Project Development Plan and Notes

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Sprint 1: Project Setup and Basic User Features

Goal:
The first phase of the project focused on setting up the development environment, creating basic user features, and preparing the foundation for the blog and personalized note features.

Tasks and Notes:

1. **Project Initialization:**
   - Started by setting up the project using **PHP**, **Laravel**, and **Livewire**.
   - Ensured that all necessary configurations and dependencies were properly installed and working.
   - Configured the database and set up models, migrations, and routes for the application.
2. **User Registration and Authentication:**
   - Implemented the user registration functionality where users can sign up with their **name**, **email**, and **password**.
   - Used **Laravel's built-in authentication** system to create user registration and login processes.
   - Validated user inputs (email format, password strength) to ensure the data is secure and correct.
3. **Admin Login Setup:**
   - Developed a separate admin login feature with strict authentication rules to manage the application's blog content and personalized notes.
   - The admin has full access to create, modify, and delete blog posts and personalized messages for users.

Sprint 2: Blog Functionality Development

Goal:
The focus in Sprint 2 was on building the blog system where the administrator could post articles, and users could interact with them via comments.

Tasks and Notes:

1. **Admin Blog Post Creation:**
   - Created a simple interface for the admin to create blog posts. The interface allows input for **title**, **content**, and **categories**.
   - Ensured that the blog posts were stored in the database, ready for display to users.
2. **Viewing Blog Posts (Public Access):**

- Developed a page where all users and visitors can **view the blog posts**. The posts are displayed in a list, showing titles, dates, and a preview of the content.
- Visitors can only view the posts; editing or deleting posts is restricted to the admin.

3. **Comment System for Blog Posts:**
    - Implemented a **comment section** under each blog post, allowing registered users to leave comments.
    - Admins have the capability to moderate comments (approve or delete inappropriate content).
    - Used Laravel's **Eloquent relationships** to link comments to specific blog posts and users.

Sprint 3: Personalized Notes Feature

Goal:
Sprint 3 centered around creating the functionality to allow the admin to send personalized notes to users based on a specific date and time.

Tasks and Notes:

1. **Creating Personalized Notes (Admin Only):**
    - Developed an interface where the admin can **create personalized notes**. Each note includes the user's email, a custom message, and a **scheduled sending date**.
    - The system allows the admin to schedule notes for future delivery, ensuring the application is ready to send the notes at the appropriate time.

2. **Sending Personalized Notes:**
    - Set up **email functionality** using Laravel's **Mail system** to send personalized notes.
    - Developed a scheduler that ensures emails are sent automatically to users at the scheduled date.
    - Implemented logic to store and manage scheduled notes in the database.

Sprint 4: Testing and Final Deployment

Goal:
The final sprint focused on testing the application's functionality, ensuring everything worked correctly, and deploying it for public use.

Tasks and Notes:

1. **Unit Testing and Functionality Validation:**

- o Wrote unit tests to ensure key functionalities like **user registration**, **blog creation**, and **personalized note sending** worked correctly.
- o Focused on ensuring the **input validation** for user data, **email delivery**, and **comment moderation** all functioned smoothly.

2. **Bug Fixes and Optimizations:**
- o Fixed any bugs identified during testing. This included minor issues with user authentication and note scheduling.
- o Optimized queries and the database structure for efficient performance as the application scaled.

3. **Final Deployment:**
- o Deployed the application to a production server, ensuring all configurations were correctly set up.
- o Verified that all functionalities (user registration, blog management, comment posting, and note scheduling) worked as expected in the live environment.
- o Made the application publicly accessible while ensuring proper security measures, like HTTPS, were in place.

Final Notes:

- **Project Achievements:**
  This project successfully implemented a **personalized note system** and a **blogging platform** that allows users to interact with content while maintaining secure and organized administration. The use of **Laravel**, **Livewire**, and **unit testing** ensured the application was both functional and stable.

- **Learning Outcomes:**
  This project helped to solidify my understanding of **PHP**, **Laravel**, and **Livewire**, as well as how to structure and plan a web application following **Agile methodology**. It also provided insight into how to implement complex functionalities such as **email scheduling** and **comment moderation**.

Thanks for reading,

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