Internet of Things for Healthcare system

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ABSTRACT-Due to the increasing of IoT solutions, healthcare cannot be outside of this paradigm .his revolution is the way we see healthcare, from the smallest sensor to the big data collected. The contribution of this paper is to introduce directions to achieve a global connectivity between the Internet of Things (IoT) and the medical environments.

Keywords: Internet of Things, healthcare, medical environments, sensors.

I. INTRODUCTION

The first principle of IoT (Internet of Things) is to connect smart objects - things - to the Internet in a transparent way. This leads to an exchange of data between all things, and bring users information in a more secure way. Cisco Systems estimates that IoT will consist of 50 billion devices connected to the Internet by 2020 and it is predictable that many physical objects, like computers, sensor actuators, will be distributed with unique addresses and the ability to transfer data, from the common daily activities to restricted medical records, in a secure way. The term "Internet of Things" was disseminated by the research work of the Auto-ID Center at the Massachusetts Institute of Technology (MIT) in 1999 [17].

II. OBJECTIVES

• To understand that Healthcare is the safe in future.
• To analyse that Healthcare is trustable or not in security.
We can use this objectives by checking through the survey analysis. We find the following
Hypothesis :-
Hypothesis : "After this Healthcare system technology greatly reduces the risk of malicious intervention."

III. LITERATUREE REVIEW

Security requirements for IoT-based healthcare solutions are similar to those in standard communications scenarios Gonçalo et all. [1] The Internet of Things changed the healthcare industry, increasing efficiency, lowering costs and putting the focus back on better patient care Vitor Nogueira et all.[2] It will give Better security during transaction of any value. This technology is mainly proposed to handling bitcoin transaction. Smart contract, Ethereum and distributed ledger are some applications of blockchain, This will also give more security by Remya Stephen et all. [3] This research has identified available recent research on how blockchain solutions can contribute to cyber security problems. The initial keyword searches for this research and current media reports [43] highlight blockchain as a standalone technology that brings with it an exorbitant array of possible solutions for finance, logistics, healthcare and cyber security by Paul J. Taylor et all. **[4]** In this paper, we adopt the Pow consensus mechanism. A consensus of all mining vehicles in the blockchain network can be established to generate a new block that can be used as a ground truth for the next block. The evaluation and analysis show that our proposed local blockchain scheme can be used efficiently in the VANET without storage overhead by Rakesh Shrestha et all. [5] we proposed a novel automotive security architecture based on blockchain (BC). Due to its distributed nature, the proposed architecture eliminates the need for a centralized control and allows novel automotive services. The privacy of the users is ensured by using changeable Public Keys (PK). The security of our architecture is largely inherited from the strong security properties of the underlying BC technology Marco Steger et all. [6] In this paper, we argued that although Blockchain (BC) is an effective technology for providing security and privacy in IoT, its application in the IoT context presents several significant challenges including: complexity, bandwidth and latency overheads and scalability by Salil et all. [7] This paper presents a comprehensive survey of the existing blockchain protocols for the Internet of Things (IoT) networks. We start by describing the blockchains and

summarizing the existing surveys that deal with blockchain technologies by Mohamed Amine et all.[8] In the aera of big data, large volumes of heterogeneous data are generated from different sources allowing big data management to play a pivotal role in the success and viability of any businesses by Sara Hosseinzadeh et all. [9] In this paper, we presented a comprehensive survey on the utilization of the blockchain technology in providing distributed security services. These services include entity authentication, confidentiality, privacy, provenance, and integrity assurances. The entity authentication and the confidentiality can be achieved by the public key cryptography using encryption and the signature schemes by Tara Salman et all.[10] In this paper, a blockchain-based privacy-preserving data sharing system for EMRs is proposed, named BPDS. In BPDS, EMRs are stored in the cloud and the indexes are recorded in a tamper-proof consortium blockchain, which solves the potential security risks of data centralized storage. The joint-design of the CP-ABE-based access control mechanism and the content extraction signature scheme provides strong privacy preservation in data sharing by Jingwei Liu et all.

IV. METHODOLOGY

We took an online survey with help of Google Form. The link of the form was circulated in social media platform. The questionnaires in the form were designed to test the proposed hypothesis and result.

A. Participants
To test the proposed hypothesis, this study used two conditions i.e.
a) Healthcare will secure or trustable for people.
b) Healthcare will be add extra security for people.

