Project Synopsis
on
Cryptocurrency Analysis WebApp

Submitted as a part of course curriculum for

Bachelor of Technology
in
Computer Science

Submitted by
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TABLE OF CONTENTS

The content of the synopsis must be divided into following headings depending upon your project

1) INTRODUCTION
2) PROBLEM STATEMENT
3) OBJECTIVES
4) LITERATURE REVIEW
5) METHODOLOGY (PROPOSED ALGORITHM /IMPLEMENTATION ACTIVITY)

6)CONCLUSION WITH RESULT

7)REFERENCES (IN IEEE FORMAT)

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REFERENCES

1. Ariponnammal, S. and Natarajan, S. "Transport Phonomena of Sm Sel – X Asx", Pramana – Journal of Physics Vol.42, No.1, pp.421-425, 2011.

2. Barnard, R.W. and Kellogg, C. "Applications of Convolution Operators to Problems in Univalent Function Theory",JSER., Vol.27, pp.81–94, 1987.

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Title : Cryptocurrency Analysis WebApp

Date:

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CERTIFICATE

This is to certify that Project Report entitled "**Cryptocurrency Analysis WebApp**" which is submitted by **Akanksha Mishra, Anushraya Sharma, Anshul Sharma** in partial fulfilment of the requirement for the award of degree B. Tech. in Department of Computer Science of KIET Group Of Institutions, Ghaziabadis a record of the candidates own work carried out by them under my supervision. The matter embodied in this report is original and has not been submitted for the award of any other degree.

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Supervisor Name:
Mr. Vivek Kumar Sharma
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ABSTRACT

The cryptocurrency Analysis WebApp is a web-based application which provide the easy and live trends of the top current cryptocurrencies such as ETH, Bitcoin, Dogecoin etc at one place in a combined manner and their past records which will ultimately help us to make better investments and also provide us the insights to make a profitable future investment in the crypto currencies. This app will provide the latest data and records such as the current price of each cryptocurrency (in INR as well as USD), their rank, market cap and the rise or fall in the value within the past 24 hours, you can search the results for any desired cryptocurrency.

It will help the people to invest in these cryptocurrencies and get the most benefit out of that, as many crypto lovers are investing and buying the crypto currencies for the sake of making profitable investments.

The app will also have major application areas such as in the field of market and industry and in the investment sector as well.

CHAPTER 1

INTRODUCTION

The cryptocurrency Analysis WebApp is a web-based application which aims to solve this problem - designed to present all information in a structured and centralised manner. Ranging from history and analysis of past performance to reliable predictions about future dips and rises, this covers them all. Adding on top of these, handy tools like real time value, local currency conversions, monitor of top performing currencies, and other performance statistics are also integrated. It will ultimately help us to make better investments and also provide us the insights to make a profitable future investment in the crypto currencies. It will help the people to invest in these cryptocurrencies and get the most benefit out of that, as many crypto lovers are investing and buying the crypto currencies for the sake of making profitable investments.

PROBLEM STATEMENT

Cryptocurrencies form an economic aspect and part of our economy and as it is fairly new emerging domain, the information resources are widely scattered. This proves to a major hurdle for potential and new investors as well who want to learn about this domain. Combining information from multiple resources - evaluating which ones to trust at the same time, and doing all this at regular intervals of time (considering the volatility of cryptos) increases the slope of the learning curve involved even more.

OBJECTIVE

The objective to develop this webapp is to provide the facility to present all information and trends of cryptos in a structured and centralised manner ranging from history and analysis of past performance to reliable predictions about future dips and rises along with the market cap and rank of these cryptos. Adding on top of these, handy tools like real time value, local currency conversions, monitor of top performing currencies, and other performance statistics are also integrated. It will help the people to invest in these cryptocurrencies in a more profitable manner.

SCOPE

The crypto based web-app has a wide scope in the upcoming world as the awareness regarding the cryptocurrency investments is increasing day by day therefore people are more lean towards these cryptos and want to make better investments in these, this webapp can find applications in the stock markets and crypto transactions as well as can be used by various industries and tech giants to make profit and boost the growth of their company and the economy by making a fruitful and profitable investments.

