

Public Health & Security

Blockchain based solution for
Electronic Health Record (EHR) &
Drug Supply

Team ID : PHS 24

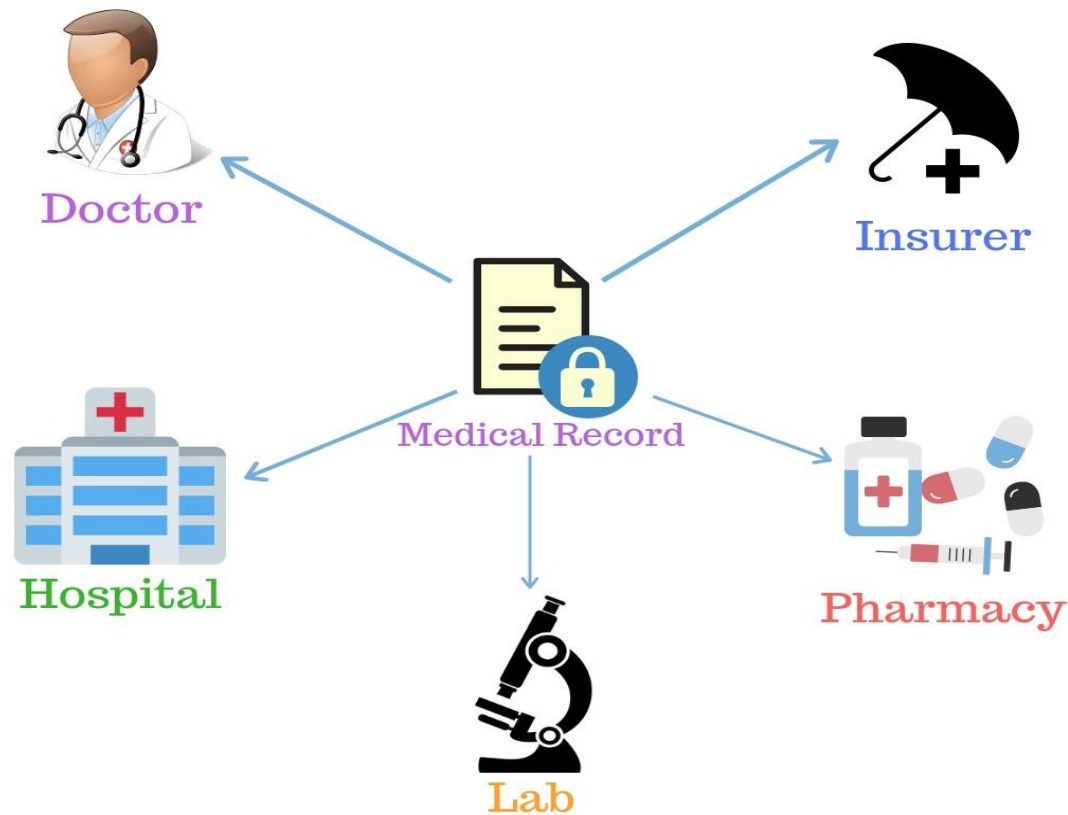
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Solution



Patient Centric System using a Blockchain

Problem Statement Breakdown –

1. The patient isn't able to confide to the hospital administration about the various treatments that he/she has been through due to various factors such as criminal record acquisition, family problems, unawareness, inability or just plain fright.
2. Records may be damaged, lost or falsified.
3. Counterfeiting of prescriptions and lab reports is possible.
4. Drug companies that manufacture, ship and deliver products have a difficult time keeping track of their products, thereby allowing counterfeiters to introduce fake drugs into the system.

1. A system must be created to ensure confidentiality of patient's record.
2. Backup of the records stored in a distributed manner.
3. Authenticity of prescription must be maintained.
4. Real-time tracking of drugs supply.

1. **Patient centred system** using a **blockchain** of hospitals linked with each other. Whenever a patient undergoes a treatment in a hospital the details about the treatment and the prescription will be encrypted, stored in a new block and the ledger will be verified and updated accordingly.
2. Only a legitimate administrator will be able to **access this data** with the prior consent of the concerned patient by **scanning the QR code** associated with the patient, in order to maintain **confidentiality**. Integrity will be maintained, since no other party can tamper with the previously entered data in the chain.
3. Nobody will be able to modify or alter the data.
4. Pharmacist and Insurance Company can verify prescription and lab reports through blockchain.
5. Analysis and prediction using machine learning algorithm.

