Development Proposal

Introduction

This document serves as a proposal for the development of the Online Library Management System. The proposed system will allow users to subscribe and access a variety of books in PDF format, which can be viewed securely within the browser. The proposal includes a detailed timeline, task breakdown, and a cost estimate.

Development Scope

The project includes the following key components:

Tech Stack Setup: Configuring the development environment using Next.js, Django, and PostgreSQL.

Database Models: Creation of appropriate database models for Users, Subscriptions, and Books.

User Authentication: Implementing user registration and login systems, including Google Sign-In.

Subscription Management: Developing the system for managing user subscriptions and serving book data.

Approval Process: Implementing the logic for the user approval process.

Payment Integration: Integration with Stripe for secure and efficient payment processing.

PDF Viewer: Handling the secure in-browser PDF viewing to prevent downloads.

Server Setup: Configuring the server on DigitalOcean with Nginx.

Project Timeline and Tasks Breakdown

The estimated timeline for the completion of this project is around 4 weeks, which translates to approximately 220 hours of work. Here's a detailed breakdown of the tasks and time allocation:

Setting up the Environment (40 hours):

- Tech Stack Setup (10 hours): Installation and configuration of necessary software packages, setting up development environment.
- Initial Project Setup (10 hours): Creation of project skeleton, installation of necessary libraries and dependencies.
- Database Model Design (20 hours): Designing and creating the database models and relationships for Users, Subscriptions, and Books.

Implementing Core Features (60 hours):

- User Authentication and Registration (20 hours): Building the registration and login system, including frontend and backend logic, and integration with Google Sign-In.
- Subscription Management (20 hours): Developing the subscription management system, including frontend and backend logic for creating, renewing, and terminating subscriptions.
- Book Catalog and PDF Viewing (20 hours): Implementing the book catalog, frontend and backend logic for serving book data, and the secure in-browser PDF viewer to prevent downloads.

Advanced Features and Integration (60 hours):

- Approval Process Implementation (20 hours): Developing the approval process system, including frontend and backend logic.
- Stripe Payment Integration (20 hours): Implementing Stripe integration for processing payments.
- Frontend and Backend Integration (20 hours): Integration of frontend and backend systems, testing and resolving issues.

Deployment and Final Testing (60 hours):

- Server Configuration and Deployment (20 hours): Configuring the DigitalOcean droplet, setting up the Nginx server, and deploying the application.
  - Server setup and package installation (5 hours)
  - Nginx configuration (5 hours)
  - Application deployment (5 hours)

- - SSL setup (5 hours)
  - Testing and Debugging (20 hours): Comprehensive testing of the system for any bugs or issues, and subsequent debugging.
  - Final Refinements and Documentation (20 hours): Making final adjustments to the system, ensuring a smooth user experience, and drafting detailed documentation for future reference.

Cost Estimation

The estimated cost for this project is based on the projected 220 hours of work at a rate of $15 per hour. This leads to a total of $3,300.

This comprehensive project involves building a scalable system from scratch, capable of serving thousands of users. The proposed cost reflects the time and effort required to ensure a high-quality, robust, and user-friendly system.

I look forward to your feedback on this proposal. Please don't hesitate to reach out if you have any questions or need further clarification.

Best regards,

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