MEDIXBLOCK

A Distributed Solution for Surveillancing Medical Data

- Shermeen Kazi -

PRESENTER INFO

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- graduated from Information Technology at York University
- interest in blockchain technology began with benefits in health care system

CURRENT PROBLEM

EXISTING ISSUES SHARING MEDICAL DATA:

- Health care system is slow to inform public of possible outbreak
- For covid-19, the outbreak could have been known earlier if hospitals were able to record covid-19 cases, and other hospitals globally could be warned

BUSINESS PLAYERS

MEDIX BLOCK PARTICIPANTS

DOCTORS

PHARMACIES

RESEARCHERS

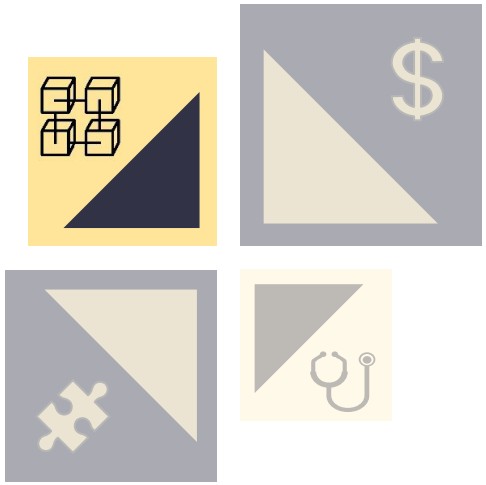
HOSPITALS

AIRPORTS

HYPERLEDGER SOLUTION

NETWORK FORMED BY TRUSTED PEERS GLOBALLY

- ➔ Hyperledger Fabric
- ➔ Encoded in a chaincode
- ➔ Ensures data security and privacy

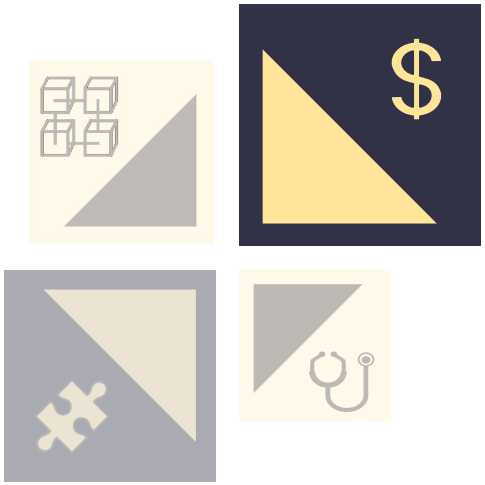


HYPERLEDGER SOLUTION

HEALTH CARE PROVIDERS

- ➔ Hospitals record cases based on illness
- ➔ MedixBlock will handle stats to inform all participants about a potential outbreak
- ➔ Organizations that are part of MedixBlock can pay to access the records of areas where there's a potential outbreak

