Technical Document – Annexure I
of
Coal Trading Mobile Application

Contents

Annexure I

1. Project Overview

✓ **Business Need**

Business need is that client have a coal mine and he wants to turn it's half into a tradable commodity, which will be available for end users to buy and sell it while the rates are fluctuating.

✓ **Solution Suggested**

We will provide an app where users will be able to buy and sell coal at the real time rate. An admin panel to maintain all the stocks and rate of the coal.

✓ **Stakeholders**

Actor	Task
End User	Will be able to buy and sell the coal from the app.
Admin	Will manage the whole platform from admin panel

✓ **Project Scope and Development Deliverables**

This project scope comprises of the following components to deliver:

- Design and Development of Mobile Application for User (iOS & Android)
- Development and Integration of API
- Development of Admin Web Panel

2. Technologies

Development Phases		Tools & Technology
Requirement Gathering and Analysis	Proposal Drafting, SRS Writing and User Flow Diagram	Microsoft Office Word 2019 / Microsoft Office Presentation 2019 / Microsoft Office Vision 2019
	Wire Framing	Axure / UiZard
Development	Application	Flutter / React Native
	Web Backend	Node.js / PHP (Laravel)
	Database	MongoDB / MySql
Version/s Supported	Android	9.0 and above
	iOS	13.0 and above
	Browser	Google Chrome, Safari, Mozilla Firefox
Quality Assurance & Testing	Test Cases	MS Office Excel 2019
	Testing	Manual

3. Features and Scope of Work

3.1. User Flow

- **Splash Screen**

    ▪ The company logo will be visible on the splash screen.

- **Sign Up / Register Page**

    o Users will be able to register on the Application by providing below details:-
        ▪ Full Name

        ▪ Email id

        ▪ Password and Confirm Password.

        ▪ Terms and Conditions checkbox

        ▪ Users will receive an OTP over his/her email id for verification.

        ▪ Option to Sign In - If already registered.

- **Login Page**

    o Users will be able to Login into the Application using below details:-

- Email id

- Password

- Forgot Password Hyperlink

- Register - If account does not exists.

● **Forgot Password**

- This option would be used by users in case they forgets their password.

- They need to enter the e-mail Id on which the password reset link would be sent to reset the password.

● **Home Screen For User**

- Landing page of the app home screen displaying below sections or details:-

- Hamburger Menu -Logo of the Application, My coal, Notifications, History, My Account, About Us, Contact Us.

● **My Coal**

- User can see the purchased coal quantity.

- User can see the rate of the purchased coal.

● **View Listed Coal:**

- User logs in and sees the list of available coal for investment.

- Accesses details like material, stock available, and quality.

● **Select Quantity and Purchase:**

- User selects the desired quantity of coal to purchase.

- Submits the purchase request.

- Payment gateway PayPal/Stripe

● **Backend Price Assignment:**

- Admin, from the backend, assigns the price and value to the purchased coal based on quality and minerals.

- **Tokenization Process:**

  ▪ Coal purchased by the user is tokenized and represented as tradable assets.

  ▪ User receives a confirmation of successful tokenization.

- **Graph of Current Prices:**

  ▪ User views a graph displaying the current market prices of the purchased coal.

  ▪ Prices are determined by the backend value assigned by the admin.

- **Redeem/Return Coal:**

  ▪ User decides to redeem/return the coal.

  ▪ The backend calculates the value based on quality and minerals.

- **Profit Calculation:**

  ▪ User receives money in return for the coal, gaining profit as the value is calculated based on quality.

- **Smart Contract Execution:**

  ▪ Smart contract handles the tokenization, pricing, and redemption processes securely.

- **Notification**

  ▪ User can see all the notifications here.

- **History**

  ▪ User can see all the transactions history.

- **About Us**

  ▪ This section would describe about the Application with text and images.

- **Contact Us**

    ▪ This section would have the Contact Us form to submit the query or feedback.

- **My Account**

    ▪ Profile to update the below details:-
    ▪ Name
    ▪ Mobile Number
    ▪ E-mail ID (If changed then the same needs to be verified through OTP)
    ▪ Update Password (Current Password, New Password and Confirm New Password)
    ▪ Sign Out
    ▪ Delete Account

3.2. Administrator Web Panel

The back end of the platform will be power packed with an administrative panel to manage the updates of data at the application level, website level and as well as back end. Following would be the key functionalities:

- **User Management:**

    ▪ Admin manages user registrations and profiles.
    ▪ Ensures the security and integrity of user data.

