DOCUMENTATION : FOOD SUPPLY CHAIN TRACEABILITY SYSTEM.

**Overview of the system.**

The team ( Asante, Felix,Harriet) have developed a web application called Food Supply Chain Traceability system. This system seeks to address the UN SDG goal – zero Hunger. Currently in Africa, there’s a challenge of food reaching the consumer from the manufacturer or wholesaler within stipulated timelines owing to delays at different process points like packaging, warehouse, transport thus some people suffer hunger. These delays may cause food to rot or expire while on transit. Besides, there may be no provision for consumer to verify state of food if it is actually from the manufacturer it was ordered.

**Purpose of the system**.

This ethereum based blockchain system thus comes in handy to address the lack of trust due to delays among stakeholders at different business processes of the food supply chain as well as speed up the food delivery processes by eliminating intermediaries.

With a feature called the LPO Tracker, the system will alleviate the problem of lack of trust in the supply chain. LPO(Local Purchase Order) is sent by buyer to seller indicating what the consumer wants to buy. In this case, when the seller or manufacturer receives this order, they generate cryptographic keys. A copy of the public key will be shared with the consumer or buyer for him/her to verify the product upon receiving it. Another key will be reserved by manufacturer/seller to trace the flow or movement of this product once it has been dispatched until it is delivered to the buyer.

Secondly, tagged on the product/food e. g packed maize bag will be a QR code (NFT generation) with information such as the expiry date and its nutritional value.

**GETTING STARTED:**

To develop, test and run this project, you are required to clone the project in your local machine, install all the dependencies like editor, python, moralis network tool, web3 and then execute the related COMMANDS .

**BUILT USING**:

1.CSS, HTML.

2.Solidity

3.Python.

4.Moralis Web3 tool.

5. Ethereum network.

**SYSTEM CONTENT.**

-Front end application.

-Smart contract.

- cryptographic keys.

-Non Fungible Token(NFT)

**PRODUCT FEATURES:**

**-** Login form.

-Local Purchase Order tracker.

**CHARACTERISTICS OF END USER**:

-Food manufacturing industry.

-Wholesalers.

**BRANCHES IN USE:**

Master branch:

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