Total of 32 participants data was collected from different city. All the 55 participants in which 65% male and 35% female.
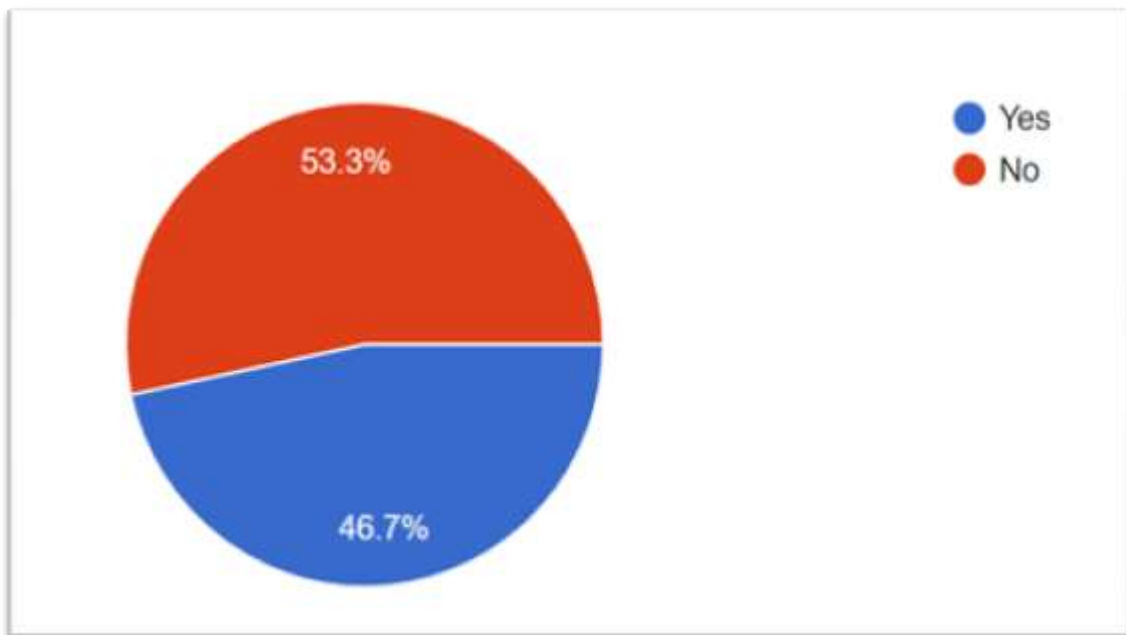
B. Measures
Participants were asked to indicate their agreement on a two scale (1= YES, 0= NO).

• Male reply on the healthcareis the secure or not secure in the future?
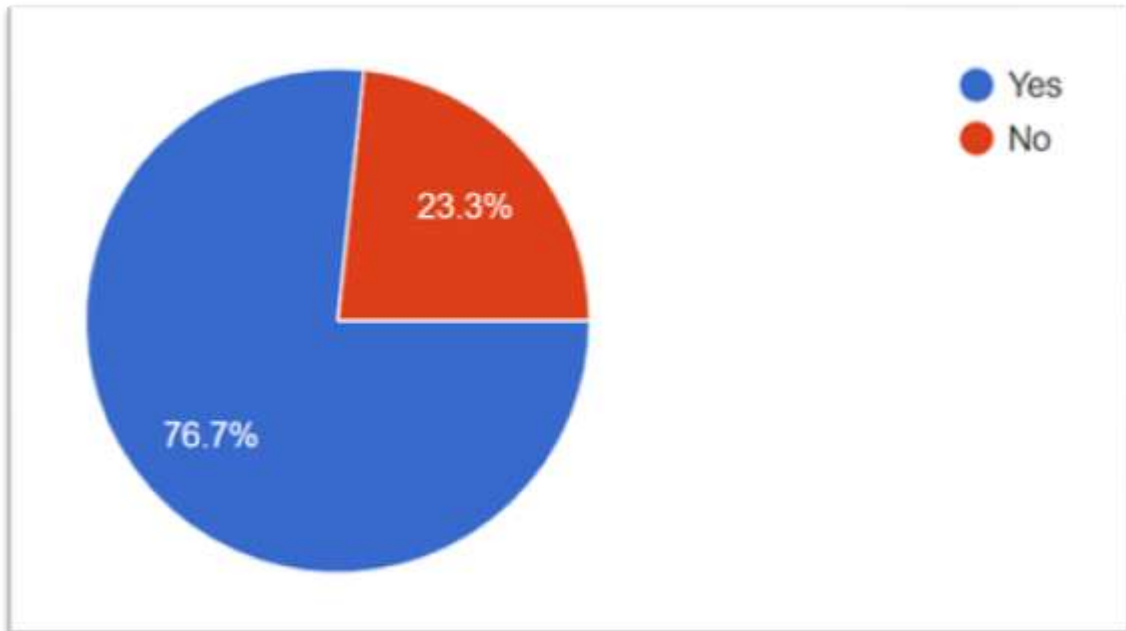
female reply on the healthcare is the secure or not secure in the future?

V. EXPERIMENT

- Calculated by Chi-Square test with two scales (YES/NO).
- After performing the chi-square test got x^2 tabulated=0.09and x^2 calculated= 1.1 at the significant level of 95%.
- Here x^2 tabulated< x^2 calculated therefore we accept the hypothesis i.e. Students are interested to learn with blockchain security that will positively increase their number.

VI. RESULT

We consider also how IoT can be used to increase healthcare and how IoT helps people and governments to improve daily activities in personal and public level. Although there are security issues in giving location information, we can give some permission to people in order to allow mechanisms to prevent people from abusing.

VII. CONCLUSION

The Internet of Things changed the healthcare industry, increasing efficiency, lowering costs and putting the focus back on better patient care. Meanwhile, the IoT is growing from building blocks of automation and machine-to-machine communication to the smallest sensors. Regarding IoT Healthcare Services and Applications, the range of fields can include: management of private health and fitness, care for pediatric, supervision of chronic diseases, elderly patients, among others. For a better understanding of this topic, this paper categorizes the discussion in two aspects: services and applications.

VIII. ACKNOWLEDGEMENT

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