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Hack n' Innovate

Theme :

Blockchain

Team Name – Hack O Holics

Team members –

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Problem Statement

- In our country, there have been a large number of suicides by farmers (16k per year) due to financial stress and not being able to earn enough.
- The reason being poor supply chain management, storage facilities and tie-ups and the rural part is not connected to the urban one efficiently.
- Also when the government gives the payment to the farmers, it goes through a lot of layers and due to poor bureaucracy and corruption, the total amount does not reach the farmer.
- A lack of proper window for selling has been a serious problem for the farmers.
- Lack of a decentralized supply chain system where there is no requirement of a middlemen.

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Proposed Solution and Use Case

- The idea is to decentralize the existing system, minimizing the middlemen and automate the supply chain using blockchain technology to connect the right farmer with the right customer, due to the scale being very large.
- Blockchain would bring transparency to this whole chain and will contribute to low latency and faster payments due to smart contract doing the job.
- By implementing this simple approach, farmers can get their products delivered efficiently, customers can get access to high-quality products, and the entire supply chain process can be transparent and secure, with low latency and faster payments.
- The solution should streamline the supply chain process, reduce the need for intermediaries, and empower farmers to adopt more sustainable practices while providing customers with high-quality products delivered in a transparent and secure manner.

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Details about your approach / Flow of development / Tech-stack

- Identify the key stakeholders involved in the supply chain, such as farmers, customers, transporters, and payment processors.
- Develop a blockchain-based platform that connects these stakeholders in a decentralized network, using smart contracts to automate the supply chain process.
- Onboard farmers onto the platform, and verify their identity and product quality. This can be done using a blockchain-based digital identity system.
- Allow customers to place orders for specific products, and enable farmers to accept or reject the orders based on their capacity.
- Once an order is accepted, the platform will automatically generate a smart contract that outlines the terms of the transaction, including payment, delivery, and quality assurance.
- Transporters can then be assigned to pick up the products from the farmer and deliver them to the customer, with the entire process being tracked and recorded on the blockchain.

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Details about your approach / Flow of development / Tech-stack

- Once the delivery is complete, the smart contract will automatically trigger the payment to the farmer, based on the agreed-upon terms.
- The platform can also provide a feedback mechanism for customers to rate the quality of the products and the overall service provided by the farmer.

Techstack we will use-

- Reactjs , Material UI, Solidity, Ethersjs, Wagmi, Hardhat, Remix IDE.

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USP and Scalability of Solution

- Innovative Scalability: Our platform is designed to be highly modular and interoperable, allowing for easy customization and seamless integration with other blockchain networks. This means that as our user base grows, our system can easily adapt and scale to meet their needs.

- Empowering Sustainability: With our blockchain-based platform, we're empowering farmers to adopt more sustainable practices and reduce their environmental impact. By providing direct access to customers and reducing the need for intermediaries, we're enabling farmers to build more resilient and sustainable supply chains for the future.

- Interoperability: The platform can be designed to be interoperable with other blockchain networks, allowing for seamless integration with existing supply chain systems and expanding the potential user base.