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Blockchain Based Cryptocurrency Payment Gateway

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ABSTRACT: With the exponential development of blockchain technology, many areas are continuously exploring the research. Blockchain benefits many areas such as medical, finance, manufacturing, and education. Blockchain technology is known as a decentralized distributed ledger. The data on the blockchain cannot be changed, which makes it trustable, creditable, transparency and secure. Blockchain was invented back in 90's but it got boomed in 2008, developer named Satoshi Nakamoto where he invented Cryptocurrency. Blockchain has prominently become the backbone of bitcoin and is an incorruptible digital ledger of transaction. This paper focuses on the cryptocurrency payment gateway using blockchain.

KEYWORDS: Payment Gateway, Cryptocurrency and Blockchain.

I. INTRODUCTION

Cryptocurrency is a digital currency that is meant to be a medium of exchange, cryptocurrency is an incorruptible currency where we can make an exchange without any middle operating bank, and the transfers fund can be easily verified by a hashing algorithm. Cryptocurrency takes much less money for the transaction. Cryptocurrency can be accessed at any time there is no limit for withdrawal or purchase. Using Cryptocurrency, the international transaction can be done faster compared to other methods. Crypto in cryptocurrency is that cryptography is a method of encrypting and decrypting to secure communication from a third party such as hackers.

There are many currencies such as Bitcoin, Solana, Tether, Cardano, and Binance Coin. I have specifically used Solana for my project. Solana can be used publicly, it is an open-source blockchain cryptocurrency that supports non-fungible token (NFTs) and decentralized application which is used for investment, transaction, etc. Solana is a secure and reliable application for cryptocurrency. 1 Solana is equal to 3732.53 Indian Rupees.

Digital currency is a virtual currency that benefits for many reasons such as security, low-cost transactions, faster settlement funds, can be access at any time and many more. India has also introduced its own Digital Rupee| Union Government introduced Central Bank Digital Currency, which will boost the Indian economy. Still Reserved Bank of India has not yet given recognition to the cryptocurrency so it is not legal in India right now, but the government is going to make it legal starting this year. The applications of blockchain have to prolong not into digital currency but also gradually increased in marketing, health care, education system, and supply chain management. Blockchain is not only limited to cryptocurrency, there are many other applications in industry and public sectors like voting services, authentication, and tracking of goods supply.

II. PROBLEM STATEMENT

To identify the Cryptocurrency and its benefit for future economy. How blockchain can solve the transaction problems.

III. OBJECTIVES

This Paper emphasis two objects: 1. To get understanding what cryptocurrency is and how it benefits the economy. 2. To understand the concept of solana.



IV.LITERATURE SURVEY

Paper No.1

Title of paper:Big-Crypto: Big Data, Blockchain and Cryptocurrency

Description:This paper has comprehensively introduced cryptocurrency and the key blockchain technology behind it, as well as provided a systematic review of the researches indicating the close interactions between Big Data and cryptocurrency. It is of note that this paper directly focuses on the convergence of these two concepts in academic friendly format and also presents the most up to date review post 2016 regarding this interactive subject.

Paper No.2

Title of paper:A Study On Cryptocurrency In India

Description:Due to the rapid development of information and communication technologies, many activities in our daily life have been merged online and they become more flexible and more effective. A huge growth in the number of online users has activated virtual word concepts and created a new business phenomenon which is cryptocurrency to facilitate the financial activities such as buying, selling and trading. The use of virtual currency has become widespread in many different systems in recent years.

Paper No.3

Title of paper: A Systematic Review Of Blockchain.

Description:Blockchain is considered by many to be a disruptive core technology. Although many researchers have realised the importance of blockchain, the research of blockchain is still in its infancy. Consequently, this study reviews the current academic research on blockchain, especially in the subject area of business and economics. Based on a systematic review of the literature retrieved from the Web of Science service, we explore the top-cited articles, most productive countries, and most common keywords.

V.ALGORITHM

1) **Create An Account:**

First we need to create an account on e-commerce website for any online purchase.

2) **Login:**

Login into your prospective account for access to an e-commerce website.

3) **Product information:**

We can search the information of the product and select it and add to the cart.

4) **Connecting cart to the phantom wallet:**

- i)After add product to the cart we need to add the phantom wallet to the cart.
- ii)After connecting the phantom wallet to the cart we connect the phantom wallet to the blockchain.
- iii)After connecting to the blockchain the price gets convert into solana.
- iv)Phantom wallet approves the transaction.

5) **After payment is successful:**

After payment is successful the page gets redirect to the thank you page.



VI. CONCLUSION

The main object of this project is to build an e-commerce website that can benefit in the future. As a cryptocurrency-based Bitcoin, Solana has taken over a worldwide economy. Using Blockchain technology, transactions can be verified, recorded, and can be secured as it is difficult to change any record in the blockchain.

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