CHAPTER 2

LITERATURE REVIEW

1. An Analysis of Cryptocurrency, Bitcoin, and the Future
Peter D. DeVries

Bitcoin, the world's most common and well-known cryptocurrency, has been increasing in popularity. It has the same basic structure as it did when created in 2008, but repeat instances of the world market changing has created a new demand for cryptocurrencies much greater than its initial showing. By using a cryptocurrency, users are able to exchange value digitally without third party oversight. Cryptocurrency works on the theory of solving encryption algorithms to create unique hashes that are finite in number. Combined with a network of computers verifying transactions, users are able to exchange hashes as if exchanging physical currency.
Bitcoin does not have intrinsic value like gold in that it cannot be used to make physical objects like jewellery that have value. Nevertheless, value continues to exist due to trust and acceptance.Transaction increase is an indicator of user acceptance growing. The conditions for Bitcoin's widespread adoption could be described as a "fire triangle". Where fire needs fuel, oxygen, and heat to exist; Bitcoin needs user acceptance, vendor acceptance, and innovation to ignite. Without all three aspects, bitcoin may not truly become a legitimized mainstream currency.
South America has seen a huge increase in bitcoin transactions, increasing 510% from 2014 to 2015 (Bitcoin: A New Global Economy, 2015).
Argentina is a hotbed for increased cryptocurrency usage due to its extremely high inflation rate and high population of unbanked citizens (Magro, 2016). In the past, Argentinians would convert their currency into US dollars to preserve their value. However, Argentina has recently put restrictions on how many US dollars its citizens can convert. As a result, both a black market for purchasing USD at a higher price and increased bitcoin adoption has arisen (Magro, 2016). The demand for Argentinians to

keep their currency value has made itself very apparent, and cryptocurrencies are prominent legal vehicles to meet that demand. Weakness-Bitcoin has quite a few internal weaknesses that are part of its design and cannot easily be modified. The public ledger, or block chain, means that every user can see every transaction. There is semi-anonymity, in that the owners of bitcoin wallets cannot be identified outright, but it is slightly nerve-wracking for some potential adopters. The public block chain is shared with all users, which means that it is susceptible to attacks due to easy access.

Opportunities-Businesses are beginning to see the value in using cryptocurrencies for international transactions, especially when transactions need to occur quickly in response to an emergency. Cryptocurrencies are solely positioned to solve this problem thanks to the speed and ease of transaction in the peer-to-peer system. Money can be wired internationally, but typically arriving days after being sent and not for the full amount. The transaction can be hit with any number of unexplained fees as it crosses borders, making it difficult to send the correct amount to another business. The transaction can be hit with any number of unexplained fees as it crosses borders, making it difficult to send the correct amount to another business. Cryptocurrency seems to have move past the early adoption phase that new technologies experience. Even motor vehicles experienced this phenomenon. Bitcoin has begun to carve itself a niche market, which could help advance cryptocurrencies further into becoming mainstream; or be the main cause of it failing. Cryptocurrencies are still in their infancy, and it is difficult to see if they will ever find true mainstream presence in world markets.

2. Understanding Cryptocurrency and its dynamics

M. Ajith Kumar

Cryptocurrency is a mysterious industry. With time, more and more people show interest in it and testing their fortune by investing in digital currencies, such as Bitcoin, Ethereum, Litecoin, Cardano, Polkadot, Stellar, Dogecoin, Binance Coin, Tether, Monero and so on. Where Cryptocurrency is a type of digital or virtual currency that uses cryptography to safeguard transactions, it is a peer-to-peer payment system that allows anyone from anywhere to send and accept payments. One of crypto's most notable features is that it can be used to transfer value between two parties. This is done without the involvement of a third party, resulting in a more open and censorship-

resistant transaction. While the price of a cryptocurrency can spike to dizzying highs they can crash to terrifying lows just as quickly.

