Blockchain and its Application supply chain

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Abstract

Blockchain is a recenty introduced concept . Initially popularized by Bitcoin ,Blockchain in more the the foundation of cypocurrency . It offers a secure way to exchange
Any kind of good, services or transaction .It falicitates smart contract ,engagements and agrements with inherent , robustness .

Introduction

Wikipedia defines Blockchain as “A decentralized and distributed digital ledger that is used to record transactions across many computers so that the record cannot be altered retroactively without the alteration of all subsequent blocks and the collusion of the network.”

- In 2008, Satoshi Nakamoto introduced the world to Bitcoin by releasing the paper, “Bitcoin: A Peer-to-Peer Electronic Cash System.” The proposal was to distribute electronic transactions rather than maintain dependency on centralized institutions for the exchange .
- It was the first implementation of blockchain ,after that it has come a long way it can be use to provide trust in a trustless environment .
- Once such implementation is in pharma suppy chain where each each step in blockchain can be recorded in blockchain and distributed between different nodes .

Literature survey

Sr NO	Name of author	Paper/ reference	Year	Methodology	Applications	Advantages	Disadvantages
1	S.Nakamoto	Bitcoin: A Peer-to-Peer Electronic Cash System,	Oct,2008.	Blockchain	Tranfer of cryptocurrency	Tranfer of money is done in and effective way	Lots of computational power is needed
2	IBM Lab	THE SMARTER SUPPLY CHAIN OF THE FUTURE	2017	Blockchain	Trace drug in every stage of supply chain	Prevent From counterfeit medicines	Every supplier in the chain needs to have the system
3	Wikpiidia	https://en.wikipedia.org/wiki/Blockchain#cite_note-te20151031-1	2012	Blockchain	Decentralized database	It is decentrailized	Neeed to have sufficient number of nodes
4	Aziz Muysinaliyev, Sherzod Aktamov	Supply chain management concepts: literature review	Jan. 2014	SCM	Centeraized database	Easy to manage	Does not communicate with different nodes in a chain

Gap

1) When it comes to getting medication from the manufacturer to the physicians and patients, Africa is facing a severe problem with counterfeit drugs.

2) For costs associated with the use of counterfeit medicines, individuals, families, and health systems are staggering.

3) Every year more than 122,000 African children under the age of five lose their lives as a result of counterfeit antimalarials alone.

4) What if we could track, trace, and authenticate the drugs at each stage of their journey from the pharma company all the way to the patient?

5) We're using blockchain technology to introduce traceability and trackability into the supply chain.

Proposed system

Aim:- Use blockchain in supply management

Objective:- track, trace, and authenticate the drugs at each stage of their journey using blockchain

System requirements:-Nodes(computer) , Dapp(Distributed App) , camera , Internet connectivity .

Flow of proposed System

1) Within the pharma supply chain, we're setting up a trusted network that allows the different parties to store information,
2) knowing that only authorized members can see it, and the information can't be altered once it's been entered.
3) Specifically for pharmaceutical orders, we can verify that the authentic drugs are handed over to an authorized party at each transfer point,
4) Ensure compliance with the proper conditions for transportation and asset transfer,
5) And we can also make sure that a joint verified ledger of all transactions is available at all times.
6) This means provenance of each and every drug in the supply chain.
7) Any party in the network can see the status of where the drugs are and who has them.