|| Volume 5 || Issue 12 || April 2021 || ISSN (Online) 2456-0774
INTERNATIONAL JOURNAL OF ADVANCE SCIENTIFIC RESEARCH & ENGINEERING TRENDS
Multidisciplinary Journal
Double-Blind Peer Reviewed Refereed Open Access International Journal

SECURE E-WALLET SYSTEM USING BLOCK CHAIN TECHNOLOGY

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Abstract: **Cashless economy seems synonymous to Canada and Sweden as manifested in study of Forex Bonuses 2017. Cashless economy is an economic system where small amount of cash is used in transactions. Cashless economy is based on transactions made by credit cards, debit cards, wallets or digital modes. India is majorly cash driven economy where people prefer to carry cash instead of cards however India is moving towards "less cash economy" -a phase of cultural-economic transition. It is important to curb shadow economy, corruption, terror -financing, human and drug trafficking, counterfeit-currency etc. Cashless economy is cost effective, growth friendly, business friendly, pro-financial inclusion, etc. Government is promoting it through BHIM app, AEPS, Digishala etc. Cashless economy requires robust digitalization. It has various challenges-escaping attitudes of people, poor transaction security mechanism, insufficient infrastructure etc. it is boon to industries like UBER and OLA. Further analysis will be done on secondary data. Cashless economy can be possible and will be more secure in India using BCT. BCT have capacity to make india cashless, transparent and secure.**

Keywords: Cashless economy, E-wallet, payment, BCT, etc.

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I INTRODUCTION

Today, making a money transfer or making a purchase at a store is as simple as a few clicks using one of the many digital payment options. In fact, you do not even need a bank account to do this, just a cellphone number is enough to get started! Widespread digitization – a result of India's transition to a cashless economy, is giving rise to innovative Fintech companies while parallelly spawning a growing ecosystem of consumers and service providers. Fintech is "unbundling banking services", by creating personalized digital offerings, out of a single business process offered by banks today. The offerings are typically characterized with minimal documentation, easy-to-use digital interfaces and, most importantly, significant reduction in time and costs, which have historically led customers to leverage non-institutionalized financial services. With Fintechs playing disruptor, banks throughout the world have realized its potential and are collaborating with fintech companies instead of resisting them as competition. With trust and immutability at the heart of financial services, Blockchain, has emerged as the quintessential technology backbone of digital currencies, global trade and supply chain dependent companies. As Fintech democratizes financial services, banks will become inclusive; placing the customer's needs at its core and enabling them with greater choice.

Here are some instances where blockchain is reinventing.

Transferring money overseas?

Today, money you transfer does not go directly to a recipient's bank – instead, it goes through several banks, validating trust along the way. This adds a cost to the transaction as well as delays the transfer. Blockchain validates trust and simplifies this process by allowing to exchange money directly and instantaneously. Leading remittance networks include Ripple and IBM's Global Financial Transaction Network.

Unsure of our investment

As customers, we're constantly seeking quality and value in the investments we make and the goods we purchase. To transact without worry, trust and transparency must be established. For instance, if the country's bullion records could be on a blockchain, it's net worth by virtue of its characteristics would be immutable and transparent. You could buy or sell with complete trust and even verify the authenticity of your purchase. Imagine being able to track a precious metal back to the distributor or all the way to the

mine! Leading solutions include the Diamond Blockchain called Everledger.

Get to know your customer better

Signzy, an innovative startup, has built a digital trust platform for banks that uses A.I and blockchain technology to verify identification and remove the tedious process of verifying KYC documents. leverages, Watson's Natural language processing and visual recognition capabilities to analyze unstructured contents of identification documents to validate authenticity. Such a digital trust platform can potentially cut verification time for banks by 80 percent, shortening the process from two weeks to just two days!

Claim our insurance faster

One of the largest insurance companies in India, uses the power of blockchain to enable faster payment of travel insurance claims to its customers. Customers can buy insurance using their portals which are also connected to the airline information system. Delays or cancellations of flights are tracked in real time from airline companies and corresponding claims are automatically paid to customer's bank account on verification of booking.