Nowadays, all have been pushed back by Crypto currency. But, Crypto currency is different, where no tax or commission is charged on this. It is also not recognized by the Governments. It is banned in the countries, such as Algeria, Bangladesh, China, Egypt, Iraq, Morocco, Nepal, Qatar and Tunisia.

The objective of this paper is to learn about cryptocurrency and how it affects investors, such as how the market value of cryptos is going up, what you need to know before investing, how risky cryptos transactions are, how to choose it, and what people think about it.

Advantagesofcryptocurrency

Protection from inflation

Self-run and managed

Decentralized

Cost-effective mode of transaction

Currency exchanges go smoothly

Secure and private

Easy money transfers

Disadvantages-

Illegal transactions

Risk of Data Loss

Power is in the hands of a few

Buying NFTs with other tokensNo refunds or cancellations

Blockchain is the technology behind digital currencies. A blockchain is a list of all the transactions that all the computers in a network share. It's a book that keeps track of everything that's happened to that money. It is a way to keep track of information that makes it impossible to break into the system

How to buy Cryptocurrency-

The cryptocurrency market is run by exchanges or brokers, just like the stock market. Most of the time, each trade on these exchanges costs a fee or commission. Some give rewards when you reach a certain goal, and others give them as a sign-up bonus. This could be governed by a different rule in each exchange. WazirX, CoinDCX, Coinswitch Kuber, and Unocoin are some of the best places to buy and sell cryptocurrencies in India.

The financial system around the world is very interested in cryptocurrencies. Cryptocurrency exchange rates change a lot. Because of this, it is very risky to trade in these cryptocurrencies. Many investors are interested in their growth. It's easy to move them around. Once people trust cryptocurrencies enough to use them, they will be used by more people. If people don't trust cryptocurrencies, their boom could slow down. They are still young, and no one knows when they will be old enough to trade on markets all over the world.

3. Assessing the probability of bankruptcy when investing in cryptocurrency

Serhii Kozlovskyi , Iaroslav Petrunenko , Hennadii Mazur, Vira Butenko , Natalya Ivanyuta

The cryptocurrency market is not regulated, people and companies wishing to invest in cryptocurrency do not have the same protection as when investing in other assets. In the absence of information and regulatory laws, investors should decide if cryptocurrencies make sense for their financial goals and what kind of investment strategy to choose not to go bankrupt.

The creation of cryptocurrency generated huge interest worldwide and led to excitement among financial traders and investors who have not seen anything like that before. A new currency Bitcoin was created in 2009 as an answer for the world’s financial crisis of unfathomable proportions. For the post-crisis age, Bitcoin promised an alternative to the financial system of the traditional banking institutions of past decades.

Despite the fact that crypto hype peak was some years ago, today technology and financial services companies are investing huge amounts in research and development in the field of blockchain and cryptocurrencies. An analysis of the Blockchain marketplace in 2021 found the industry should grow from a value of $4.9 billion in 2021 to $67.4 billion by 2026 (Blockchain Statistics, 2022). It means that the most important changes in the digital finances are going to come.

Even though Bitcoin has been on the financial market for more than 10 years, scientific articles on the prediction of bankruptcy have only begun to appear in the last 5 years. In 2019, an article was published where the authors formulated that cryptocurrency valuation was largely uncertain and subject to incalculable risks and the lack of a regulatory framework created

significant legal uncertainty in this market. he article by Alzahrani and Daim (2019) contains a literature review of past research related to cryptocurrency adoption. The main factors supporting its adoption, according to this review, include “the investment opportunity, the anonymity of the transactions and privacy, the acceptance by businesses as a payment method, the fast transfer of funds, the low cost of transactions and technological curiosity”.

Bitcoin and US dollar price quote (BTC-USD) is taken over the period from September 1, 2014 up to July 1, 2022 (CoinDesk, 2022). The information base of the study is the site data (CoinDesk, 2022). Different time horizons are allocated for longterm and short-term investment strategies.

Cryptocurrency market analysis shows that for a short-term investment strategy, a horizon is usually less than 30 days, while for a long-term.