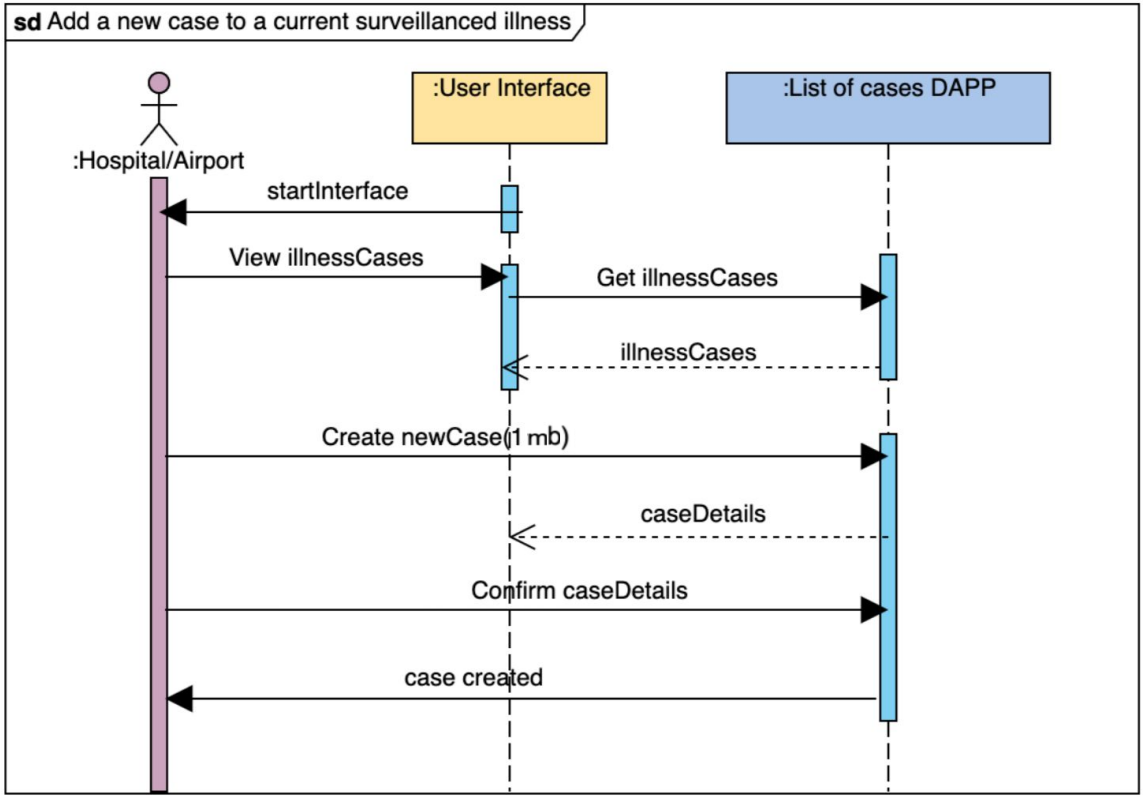
HYPERLEDGER SOLUTION



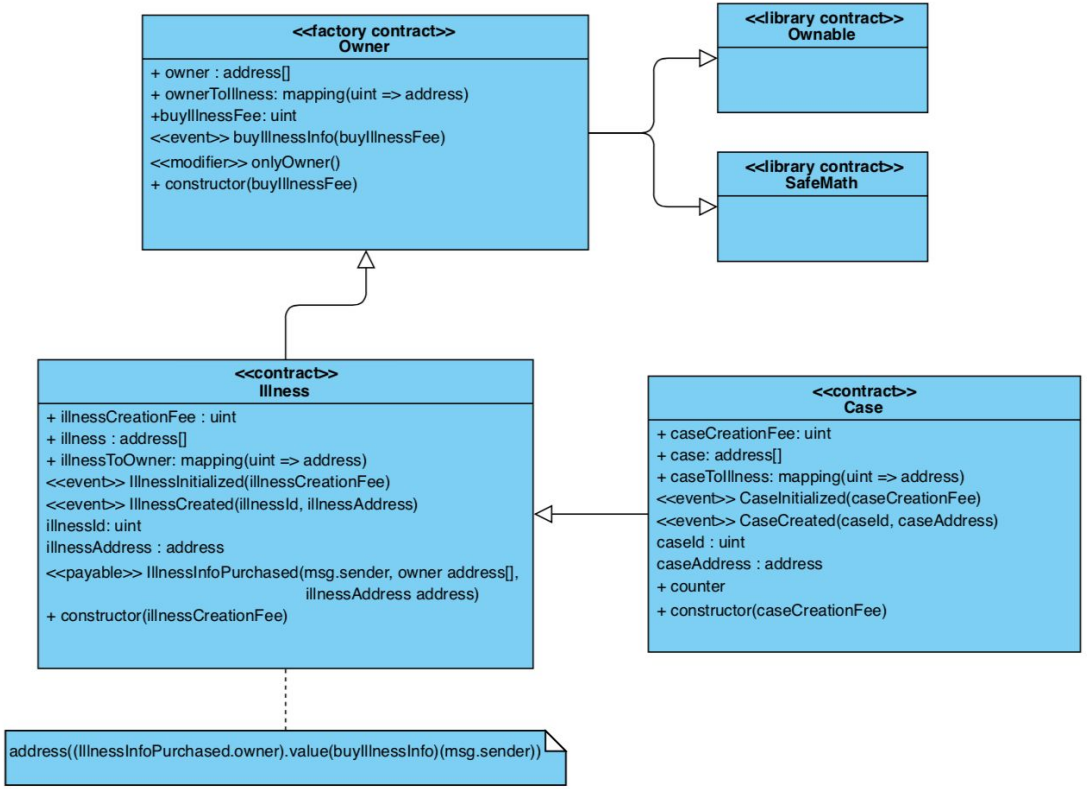
TOKEN MODEL

- ➔ New users receive fixed amount of MB tokens
- ➔ New illness created, 1 MB token is spent
- ➔ Each case reported, 1 MB token is spent
- ➔ Earn MB by other users paying for information

SEQUENCE DIAGRAM

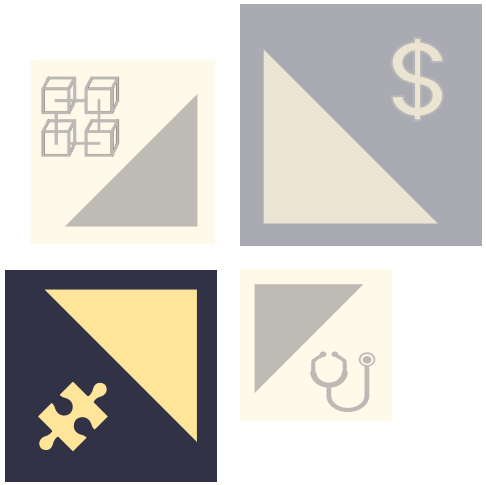


UML CLASS DIAGRAM



HYPERLEDGER SOLUTION

Prototype



WHY MEDIXBLOCK?

