

# A Blockchain Framework for Insurance Processes in Hospitals

B. Lakshma Reddy, A. Karthik, S. Prayla Shyry

*Abstract--- The Blockchain enabled system is to analyse, the best process of the treatment for a particular disease and also the system determines if any fraudulent activity has been controlled by the doctor. The system also recommends the most appropriate treatment process to perform for a particular disease in view of the movement of the previous patient. Here the system is creating Block chain enabled framework for diseases and in this the system will create disease as a unique key point and suggesting a better treatment to the hospitals. The basic objective of the project is to suggest a best treatment to the hospitals.*

*Keywords--- Blockchain, Hospital, Insurance, Treatment.*

## I. INTRODUCTION

A distributed platform with blockchain as an framework service for uploading dealing execution in insurance processes. The insurance trade is heavily relying on multiple methods between transacting parties for initiating, maintaining and shutting numerous quite policies. Transaction time interval, payment settlement time and security protection of the method execution square measure major issues. Blockchain technology, originally advanced as an immutable delivered ledger for finding double spending of crypto currencies, is now increasingly used in different Financial Technology systems to address productivity and security requirements. Thus, the paper targets on the design of a powerful access for processing insurance associated transactions based on a blockchain-enabled platform. An experimental example is refined on Hyperledger fabric, an source approved blockchain design framework. Here we mainly discuss about the sketch requirements, matching design scheme, and encrypt various insurance methods as smart contracts. Extensive experiments were administered to analyse accomplishment of the framework foundation and security of the projected design. Blockchain would supply the capabilities to switch these different systems with one system that provides ability .With the utilization of good contracts and absolutely auditable history, Blockchain would modify peer-to-peer ability among participants at intervals transactions.

## II. RELATED WORK

Marko Vukolić et al. (2017) Proposed that the present blockchain floor, specifically the new authorized systems, have some architectural limitations smart agreements run ultimately, all the nodes assassinates all smart agreements,

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unanimity protocols are hard-coded, the trust model is static and not exile, and non-determinism in smart-agreements execution holds a heavy problem. Conquer these limitations is important for up each practical property of the blockchains, for example, conditionality and consistency, just as their non-functional properties, for example, achievement and adaptability. We discuss about these drawbacks within the setting of licensed blockchains, together with associate degree early interpretation of an Hyperledger material blockchain stage, and the method a remodel of an Hyperledger Fabric's design addresses them.

Christopher D. Clack et al. (2016) Proposed that the smart agreement arrangements support fair smart contracts, using operational parameters to connect legal agreements to standard code. Thus, the paper we tend to investigate the look landscape of potential formats for storage and transmission of good legal agreements. We establish essential needs and describe variety of key style choices, from which we imagine future development of patterned formats for defining and manipulating intelligent legal agreements. This provides a prior step towards supporting business adoption of sensible legal agreements.

Konstantinos Christidis et al. (2016) Proposed that inspiration by the new outbreak of interest around blockchains, we inspect whether they make a good linear unit for the web of Things (IoT) sector. Blockchains enable North American country to possess a distributed peer-to-peer network wherever non-trusting members will act with one another while not a trusty go-between, in a variable manner. We review however this mechanism works and conjointly investigate sensible contracts scripts that occupy on the blockchain that provide the automation of multi-step processes. Wherever applicable, we recognize resolutions and workarounds. The conclusion is the blockchain-IoT mix is effective and may cause important transformations across many industries, concrete the means for brand spanking new business imitations and new, distributed applications.

Wenting Li et al. (2017) Proposed that an present blockchain come out as an innovative tool that has the probable of positively impact the method, we draft a few online applications today. In some ways the blockchain innovation is however, still not sophisticated to serve for industrial standards. These systems generally need that each transaction (and their order of execution) square measure publicly on the market to any or all nodes within the system, that comes at odds with familiar knowledge sharing practices within the trade and block a centralized regulator from supervise the total blockchain system.



Thus, the paper has a liability to propose a completely unique blockchain design devised particularly to fulfil industrial standards. Our proposal holds the idea of satellite chains which will in private run totally different agreement protocols in parallel thereby importantly boosting the measurability premises of the framework. Our answer additionally accounts for a hands regulator that oversees the complete network, enforces special policies by means of smart contracts, etc. We enforced our answer and integrated it with Hyperledger cloth.

### III. EXISTING SYSTEM

In the Existing System, there is no automatic process to identify the Insurance method and its security. In this insurance trade is heavily smitten by multiple methods between transacting parties for initiating, maintaining and shutting many reasonably policies. It's a time taking operation, not efficient and many security issues. Blockchain is not been achieved in the existing scenario.