The biggest loss per one Bitcoin is 25 thousand US dollars. The probability of such event is 0.4%, which is the same as for the biggest profit from investing that reaches 28 thousand US dollars. On average, extreme values of the normal distribution fluctuate between losses of 25-20 thousand US dollars and profit of 25-280 thousand US dollars per one Bitcoin. The probability of bankruptcy for a short-term cryptocurrency investment strategy is about 17%-23%.

Solving the problem of reducing the risk of bankruptcy in the crypto business is one of the most dynamic and relevant problems of our time. The search for a solution to this problem is based on the choice of the most optimal and high-quality methods of economic and mathematical analysis. Existing approaches to assessing the probability of bankruptcy are based on the methods of technical and fundamental analysis. But these methods and approaches do not allow predicting the risks of investing in cryptocurrency with a very high probability.

4. Cryptocurrencies: market analysis and perspectives

Giancarlo Giudici · Alistair Milne · Dmitri Vinogradov

Cryptocurrencies continue to draw a lot of attention from investors, entrepreneurs, regulators and the general public. Much recent public discussions of cryptocurrencies have been triggered by the substantial changes in their prices, claims that the market for cryptocurrencies is a bubble without any fundamental value, and also concerns about evasion of regulatory and legal oversight. These concerns have led to calls for increased regulation or even a total ban. Cryptocurrencies are digital financial assets, for which records and transfers of ownership are guaranteed by a

cryptographic technology rather than a bank or other trusted third party. They can be viewed as financial assets because they bear some value for cryptocurrency holders, even though they represent no matching liability of any other party and are not backed by any physical asset of value (such as gold, for example, or the equipment stock of an enterprise).

Cryptocurrencies: an asset on a blockchain that can be exchanged or transferred between network participants and hence used as a means of payment—but offers no other benefits.

If it is the ease and the speed of transactions, then new transaction technologies and fund transfer systems that greatly improved in the recent decade (such as TransferWise and similar systems) should have wiped out a big chunk of the cryptocurrency value, yet this does not seem to be the case. A possible answer may lie in the features that distinguish cryptocurrencies from other assets and payment systems. Privacy, or rather anonymity, is a prominent distinctive feature popping up in most discussions of cryptocurrencies.

A key development in the rise of cryptocurrencies and other cryptoassets has been the emergence of cryptoexchanges where anyone can open accounts and trade cryptoassets both against each other and against fat currencies. In a survey by Hileman and Rauchs (2017), the US dollar, the Euro and the British Pound are currently most widely traded against cryptocurrencies, while the importance of the Chinese Renminbi (CNY) significantly diminished after the tightening of the regulation by the People's Bank of China; about three-quarters of large exchanges provide trading support for two or more cryptocurrencies.

Growing attention has been paid to cryptocurrencies in the academic literature, discussing whether they are supposed to disrupt the economy or are a speculative bubble which could crash and burn or favour money laundering and criminals. In support of the first view, it is often argued they meet a market need for a faster and more secure payment and transaction system, disintermediating monopolies, banks and credit cards. Critics, on the other hand, point out that the unstable value of cryptocurrencies make them more a purely speculative asset than a new type of money. The reality is somewhere in between these two positions, with cryptocurrencies performing some useful functions and hence adding economic value, and yet being potentially highly unstable.