Inform Sooner

- Hospitals record cases based on illness
- MedixBlock will inform all participants about a potential outbreak from an area

Preventative Measures

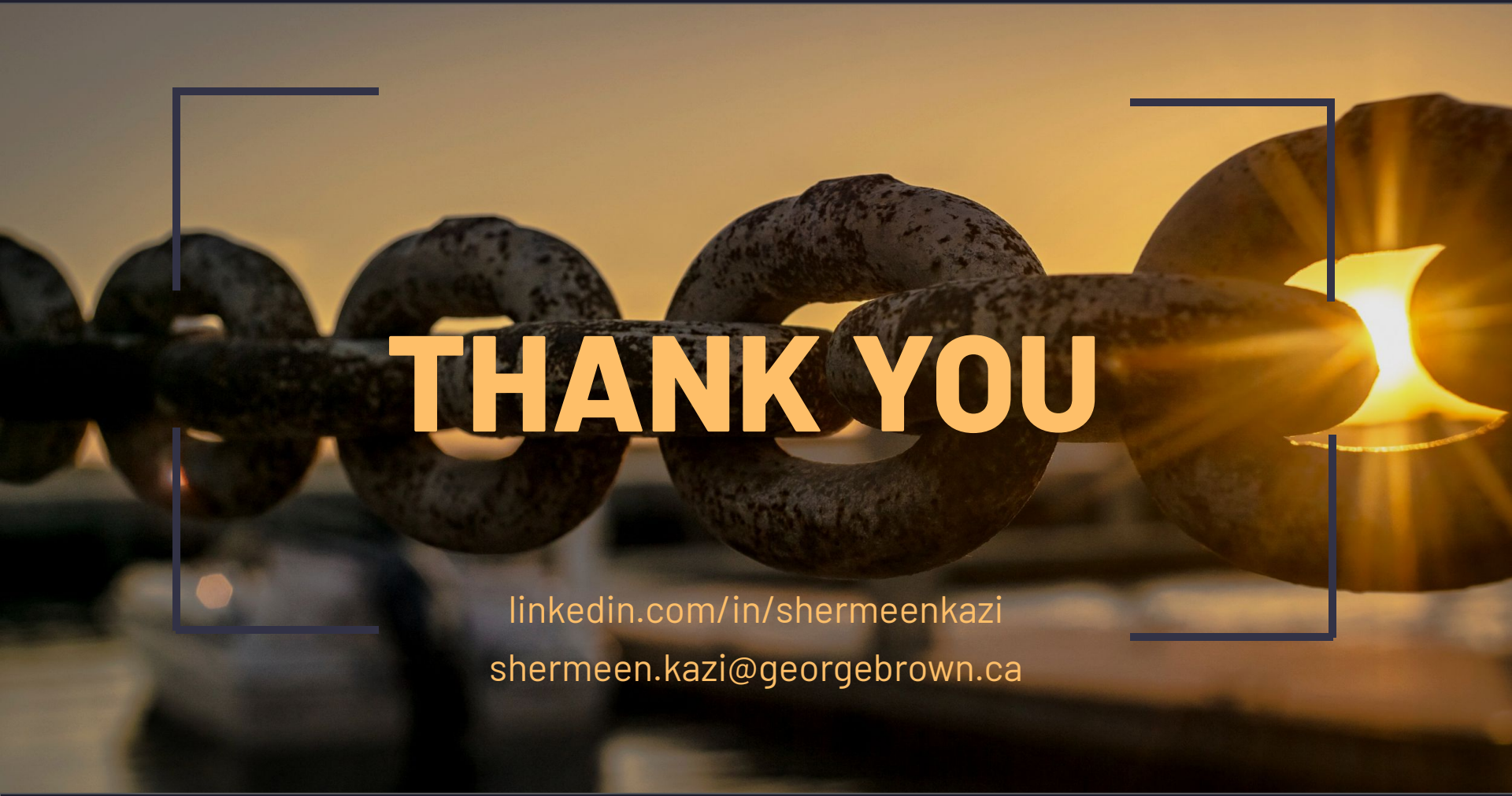
- Cases are recorded into the system right in the hospital
- Data cannot change
- Reduces concern over governments altering data

Risk Indicator

- Based on data collected about population of the area and number of cases, MedixBlock can determine level of risk that illness poses

CALL TO ACTION

- Current situation calls for a better method of keeping the public informed, and sooner
- This is an opportunity for us to shape the world and better it with new and upcoming technology



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