Report on the Development of SMC Website

Introduction

Social Media Campaigns Ltd. (SMC) is a new initiative focused on promoting safe social media practices among teenagers. The goal of the project was to develop a website that would not only provide educational content but also facilitate interaction with users through features such as membership registration for a monthly newsletter. This report discusses the development of the SMC website, focusing on how web services were utilized, the effectiveness of the web development tools used, and how PHP was employed to design and manage the website's database. Additionally, the report evaluates how well the website meets the specific requirements set forth in the project scenario, ensuring that all aspects of the assignment have been addressed.

Benefits of Web Services for SMC

The integration of web services into the SMC website provides substantial benefits that enhance the user experience and fulfill the educational objectives of the platform. Two key web services—weather updates and daily quotes—were implemented to make the website more interactive and engaging.

The weather service allows users to access real-time weather information, which is particularly useful for planning safe outdoor activities. This feature aligns with SMC's mission to help teenagers make informed decisions that contribute to their safety, both online and offline. By providing timely weather updates, the website supports users in maintaining safe behaviors, even outside the digital realm.

The quotes service offers motivational and inspirational quotes that change daily. This feature adds a positive and encouraging tone to the website, promoting mental well-being, which is a crucial aspect of safe social media use. These web services were integrated using APIs, demonstrating the website's ability to interact with external data sources dynamically. This not only enriches the content but also ensures that the site remains relevant and engaging for its audience.

Use of Web Development Tools

In accordance with the assignment requirements, the SMC website was developed without using any pre-built templates or website builders. Instead, the entire website was hand-coded using HTML5, CSS, and JavaScript, with all the development carried out in a text editor. This approach ensured that the project adhered to the guidelines, allowing for full customization and creativity in the design and functionality of the website.

1. **HTML and CSS**: HTML5 was used to create the structure and layout of the website. Each of the seven interlinked pages—Home, Information, Most Popular Social Media Apps, How Parents Can Help, Livestreaming, Contact, and Legislation and Guidance—was individually coded to meet the specific content and navigation requirements. The external CSS file (styles.css) provided consistent styling across all pages, enhancing the visual appeal and ensuring mobile-friendly content. The CSS file also incorporated custom cursors, responsive images, and text to create an engaging user interface that adapts well to various screen sizes.
2. **JavaScript**: JavaScript was employed to add interactivity to the website. The navigation bar, which features drop-down menus, was made interactive using JavaScript, ensuring that users can easily navigate between different sections of the site. Additionally, scripts like home.js, tips.js, and toggle.js were developed to handle dynamic content updates and provide a smooth user experience. For

instance, the toggle.js script controls the visibility of different navigation elements, making the website more user-friendly and intuitive.

These tools were chosen for their flexibility and power, allowing the website to meet the specific requirements of the project while also providing room for future enhancements.

PHP and Database Integration

PHP played a crucial role in managing the website's backend, particularly in handling user data and interactions with the MySQL database. The use of PHP ensured that all backend processes were secure, efficient, and aligned with the project requirements.

The login.php script is a key component of the website's security. It handles user authentication by verifying credentials against the database. To enhance security, the script includes a lockout mechanism that restricts access after three failed login attempts, locking the account for ten minutes. This feature is crucial for preventing unauthorized access and protecting user data. The script also utilizes password_verify() to securely compare hashed passwords, further safeguarding user credentials.

The database was designed to store essential user information, including first names, surnames, and email addresses. This information is crucial for managing the membership section of the website, which allows users to register for a monthly newsletter. The database schema was created following best practices, ensuring that data is stored securely and can be efficiently queried and manipulated.

The config.php file was used to manage the database connection, ensuring that all interactions with the database were handled securely. Other PHP scripts, such as register.php and contact.php, managed user registration and form submissions, respectively. These scripts were carefully crafted to validate user input, prevent SQL injection, and provide feedback to users, ensuring a smooth and secure experience.

Evaluation of SMC Website

The SMC website effectively meets the objectives outlined in the project scenario. The integration of web services has added significant value, making the website not only informative but also engaging and dynamic. The weather and quotes services are well-aligned with the site’s mission of promoting safe and positive behavior among teenagers.

The website is accessible on various devices, thanks to the responsive design techniques implemented in the CSS. The use of media queries and responsive images ensures that the content is easily viewable, whether on a desktop, tablet, or mobile phone. This meets the requirement for mobile-friendly content, making the website accessible to a broader audience.

PHP has been effectively used to manage user data and secure the website. The inclusion of features like account lockout after multiple failed login attempts, input validation, and session management demonstrates a strong commitment to security. These features are crucial for protecting the personal information of the website’s users, which is particularly important given the target audience of teenagers.

In conclusion, the SMC website is a robust and well-designed platform that fulfills the specific requirements of the project. By leveraging web services, hand-coded HTML, CSS, and PHP, the site provides a secure, interactive, and educational experience for its users. The development process adhered strictly to the guidelines, ensuring that the final product is both original and highly functional. Moving forward, the

website is well-positioned to serve as a valuable resource for promoting safe social media use among teenagers.

Reflection on the Website Development Assignment

During the development of the SMC website, I primarily used HTML, CSS, JavaScript, and PHP. The process began with drafting the structure of the website using HTML5 and styling it with CSS to ensure a consistent and visually appealing design across all pages. I focused on making the site responsive and mobile-friendly, which required careful use of CSS media queries. JavaScript was employed to add interactivity, such as the navigation bar and dynamic content updates. For the backend, I used PHP to handle user authentication and manage the database, ensuring secure storage and processing of user data.

Throughout the project, I learned the importance of building websites from scratch without relying on templates or pre-built tools. This hands-on approach gave me a deeper understanding of how each element of a website interacts, from frontend design to backend functionality. I also realized the critical role of security in web development, especially when handling user data.

If I were to undertake a similar task in the future, I would focus more on optimizing the user experience, perhaps by incorporating more advanced JavaScript features and further refining the responsiveness of the design. I would also explore using version control tools like Git to manage the development process more effectively. Overall, this assignment has significantly enhanced my skills and understanding of web development, preparing me for more complex projects in the future.

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