

Mini Project Report

on

Daily: A Productivity Web Application

For the course

Web Programming Laboratory

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I declare that the written Mini Project report submission represents the work done based on

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anthonyjennis/wpl_mini_project

Introduction

"Daily" is an application that you can use as a tool that serves you in your productivity – you can use it for taking notes, managing to-do lists, and much more. "Daily" stands for the fact that it can be utilized every day without a doubt and by the help of an inclusive approach may all tasks and notes be successfully organized.

The need for an improved and more effective manner of task management, the ability to easily write down notes, and the process of making available the necessary information has driven the consistency in the demand for multifunctional productivity tools in the digital era. That is to say, "Daily" is a web application which has brought all these features together. In fact, what the authors actually present in this paper is the creation, the concept, the implementation of "Daily," in which the objectives, the structure, and the potential futures are outlined for the reader in an intelligible manner.

Literature Review

Web application development has transitioned significantly owing to the development of front-end and back-end technologies which correspond to the two layers of the web application architecture. The "Daily" system is a result of several key areas that are supported by the following:

The project is using HTML5, CSS3, and JavaScript for the front-end stack, which is very good for the creation of the User Interface. An article (Flanagan, 2011; Duckett, 2014) showed that these technologies are best for the fluidity of the user interaction on mobile and desktop platforms.

The practice of working with PHP for server-side programming is the standard in web development, as it is easy to combine with a relational database like MySQL. The research (Welling & Thompson, 2008) shows that PHP has been significantly improved to cover user authentication, session and CRUD (Create, Read, Update, Delete) operations safely. In "Daily", the user's login, signup, session, and database are managed by the PHP script.

MySQL is used in the back end for the management of user data, notes, to-do tasks, and contact information. Database design affirms that normalization, integrity, and security are the most important principles. Web applications are now adopting the use of a flat design, which is indicated by various scholarly researches as the present trend. A good practice in the project is the new UI design which is minimalistic and responsive. For instance, tools such as Figma are used for design prototyping and CSS frameworks are featured in our project to provide a user-friendly layout.

One of the prevalent trends in productivity apps is a platform that offers various utilities (to-do list, notes, contact forms). A paper (Bodin, 2017) reports that the integrated application suites have a better user experience as the user needs not to manage so many applications one by one.

The development of "Daily" is anchored in contemporary web development paradigms and user experience principles. Key insights from recent literature include:

Responsive Web Design (RWD): With the proliferation of diverse devices, RWD ensures optimal user experiences across varying screen sizes. Implementing RWD not only enhances user engagement but also positively influences SEO rankings, as search engines prioritize mobile-friendly websites.

User Experience (UX) Principles: While simplicity in design is often championed, clarity remains paramount. Effective UX design emphasizes clear communication, intuitive navigation, and user empowerment, ensuring that users can interact with applications seamlessly.

Security Best Practices: Incorporating robust security measures is vital. Utilizing parameterized queries in PHP and MySQL interactions mitigates risks associated with SQL injection attacks. Additionally, implementing HTTPS protocols safeguards data transmission, fostering user trust.

Need Statement

In today's fast-paced digital landscape, professionals and students alike are overwhelmed by the need to manage multiple streams of information, tasks, and reminders. Traditional productivity solutions often require users to switch between several applications. "Daily" was conceived to provide an all-in-one productivity platform that integrates task management, note taking, and RSS feed aggregation.

Objectives

The "Daily" application is built with the following objectives:

Functional Objectives:

- o Allow users to sign up, log in, and maintain secure sessions.
- Provide CRUD functionalities for notes and to-do tasks.
- o Integrate an RSS feed aggregator to deliver news or personalized content.
- Offer dynamic navigation among home, about, contact, and feature-specific pages.
- Maintain user contact with a form that validates and saves messages in the database.

Technical Objectives:

- Use PHP with secure practices (e.g., session management, prepared statements) for back-end processing.
- o Implement a responsive design using HTML5, CSS3, and JavaScript to ensure compatibility across devices.
- o Employ MySQL for the robust storage and retrieval of user data.
- o Structure code modularly to facilitate future improvements and scalability.

