

ROLE OF DIGITIZATION IN INDIAN ECONOMY

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Abstract:

The world as we know it is constantly changing, and digital transformation is one of the primary causes. Digital transformation isn't about Internet "unicorns" at its core; it's about employing cutting-edge technology to accomplish what you currently do – but better. The global economy is also experiencing a digital revolution, and it's moving at rapid pace. What is the digital economy, exactly? It is the economic activity generated by billions of daily online connections between individuals, businesses, gadgets, data, and processes. Hyper connectivity, or the increased interconnectivity of people, companies, and machines as a result of the Internet, mobile technologies, and the internet of things, is the backbone of the digital economy (IoT) The digital economy is forming, challenging long-held beliefs about how businesses are organised, how firms interact, and how consumers receive services, information, and things. Blockchain is a distributed ledger that maintains business transactions in an unbreakable, permanent chain that can be viewed by all parties involved in the transaction. Blockchain technology has the potential to disrupt the financial business applications as it provides permanent and tamper proof recording of transactions in a distributed network

Keywords:- *cashless economy, security, distributed database, visual cryptography, hash algorithm, etc.*

Introduction:

India currently has the world's seventh-largest economy. According to the World Economic Forum, it has a population of roughly 1.34 billion people, or nearly 18 percent of the world's population. Despite a 5.7 percent decline in GDP in the quarter ending in June this year, India remains the world's fastest growing big economy - except from China. According to projections, India will have surpassed China as the world's most populous country by 2024, cementing its status as the world's largest youth population. According to the World Economic Forum, India's economy will be the second-largest in the world by 2050, with China taking first place. Despite how bad the programme was for ordinary Indians, there were some bright spots for proponents of a cashless economy. According to the World Economic Forum, the number of digital transactions in India grew as a result of the demonetization programme, which is good news for the government, which will now be able to track the movement of money more easily. In turn, the rise in digital transactions in India is a boon for Blockchain and cryptocurrency. Bitcoin, the cryptocurrency that popularised Blockchain technology, is being used by roughly 0.5 percent of Indians. Inferring from the fact that so few people in India are aware of Bitcoin, it's safe to assume that just roughly 0.5 percent of India's population is aware of Blockchain technology. However, much work is being done on a national level to integrate Blockchain technology into several sectors of the economy, including the financial and health care sectors. ICIC Bank, an Indian bank, reported in 2016 that it has performed a cross-border transaction using Blockchain technology. The Reserve Bank of India's Institute for Development and Research in Banking Technology, or IDRBT, revealed plans to develop a new Blockchain platform in September of this year. India's central bank is the Reserve Bank of India. India could use Blockchain to digitise its national currency, the rupee, according to a paper issued by the IDRBT in January of this year. Given the benefits — such as greater tax payments — that India's demonetization policy has brought about through increased digital transactions, it's likely that the government will continue to push for a cashless economy. There are some obstacles, but it appears to be on the right track. If the Indian government, like every other government in the world, wants to expand its cashless economy, it must find long-term answers to the issues that come with implementing a cashless economy. Financial inclusion, high setup and transaction fees, and transaction times are only a few of the issues. Because a large portion of the Indian economy is still unorganised, a large portion of the population still does not rely on traditional financial institutions for financial services. Most people would need a bank account to survive in a cashless economy, based on current cashless technologies - an uphill battle

Literature Survey:

The Implementation of E-money in Mobile Phone: A Case Study at PT Bank KEB Hana

Didik Haryadi ; Harisno ; Victory Haris Kusumawardhana ; Harco Leslie Hendric Spits Warnars

Published in: 2018 Indonesian Association for Pattern Recognition International Conference (INAPR)

The purpose of this research is to examine the design of e-money and to provide some development suggestions for e-money implementation. The approach here employs electronic payment via QR code and encryption technology.

A Landscape of Cryptocurrencies

Zhaofang Li ; Qinghua Lu ; Shiping Chen ; Yue Liu ; Xiwei Xu

Published in: 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)

The created landscape, which reports the state of cryptocurrencies and may be utilised as a framework for cryptocurrency analysis, provides a breakthrough understanding of cryptocurrencies.

Security Management and Visualization in a Blockchain-based Collaborative Defense

Christian Killer ; Bruno Rodrigues ; Burkhard Stiller

Published in: 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)

The goal of this project is to provide a security management dashboard for BloSS that can be used interactively by cyber security analysts. DDoS attacks on defence systems are the subject of this research.

On the Effectiveness of Multi-Token Economies

Published in: 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)

This article discusses token classification, the rationale for implementing multi-token economies, and their efficacy. Steemit is examined as a representative example of multi-token economy. We explain how the multi-token economy works and show how it differs from other types of economies. We also suggest criteria for evaluating multi-token economies.

