SRINIVAS GROUP
SAMAGRA GNANA

Srinivas Institute of Technology
Valachil, Merlapadavu, Mangaluru - 574143
Accredited by NAAC

Department of Computer Science and Engineering

Blockchain Based Secured Supply Chain Management

Domain: Blockchain

Internship Presentation by

Ritik Ranjan 4SN20CS060

Under the Guidance of

Prof. Shreya S

Company Profile:

IT Department of NITK established in the year 2000, the Department of Information Technology is the youngest among the 14 departments at NITK Surathkal. Since then, it has grown to be a center for excellence, innovation, and research with dedicated faculty & staff, highly motivated students, state-of-the-art facilities, and an innovative teaching-learning environment.

Guide:-

Dr. Kiran M

Assistant Professor

Department of Information Technology

National Institute of Technology Karnataka, Surathkal

Introduction

It is a blockchain-based supply chain management system revolutionizes traditional practices by providing a decentralized, transparent, and immutable ledger, for tracking goods and services throughout the supply chain. Every transaction and event, from production to distribution, is securely recorded in order, ensuring transparency, traceability, and reliability. With enhanced security and efficiency, stakeholders benefit from improved trust, and streamlined operations, making blockchain a tool for modern supply chain management.

Aim

- The aim of this project is to improve how supply chains work by using blockchain technology.
- It aims to make supply chains more transparent, so everyone involved knows where things are at all times.
- It also wants to make supply chains more efficient, so things move faster. Overall, the goal is to make supply chains better for businesses and customers.

Main Features of our app

Registering Entities

Owner should register raw material supplier, manufacturer, distributors, and retailers.

Control Supply Chain

Supply chain must be managed by particular registered entities.

Product tracking

Consumers can track their product using QR code

Technology Used

React

- Builds the user interface for interacting with the supply chain system.

Solidity

- Writes smart contracts for block chain interactions.

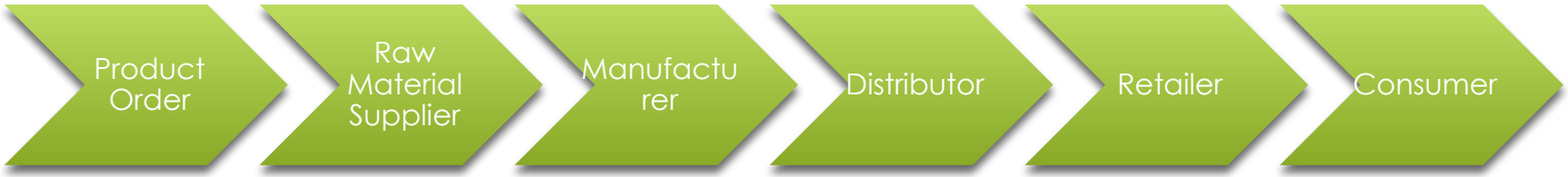
Ganache

- Simulates a local blockchain for testing smart contracts.

Metamask

- Allows users to interact securely with the blockchain via their browser wallets.

Flow Chart


Product Order
Raw Material Supplier
Manufactu rer
Distributor
Retailer
Consumer

Target audience

- **Enterprises**: Businesses involved in manufacturing, logistics, retail, and other industries with complex supply chains can benefit from blockchain solutions to improve transparency, traceability, and efficiency.
- **Logistics and Transportation Providers**: Companies offering logistics, warehousing, and transportation services can integrate blockchain technology to optimize route planning, track shipments in real-time, and streamline documentation processes.
- **Consumers**: End consumers who want assurance about the authenticity, quality, and ethical sourcing of products can benefit from blockchain-enabled supply chain transparency, allowing them to make more informed purchasing decisions.

Conclusion And Future Work

- ✔ Blockchain-powered supply chain management makes things clearer, safer, and more efficient for everyone involved.
- ✔ It helps businesses track products better, saves time and money, and gives customers peace of mind about what they're buying.
- ✔ Future scope is to implement QKD

THANK YOU