• User Experience Objectives:

- o Design an intuitive UI with clear navigation and engaging visuals.
- Minimize user friction by pre-loading content (e.g., notes and to-do tasks) upon login.
- o Provide real-time feedback to user interactions (e.g., alerts on successful login, note saving, etc.).

Flow of Pages

The application's overall navigation and workflow are designed to be simple and usercentric. Below is the flow of pages:

Home Page (index.php):

- Serves as the landing page.
- Displays a welcome message, brief description, and an overview of the tech stack and features.
- Accessible to both authenticated and unauthenticated users with different call-toactions (e.g., Login/Signup or access to productivity features).

About Page (about.php):

- Introduces the team behind the application.
- Provides details about the mission and vision of "Daily."

Contact Page (contact.php):

- Enables users to send inquiries or feedback.
- Implements form validation before submission and stores data in the database.

Authentication Pages (login.php & signup.php):

- User login and signup functionalities.
- Securely handle authentication and session management.

Productivity Feature Pages:

- **To-Do Page** (**todo.php**): Manages tasks with functionalities such as adding, updating, or deleting categories and tasks.
- **Notes Page (notes.php):** Allows users to write and store notes with options to edit or delete.

Logout (logout.php):

• Ends the session and safely redirects the user.

Database Schema

The database for "Daily" is designed to support multiple interconnected features. The schema is as follows:

- Users Table (sign_up):
 - o *id* (Primary Key, Auto Increment)
 - o name (VARCHAR)
 - o email (VARCHAR, Unique)
 - o password (VARCHAR, hashed)
- Contact Table:
 - o *id* (Primary Key, Auto Increment)
 - o name (VARCHAR)
 - o *email* (VARCHAR)
 - o message (TEXT)
 - o *timestamp* (DATETIME, optional for logging when the message was received)
- Notes Table:
 - o *id* (Primary Key, Auto Increment)
 - o *user_id* (Foreign Key linked to Users)
 - o *title* (VARCHAR)
 - o text (TEXT)
- Categories Table:
 - o *id* (Primary Key, Auto Increment)
 - o user_id (Foreign Key linked to Users)
 - o name (VARCHAR)
 - created_at (TIMESTAMP)
- Todo Table:
 - o *id* (Primary Key, Auto Increment)
 - user_id (Foreign Key linked to Users)
 - category_id (Foreign Key linked to Categories)
 - o *title* (VARCHAR)
 - o status (ENUM: 'pending', 'in_progress', 'completed')
 - created_at (TIMESTAMP)

Each table is designed to ensure relational integrity through foreign keys and leverages input sanitation (as seen in the PHP code using functions like *mysqli_real_escape_string* and prepared statements) for securing interactions with the database.

Conclusion

"Daily" is a comprehensive, feature-rich web application built to increase productivity by integrating task management, note keeping, and information curation in a single platform. By leveraging proven technologies (HTML5, CSS3, JavaScript, PHP, MySQL) and secure coding practices, the application meets current user needs and serves as an evolving foundation for additional features.

"Daily" stands as a testament to the fusion of modern web development practices and user-centric design. By integrating essential productivity tools into a cohesive platform, it addresses the fragmented nature of current solutions. With a foundation rooted in responsiveness, security, and scalability, "Daily" is poised to evolve, adapting to emerging user needs and technological advancements.

Future Scope

Looking forward, "Daily" has significant potential for further expansion and enhancements.

- Developing companion mobile applications (iOS and Android) to increase accessibility and convenience.
- Incorporating analytics to help users track productivity trends, set goals, and receive personalized recommendations based on usage patterns.
- Expanding functionalities by integrating calendar systems, email services, or external to-do apps for seamless workflow automation.
- Implementing multi-factor authentication (MFA) and robust encryption techniques to further secure user data.
- Utilizing AI for smart reminders, task prioritization, or even natural language processing to summarize notes and content from RSS feeds.

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