Digitizing Invoice and Managing VAT Payment Using Blockchain Smart Contract

Van-Cam NGUYEN ; Hoai-Luan PHAM ; Thi-Hong TRAN ; Huu-Thuan HUYNH ; Yasuhiko NAKASHIMA

Published in: 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)

This article proposed using BCT to construct the VAT system as an online system. In an online system, a distributed database system is used. BCT can protect the system from being hacked.

Enforcing Fairness in Blockchain Transaction Ordering

Ariel Orda ; Ori Rottenstreich

Published in: 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)

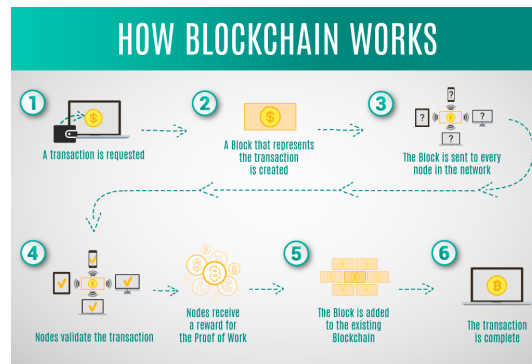
Analysis of the Possibilities for Improvement of BlockChain Technology

Daniela Mechkaroska ; Vesna Dimitrova ; Aleksandra Popovska-Mitrovikj

Published in: 2018 26th Telecommunications Forum (TELFOR)

The purpose of this research is to investigate block chain technology. A study on the design and development of BCT was proposed in the paper. The feasibility of BCT was investigated, and it was determined that BCT is a secure and efficient method.

Proposed System:



Algorithm:

SHA 256:

SHA-256 (secure hash algorithm, FIPS 182-2) is a 256-bit digest cryptographic hash function. It's an MDC, or a keyless hash function (Manipulation Detection Code). A message is broken down into 512 = 16 32 bit blocks, each of which takes 64 rounds to process. A cryptographic hash (also known as a digest) is a type of signature used to identify a text or data file. For a text, SHA-256 provides a nearly-unique 256-bit (32-byte) signature. A hash isn't

encryption because it can't be reversed to reveal the original text (it is a one-way cryptographic function, and is a fixed size for any size of source text). This makes it suitable when it is appropriate to compare hashed versions of texts, as opposed to decrypting the text to obtain the original version.

AES:

AES is used to encrypt the database.

The encryption process uses a set of specially derived keys called round keys.

These are applied, along with other operations, on an array of data that holds exactly one block of data, the data to be encrypted.

This array we call the state array.

STEPS:

- Derive the set of round keys from the cipher key.
- Initialize the state array with the block data (plaintext).
- Add the initial round key to the starting state array.
- Perform nine rounds of state manipulation.
- Perform the tenth and final round of state manipulation
- Copy the final state array out as the encrypted data (ciphertext)

Experimental Results:

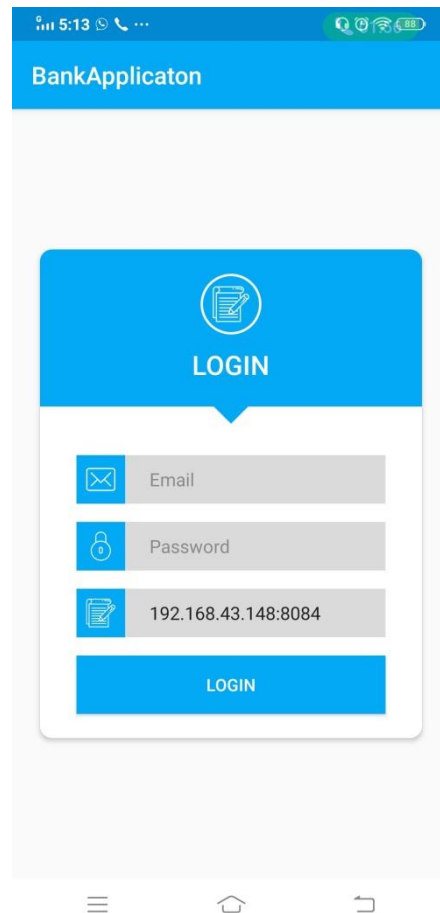


Fig: User Login

Conclusion:

Thus we are have implemented a system for cashless economy using BCT. The proposed system under e governance will be the most secure, transparent, user friendly and corruption free system. We believe that with the help of this proposed system, every activity in transaction can be tracked and corruption of intermediate banks can be totally removed.

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