Project: Brange Financial Platform Development

By:

SoluLab

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www.SoluLab.com

info@solulab.com | +61 8 8220 0001

Overview

SoluLab is building a decentralized finance (DeFi) web app—Brange Financial Platform. This project encompasses the development of smart contracts, a modern front end, and seamless AWS integration, delivering an intuitive and secure DeFi experience.

Scope of Work

1. **DeFi Web App Development:**
    - Develop a decentralized finance (DeFi) web application in line with the provided specifications.
    - Create smart contracts for lending protocols, staking protocols, and a unified token contract. Write all contracts in EVM-compatible Solidity with BSC target.

2. **Wallet Connection and Integration:**
    - Establish wallet connection functionality and integrate the platform seamlessly with Web3 DeFi platforms.
    - Ensure compatibility with various wallets for enhanced user accessibility.

3. **Multisig Gnosis Wallet Operations:**
    - Implement operational changes to contracts via multisig Gnosis wallets.
    - Utilize multisig functionality for secure and controlled execution of critical contract operations.

4. **Front-End Development:**
    - Build the entire front end using modern frameworks, including Next.js and React.js.
    - Adhere to ES6 coding standards for consistency and improved maintainability.
    - Address compilation errors and resolve any dependencies hindering successful compilation and execution.

5. **Smart Contract Development:**
    - Develop specific smart contracts for lending protocols, staking protocols, and a unified token contract.
    - Ensure proper documentation for each contract, including detailed explanations of functionalities and usage.

6. **Onchain Data Utilization:**
    - Integrate The Graph where necessary for onchain data, enhancing the platform's capabilities.
    - Provide clear documentation on how The Graph is leveraged within the system.

7. **Backend Development:**
    - Develop backend components using Node.js, Express, or GraphQL as per project requirements.

- Implement APIs to facilitate communication between the front end and smart contracts.

8. **Cloud Platform Utilization:**
    - Utilize AWS as the primary cloud platform for hosting and scaling the DeFi platform.
    - Implement best practices for security, scalability, and availability on the AWS infrastructure.

9. **Gnosis Multisig Consideration:**
    - Consider the use of Gnosis multisig for secure and auditable execution of operational changes to contracts.
    - Ensure thorough documentation on the integration and usage of Gnosis multisig within the platform.

10. **Smart Contract Parameter Documentation:**
    - Document all contract parameters, specifying their purpose and usage.
    - Provide walkthroughs demonstrating how to interact with and utilize these parameters.

11. **Quality Assurance and Code Review:**
    - Conduct a thorough code review, addressing compilation errors and ensuring adherence to coding standards.
    - Implement consistent return types in major functions and address any variable shadowing issues.

12. **Error Handling and Code Maintenance:**
    - Implement robust error handling mechanisms, including try-catch blocks, for asynchronous operations.
    - Address and resolve all TODO comments to enhance code completeness and maintainability.

13. **Subgraph Interaction Code:**
    - Provide clear documentation on how to interact with the subgraph code present in the repository.
    - Specify where and how the subgraph is utilized within the overall system.

14. **Client Interaction and Reporting:**
    - Regularly engage with the client, providing updates on project progress and addressing any queries or concerns.

- Maintain transparent communication and offer regular reports on the status of the Brange Financial Platform development.

15. Open Source Consideration:

- Evaluate the feasibility of incorporating open-source DeFi code into the project, enhancing efficiency and leveraging existing community expertise.

16. Non-functional Requirements:

- Prioritize and address non-functional requirements, including security, scalability, and availability, right from the solution architecture stage.

Sprint Plan

The development of the Brange Financial Platform will be organized into iterative sprints, each focusing on delivering specific features and improvements. The sprint plan outlined below is designed to ensure a systematic and efficient development process.

Sprint 1: Foundation and Smart Contracts

- Set up the project environment and repository.
- Develop the foundational structure of the front end.
- Begin smart contract development for lending and staking protocols.