### IV. PROPOSED SYSTEM

In this delivered platform with blockchain as an framework service for supporting dealing execution in insurance processes. The insurance trade is heavily smitten by multiple methods between transacting parties for initiating, maintaining and shutting numerous reasonably policies. Transaction time interval, payment settlement time and security protection of the method execution are major issues. In this the system examine the excellent process of the treatment for a specific disease and also our system identifies if any illegal activity has been processed by the doctor. The system also commends the excellent treatment process to perform for a distinct disease in view of the follow of the previous patient's treatment.

### V. ARCHITECTURE DIAGRAM

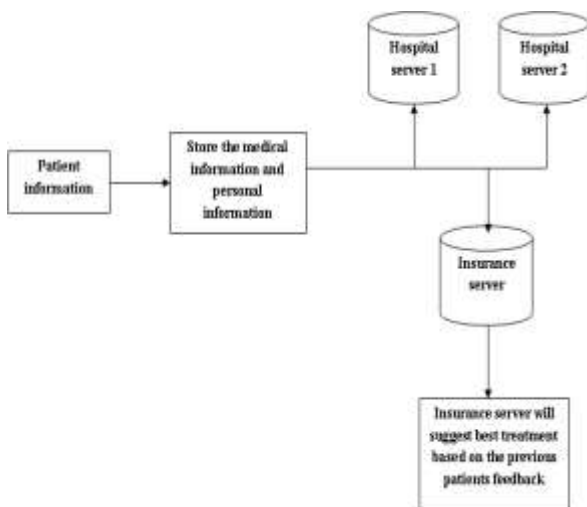


Fig. 1: System architecture

The system architecture represents the flow of the blockchain process between the hospitals and insurance companies and maintains the storage of data and the level of a security it provides. It processes by referring the patient's unique id. It creates blockchain enabled framework for diseases and it creates diseases as a key point and suggests a better treatment to the hospitals.

### VI. STEPS IN THE PROCESS

1. Patient registration
2. Hospital server
3. Insurance server
4. Block formation
5. Best treatment recommendation

#### Patient Registration

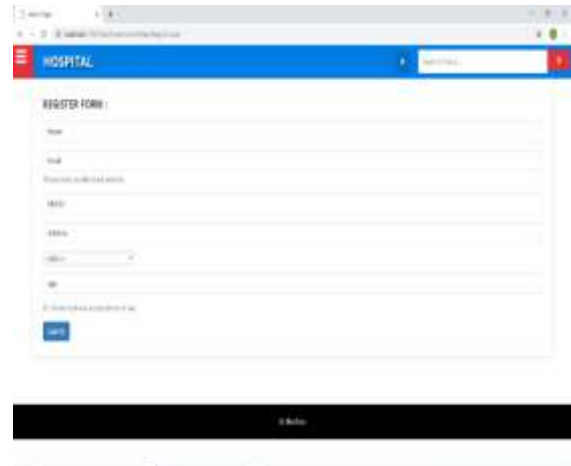


Fig. 2: Patient registration

Here the system stores the credentials of a patient like name, mobile number, email id, and what are all the medical issues all the statistics will be registered in the local hospital server. All the facts regarding patient details like personal facts and medical facts. Blockchain framework is implemented for every transaction between the hospital and insurance industries.

#### Hospital Server

ID	Name	Sex	Age	City
276	Am	Female	25	Hyderabad
280	Am	Female	25	Hyderabad
282	Am	Female	25	Hyderabad
480	Am	Female	25	Hyderabad
576	Am	Female	25	Hyderabad
680	Am	Female	25	Hyderabad
776	Am	Female	25	Hyderabad
880	Am	Female	25	Hyderabad
976	Am	Female	25	Hyderabad

Fig. 3.1: Doctor data

ID	Name	Sex	Age	City
100001	Am	Female	25	Hyderabad
100002	Am	Female	25	Hyderabad
100003	Am	Female	25	Hyderabad
100004	Am	Female	25	Hyderabad
100005	Am	Female	25	Hyderabad
100006	Am	Female	25	Hyderabad
100007	Am	Female	25	Hyderabad
100008	Am	Female	25	Hyderabad
100009	Am	Female	25	Hyderabad
100010	Am	Female	25	Hyderabad

Fig. 3.2: Patient data

All the patients record of the distinct hospital will be stored in their local server. It maintains all the patient facts who are all registered on that hospital.





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