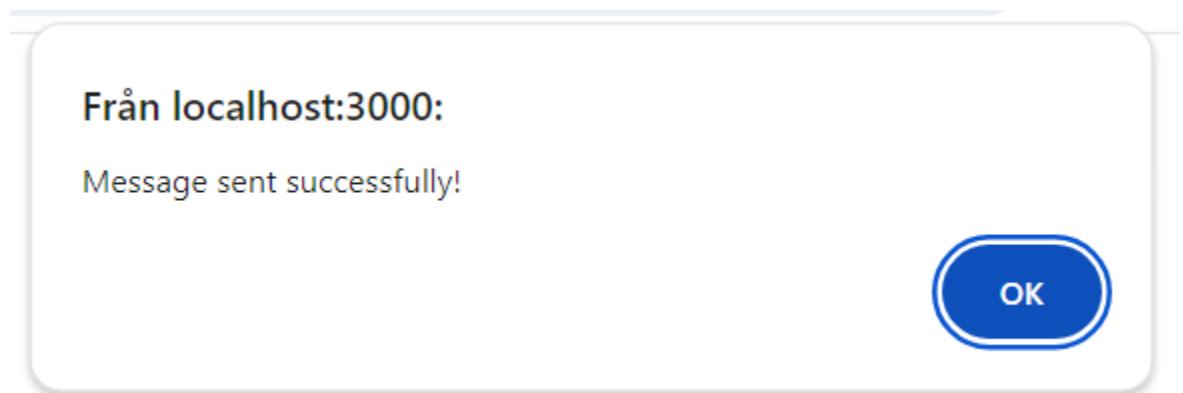


Figure 13: successful message submission pop up message

Database Interaction:

- The figures detail how submitted data is added to the database. These include screenshots the database tables that store trip bookings and messages.
- The database schemas are designed to efficiently store and organize the data, which can later be accessed by the website administrators for processing bookings and responding to messages.

	<input type="button" value="← T →"/>		<input type="button" value="▼"/>	id	name	email	phone	address	location	guests	arrivals	leaving
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	1	fv	fve@c.c	23	cqe	ce	1	2024-02-09	2024-02-09
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	2	Sa	As@gm.c	080203	as	dqwk	2	2024-04-08	2024-04-09
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	3	fd	df@m.c	09876	cnj	mksd	2	2024-04-25	2024-04-30
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	4	Saly	salymas@gmail.com	0999999999	Sundsvall	Stockholm	0	2024-04-09	2024-04-10

Med markerade:

Figure 14: after adding the information at the bottom of the messages table in the database

	<input type="button" value="← T →"/>		<input type="button" value="▼"/>	id	fullname	email	message
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	1	sa	sm@fm.c	dfnql
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	2	sdfw	sdg@v.c	gfqe
<input type="checkbox"/>	<input type="button" value="Redigera"/>	<input type="button" value="Kopiera"/>	<input type="button" value="Radera"/>	3	Saly	salymas@gmail.com	i have some questions regarding the trip if you co...

Med markerade:

Figure 15: shows the message sent to the database

This systematic handling of user data through well-designed forms and immediate feedback ensures a smooth and reliable interaction on our travel agency website, fostering trust and enhancing user satisfaction.

Conclusion

Reflecting on the development of our web project, several aspects have stood out in terms of both success and areas for improvement. The integration of third-party libraries such as Swiper for creating responsive sliders and Font Awesome for enhancing the UI with intuitive icons significantly improved the aesthetic appeal and functionality of the site. The overall layout and navigation structure were implemented efficiently, providing users with a seamless and intuitive browsing experience.

However, the project faced challenges, particularly with JavaScript functionalities and CSS styling consistency across different browsers. The responsiveness of the navigation bar and modal pop-ups required multiple revisions to ensure a uniform user experience, which highlighted a need for more robust cross-browser testing in the early stages of development.

Looking forward, adopting a mobile-first design approach could enhance user engagement and accessibility, given the increasing prevalence of mobile web browsing. Additionally, implementing a CSS preprocessor like SASS could streamline styling processes and improve stylesheet maintainability.

In personal reflection, the project was an enriching experience that underscored the importance of detailed planning and the benefits of incremental testing. Future projects would benefit from integrating continuous integration/continuous deployment (CI/CD) practices to automate testing and deployment, ensuring higher code quality and reliability.

Overall, while there are areas for enhancement, the foundations laid and the lessons learned provide a solid basis for future development, aiming for greater efficiency and user satisfaction.

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