**Decentralized Manufacturing Unit**

**Member 1:**

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Description:

The ERC20 token we propose will be used to address the shortcomings of traditional transaction systems. We have a manager who will be deploying the smart contract and also approving retailers and manufacturing plant agents into the network in order to carry out the transactions through the smart contract. Once the smart contract is deployed, retailers and manufacturing plant agents can use the register function to register themselves into the network. After registration, the manager provides the approval to the retailers and the manufacturing agents and also gives them tokens to spend on the network. The retailers can use the smart contract to return product if they find it faulty and also find availability at a particular manufacturing plant by specifying address of the manufacturing plant agent. For every transaction, manufacturing plants through their agents can reward retailers 10 tokens for every 1000 tokens of purchase.

**Parameters:**

Name: Decentralized Manufacturing Unit

Symbol: DMU

Decimals: 2

Total Supply: 90,000 DMU

**Architecture Diagrams:**

Diagram

Description automatically generated

**Use case diagram:**

Diagram

Description automatically generatedDiagram

Description automatically generated

Diagram

Description automatically generated

**Contract diagram:**

Table

Description automatically generated

**Sequence diagram:**

Self-register

Process Transaction and Reward

Self-register

Deploy Contract

Retailer

Manufacturing Agent

DMU Smart Contract

DMU Manager

constructor (total)

register ()

register ()

approvalTo ()

approvalTo ()

availabilityAt(add)

transfer(add, tokens)

reward(add)

returnProduct(add, tokens)

balanceOf(add) Time

balanceOf(add) Progress

balanceOf(add)