Start innovating with Blockchain

Owing to the rapid adoption of blockchain, we'll soon be part of trusted and immutable networks that simplify experience with any transaction; be it making one or redressing one. With Fintech being at the forefront of blockchain adoption, there is immense potential for innovative companies to. Blockchain is helping reshape not just finance but industries in domains as varied as healthcare, government and manufacturing. If you're thinking about the next big supply chain, transaction or finance-led idea, it's clear which technology you should start considering.

II LITERATURE REVIEW:

Jain, P.M (2006) in their article "E-payments and e-banking—An Analysis of Growth Pattern of

Cashless Transaction System". Taking fullest advantage of technology, quick payments and remittances will ensure optimal use of available funds for banks, financial institutions. He also pointed out the need for e-payments and modes of e-payments.

P Manivannan (2013) in his research paper "Plastic Money a way for cash Less Payment System" examined that Plastic Money i.e. usage of Credit card was measured a luxury, and has become needed.

Zandi et al. (2013) studied whether the long-term shift to credit and debit cards stimulateseconomic growth of 56 countries worldwide. They discovered that electronic card payments can increase efficiency and boost consumption of the economy.

Mieseigha&Ogbodo (2013) Moreover, the adoption of electronic transaction is essential for transparency, accountability and reduction of cash related fraud, the fundamental elements of economic growth and development.

Liao and Handa (2010).Electronic payments will replace cheque payments extensively but cashbased payment will persist to a substantial extent.

THE SWEDEN CASHLESS ECONOMY EXAMPLE

Garratt identified Sweden as an example of a functioning cashless economy. In Sweden, cash accounts for less than 1.2 percent of the country's GDP. Many businesses in the country do not accept cash transactions. Swedish banks tend not to deal with cash transactions anymore. In the United States, there exists a number of issues derailing the actualization of a cashless economy. Trust in the government and online privacy concerns are among some of these major issues.

III PROPOSED SYSTEM:

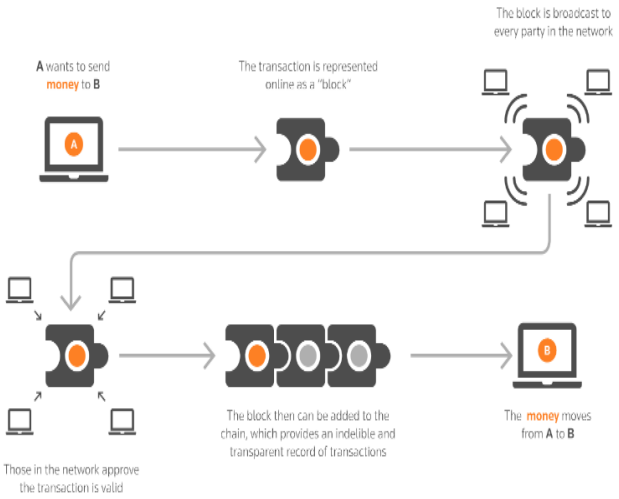

Fig: Digital Transaction using BCT

Algorithms:

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).

MD5:Hash Function

Step 1. Append Padding Bits. The message is "padded" (extended) so that its length (in bits) is congruent to 448, modulo 512. ...

Step 2. Append Length. ...

Step 3. Initialize MD Buffer. ...

Step 4. Process Message in 16-Word Blocks. ...

Step 5. Output.

In cryptography, MD5 (Message-Digest algorithm 5) is a widely used cryptographic hash function with a 128-bit hash value.

As an Internet standard (RFC 1321), MD5 has been employed in a wide variety of security applications, and is also commonly used to check the integrity of files.

An MD5 hash is typically expressed as a 32 digit hexadecimal number.

IV CONCLUSION:

Businesses that embrace online transactions using Blockchain technology are going to benefit on a global scale. This is mainly due to the fact that Blockchain is itself a decentralised money management system that allows anyone in an encrypted database to send and receive money. Blockchain will benefit both multinational companies, who have to deal with different rates and different currencies and small business, who have settlement difficulties but can scale up faster in the digital space. Thus We are going to implement a cashless economy model using android and block chain technology.

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