

API Documentation

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API Overview

Our decentralized application (DApp) includes a comprehensive set of APIs that facilitate interactions between farmers, consumers, and the blockchain infrastructure. These APIs handle user authentication, product management, transaction processing, and data retrieval, ensuring seamless communication and efficient operations.

Authentication API

The Authentication API manages user login, securing access to the platform and distinguishing between farmers and consumers through role-based access control.

Key Functionalities:

- Identify and assign user roles (farmer or consumer).

Product Management API

The Product Management API allows farmers to manage their product listings on the platform. This includes adding new products, updating existing product details, and retrieving product information.

Key Functionalities:

- Enable farmers to create and manage product listings.
- Provide real-time updates to product details.
- Facilitate product discovery and browsing for consumers.

Transaction Management API

The Transaction Management API handles the processing and recording of transactions on the platform. It ensures secure and transparent transactions between farmers and consumers, leveraging blockchain technology for immutability and traceability.

Key Functionalities:

- Facilitate secure and efficient payment processing.
- Ensure transparent and immutable recording of transactions on the blockchain.
- Provide detailed transaction histories for users to track their purchases and sales.

QR Code Integration API

The QR Code Integration API generates and manages QR codes for products, enabling consumers to access detailed product information by scanning the codes. This feature enhances transparency and traceability.

Key Functionalities:

- Enhance product traceability and transparency.
- Provide consumers with access to detailed product information.
- Foster trust and confidence in product quality and origin.

Step-by-step description to run project:

- npm install
- npm install web3
- npm install -g ganache-cli
- npm install -g truffle
- ganache-cli
- truffle compile
- truffle migrate --reset --network development
- cd blueberry-tracker
- cd client
- npm start