- **Coal Listing and Details:**

    ▪ Admin adds new coal listings with detailed information (material, stock, quality).
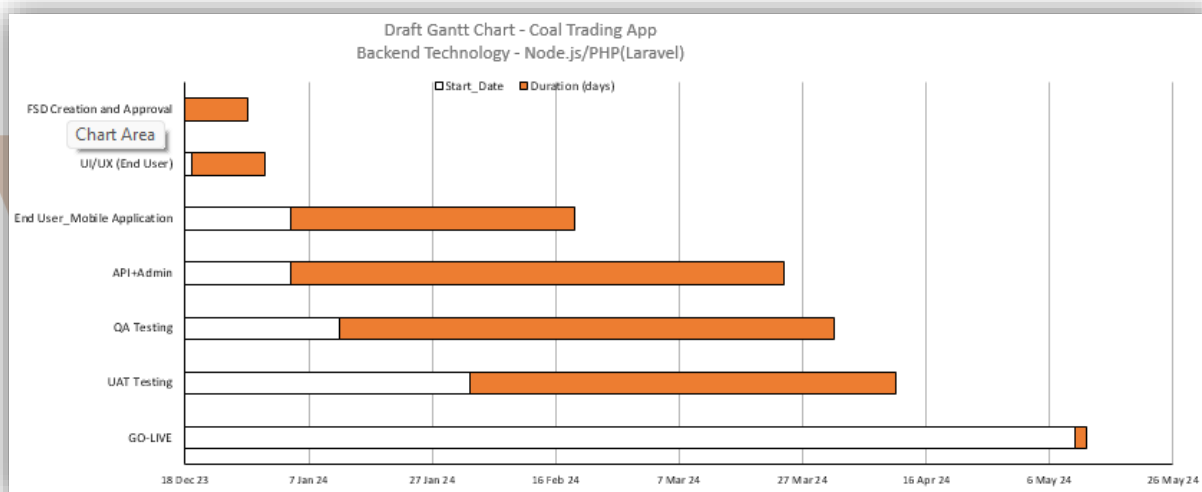   ▪ Updates existing coal details.

- **Price Assignment:**

    ▪ Admin sets the backend price and value for coal based on quality and minerals.

▪ Ensures fair and transparent pricing.

- **Tokenization Management:**

    ▪ Admin oversees the tokenization process of purchased coal.

    ▪ Manages the tokenized assets securely.

- **Graph Generation:**

    ▪ Admin inputs backend values for coal, which dynamically generate the graph of current market prices for users.

- **Redemption Process:**

    ▪ Manages the process of users redeeming/returning coal.

    ▪ Coordinates with the backend calculation of coal value.

- **Smart Contract Monitoring:**

    ▪ Admin monitors and ensures the proper execution of smart contracts.

    ▪ Resolves any issues related to tokenization, pricing, or redemption.

- **Notification Management**

    ▪ Admin will be able to view and manage notifications from the backend.

- **Contact Us Management**

    ▪ Admin will be able to view and manage contact us queries from the backend.

- **Inventory Management**

    ▪ Admin will be able to view & manage the inventory from the backend.

- **Content Management**

    ▪ Admin will be able to update and add text for About Us

    ▪ Admin will be able to update and add text for Terms and Condition.

4. Draft Delivery Timeline and Gantt Chart

Backend Technology - Node.js / PHP (Laravel)	
Development Start Date	Development End Date
18-Dec-23	13-May-24
Total Project Effort (in person days)	138

Draft Gantt Chart - Coal Trading App
Backend Technology - Node.js/PHP(Laravel)

*Project Duration would be met with a condition that the client responses are received on time.

5. Project Management

Before Project is awarded			
Business Analysis	**Project Management / Software Development**	**Business Development / Sales**	**Accounting**
1. Project Identify / Analysis 2. Develop one-page proposal overview 3. Create project management overview 4. David assigned to business manager GBM *GBM: Global Business Manager*	5. Project Evaluation by technical teams 6. Introduction call 1 on 1 interaction with David 7. System appropriate services determined 8. Requirements / System application architecting 9. Project needs analysis 10. Detailed proposal development 11. Cost and Time effort estimation	12. Introduction call 13. Deliverables discussed with David Milestones discussed 14. Project success discussed 15. Future growth alignment 16. Detailed proposal provided 17. Payment instructions	18. Invoice submitted to David 19. Payment received 20. Payment confirmation sent to David 21. Account forwarded to PM

After Project is awarded			
Phase 1	**Phase 2**	**Phase 3**	**Phase 4**
1. Project manager assigned 2. Project initiation/ introduction call 3. Online project profile created 4. Weekly project meetings scheduled 5. Reporting formats explained to <CLIENT NAME>	6. Design, Development / technical teams assigned 7. Project start 8. David feedback on weekly 9. Weekly project feedback session- 30 min 10. Reports available on-line 11. Online Rebel catering access of PM system application	12. Testing / Quality Assurance 13. Live server testing 14. Final bugs issues fixed 15. Campaign completed	16. Periodic project maintenance 17. Data backups 18. Web site – System application upgrades 19. On line marketing ** Optional

6. Proposed Team of Project

The proposed team to achieve the deliverables in a time span of 28 Business Weeks comprising of 40 hrs./week is as follows

Designation	Availability
Project Manager	Part Time
Project Expert	Part Time
Designers	Full Time
Developers	Full Time
Quality Analyst	Full Time