SMART CITY IDEATHON

1. Health Care providers collect information from the patients



3. A hash is created from each source of data and is redirected to the blockchain



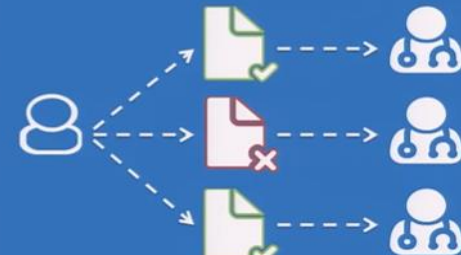
5. Healthcare stakeholders can query the blockchain to obtain access to the information



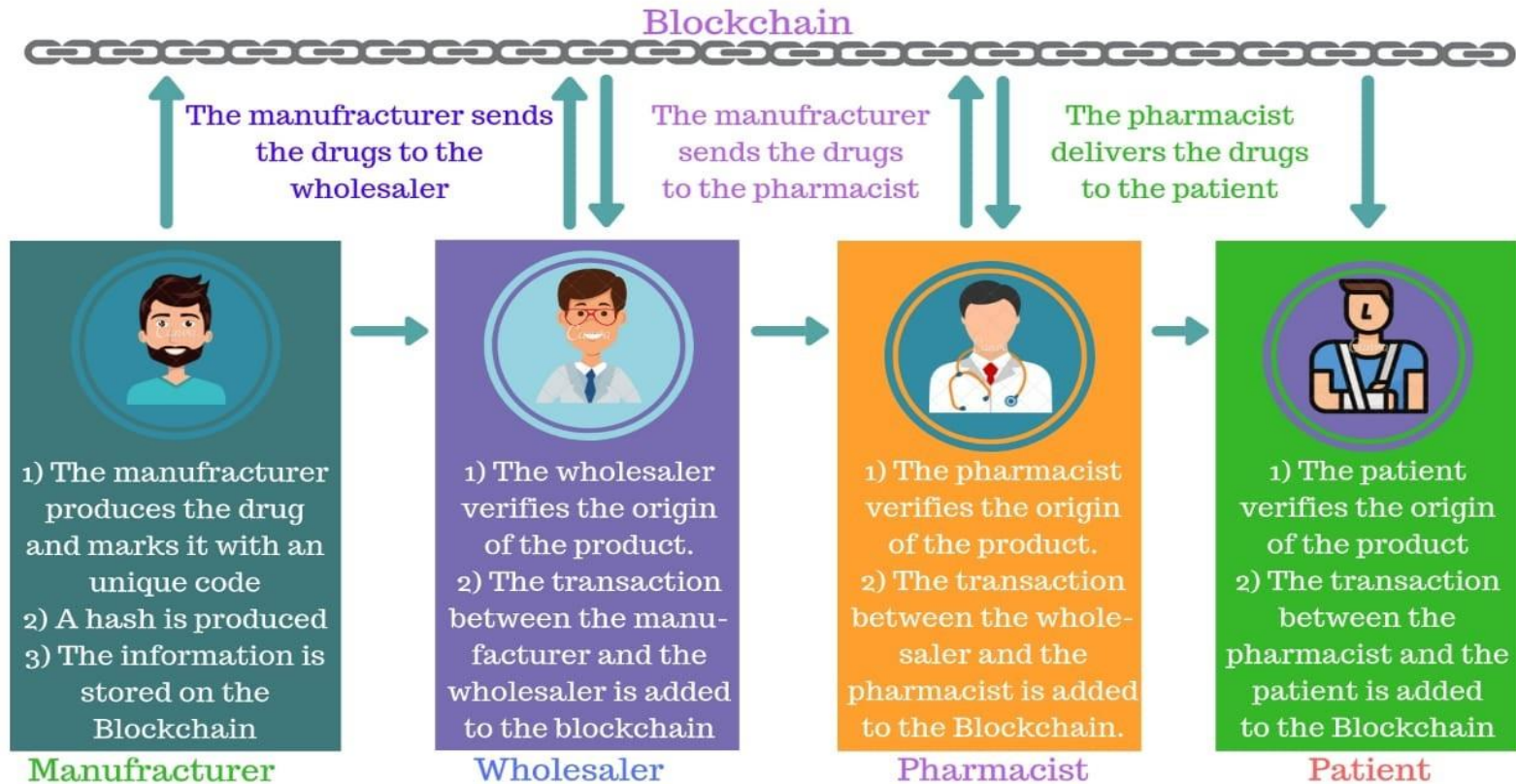
2. The data is stored in existing databases