Sprint 2: Wallet Integration and User Interface

- Implement wallet connection and integration with Web3 DeFi platforms.
- Continue smart contract development.
- Enhance the user interface for portfolio management.

Sprint 3: Backend Development and The Graph Integration

- Develop backend components using Node.js, Express, or GraphQL.
- Integrate The Graph for onchain data where required.
- Conduct initial code reviews and address any identified issues.

Sprint 4: Front-End Refinement and Testing

- Refine the front-end components based on feedback.
- Conduct comprehensive testing of the developed features.
- Document front-end codebase and deployment procedures.

Sprint 5: Gnosis Multisig and Security Measures

- Integrate Gnosis multisig for operational changes to contracts.
- Implement additional security measures and conduct a preliminary security review.
- Address any outstanding code review comments.

Sprint 6: Documentation and Walkthroughs

- Finalize comprehensive documentation for the entire project.
- Create walkthroughs for using the front end and interacting with smart contracts.
- Conduct user acceptance testing (UAT).

Ongoing Activities:

- **Code Review and Refinement:** Continuous code reviews and refinement of the codebase to address any emerging issues.
- **Client Interaction:** Regular client meetings to provide updates, gather feedback, and align on priorities.
- **Quality Assurance:** Continuous testing and quality assurance activities to ensure a robust and secure platform.
- **Agile Adaptation:** Adapt the sprint plan based on feedback, emerging requirements, and project progress.

Team Structure

The successful execution of the Brange Financial Platform development relies on a well-structured and collaborative team. Each team member plays a crucial role in contributing to the project's success.

1. **Project Manager:**
   - Oversee the overall project management and coordination.
   - Ensure alignment with client expectations and project goals.
   - Facilitate communication between team members and the client.
   - Monitor project timelines and deliverables.
2. **Technical Lead:**
   - Provide technical guidance and leadership throughout the development process.
   - Oversee architectural decisions and ensure alignment with best practices.
   - Collaborate with the development team to address technical challenges.
   - Conduct regular code reviews to maintain code quality.
3. **Front-End Developers:**
   - Develop intuitive and responsive user interfaces using modern frameworks (Next.js and React.js).
   - Adhere to coding standards and address any frontend-related issues.
   - Collaborate with UX/UI designers to ensure a seamless and visually appealing user experience.
4. **Smart Contract Developers:**
   - Develop and deploy smart contracts using Solidity with BSC target.
   - Ensure adherence to best practices for smart contract development and security.
   - Collaborate with the technical lead to integrate contracts seamlessly with the front-end.
5. **Backend Developers:**
   - Develop backend components using Node.js, Express, or GraphQL.
   - Implement APIs for smooth communication between the front-end and smart contracts.
   - Ensure backend scalability, security, and adherence to project requirements.
6. **Blockchain Integration Specialist:**
   - Focus on integrating blockchain-related functionalities, including wallet connection and Web3 DeFi platform integration.

- Collaborate with smart contract developers to ensure smooth blockchain interactions.
- Address any issues related to blockchain connectivity and data retrieval.

7. **Quality Assurance/Testers:**
    - Conduct rigorous testing of the entire platform, including front-end functionalities, backend processes, and smart contract interactions.
    - Identify and report any bugs, issues, or inconsistencies.
    - Collaborate with developers to ensure timely bug resolution.

Estimation

Our comprehensive estimation for the development of the Brange Financial Platform is as follows:

- **Total Cost:** $150,000 USD
- **Timeline:**
  - Development: 12 weeks
  - User Acceptance Testing (UAT): 2 weeks

Payment Terms: To facilitate a structured and transparent payment process, we propose the following payment terms:

- **Initiation:**
  - 20% of the total cost to initiate the project and allocate necessary resources.
- **Progressive Payments:**
  - The remaining 80% will be distributed in biweekly payments based on completed tasks and achieved milestones during the development process.