4. The patient decides who has access to his medical records



Flow Chart for Supply Chain



Technology Stack

Python

Android,
Web

Solidity

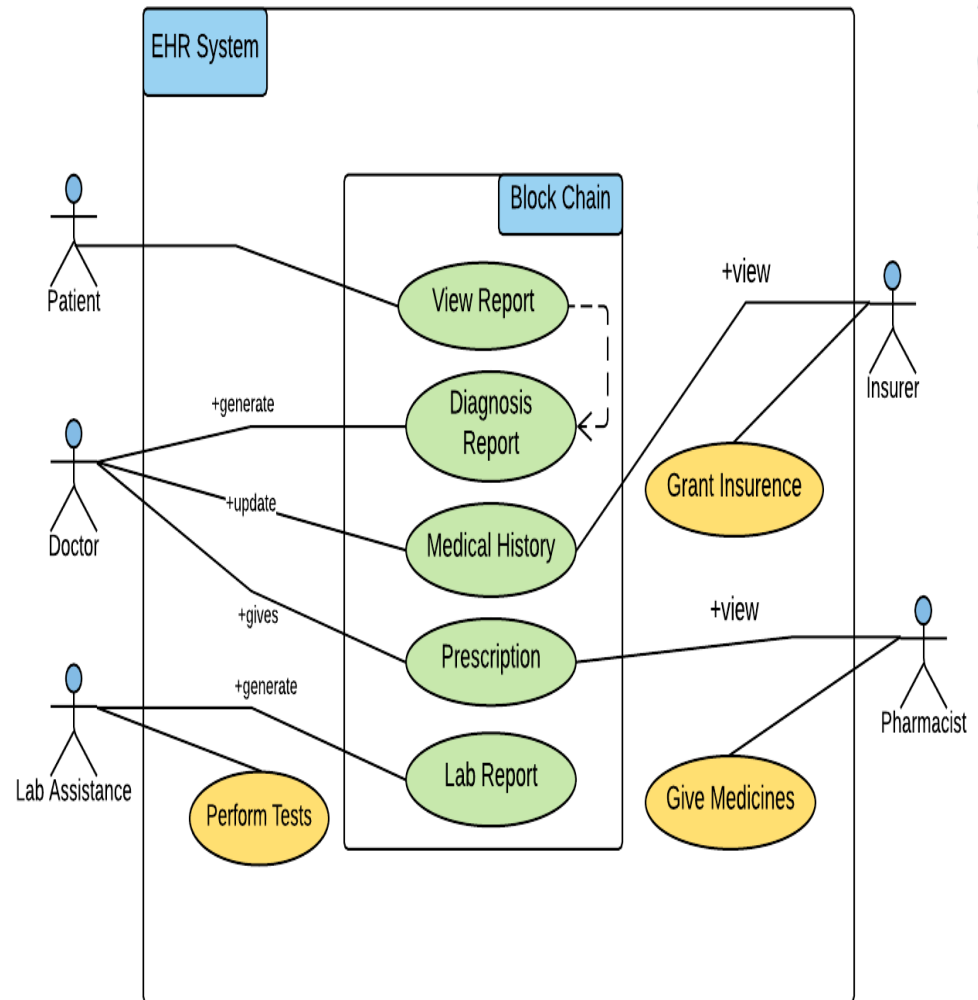
Ganache

GraphQL

Truffle

Ethereum

Use Case



Thank you