5. Security and Trust in Cryptocurrencies

The term of cryptocurrency is phenomenon of recent years, standing for digital currency based on principles of cryptography. General public may confuse this term with Bitcoin, but many other cryptocurrencies arose.
Bitcoin was first cryptocurrency introduced and still it is the most popular. All other cryptocurrencies are inferred on principle from Bitcoin with some adjustments. There are two types of Bitcoin users: basic ordinary users and so called "miners". Ordinary Bitcoin users use digital wallet similar to electronic banking for management of Bitcoin cash and transferring payments in bitcoins. Bitcoins exist only as data in a computer or mobile device. Access to these data has only the holder of cryptographic private key. If the wallet data is lost (e.g. the wallet data file is inadvertently corrupted or deleted), then the bitcoins contained in this wallet are lost forever (when file was not backed up). The public address of the wallet still exists, but it can only be accessed by the private key, which has been deleted. Unless someone breaks highly secure encryption built into the cryptocurrency system, then it is not possible to recover the lost bitcoins.
And breaking Bitcoin's encryption is virtually impossible using common computational force of personal computer in timely manner.
New units of Bitcoin are generated by Bitcoin network in process called mining, which is performed by so called miners. Miners are dedicating their computational power to solving artificial mathematical problem.
The awareness of cryptocurrency affects the numbers of its users and therefore also its stability. Significant role in the field of awareness play the media. High media coverage of Bitcoin's price rally definitely drew attention of numerous additional speculators. Besides the all forms of media also the word of mouth increases the awareness of cryptocurrencies and contributes to increase of cryptocurrency users' numbers. On the other hand, negative information about cryptocurrencies in media discourages potential users.
The cryptocurrency payments are anonymous and hardly traceable. This is the main reason of their usage in illegal activities. Anonymity and no central guaranty of currency are main reasons legislation restrictions of cryptocurrencies. Governments and other legal authorities are afraid of virtually untraceable transactions that might be connected with illegal activities or even financing terrorist organizations.
Bitcoins are generated by mining procedures, where miners use special software to solve cryptographic hash problems and it is primary source to

gain bitcoins. Miners are awarded with bitcoins only if they provide valid proof-of-work and this keeps BTC network stable, safe and secure by approving transactions. Proof-of-work is a process of verifying the block of data (transactions) in order to generate the next block by computing some random sequence (cryptographic problem), which is computed using a brute-force method employing software or hardware resource.

The first factor of cryptocurrency security is the security of block and block chains. A block of data with unverified cryptocurrency transactions has a unique key embedded. A new block cannot be submitted to the network without opening the present block of unverified transactions. Another aspect of cryptocurrencies' security is the security of generation algorithm. The third factor of security of cryptocurrencies is the network security.

Research identified multiple factors affecting trust in cryptocurrencies. Enormous volatility of cryptocurrencies exchange rates was detected. Their high volatility causes high risk of trading cryptocurrency and is reflected in the formation of price bubbles. However, the great growths of their exchange rates attracted many speculators, but it is obvious that cryptocurrencies can only hardly retain their value. Cryptocurrencies in comparison with commodities have advantage of easy portability thanks to their virtual character. However it makes them unusable outside of electronic environment. Cryptocurrencies are still popular medium of exchange in black economy. If potential legitimate users' trust in cryptocurrencies will rise in future, they will be used in increased scale also officially. Otherwise trust in cryptocurrencies might not reach necessary levels and their boom might sublime.

6. Research Perspectives and Challenges for Bitcoin and Cryptocurrencies

Joseph Bonneau, Andrew Miller, Jeremy Clark, Arvind Narayanan

Consider two opposing viewpoints on Bitcoin in straw man form. The first is that "Bitcoin works in practice, but not in theory." At times devoted members of the Bitcoin community espouse this philosophy and criticize the security research community for failing to discover Bitcoin, not im mediately recognizing its novelty, and still today dismissing it due to the lack of a rigorous theoretical foundation. A second viewpoint is that Bitcoin's stability relies on an unknown combination of socioeconomic factors which is hopelessly intractable to model with sufficient precision, failing to yield a convincing argument for the system's soundness. Given

these difficulties, experienced security researchers may avoid Bitcoin as a topic of study, considering it prudent security engineering to only design systems with precise threat models that admit formal security proofs. We intend to show where each of these simplistic view points fail. To the first, we contend that while Bitcoin has worked surprisingly well in practice so far, there is an important role for research to play in identifying precisely why this has been possible, moving beyond a blind acceptance of the informal arguments presented with the system's initial proposal.
Furthermore, it is crucial to understand whether Bitcoin will still "work in practice" as practices change. We expect external political and economic factors to evolve, the system must change if and when transaction volume scales, and the nature of the monetary rewards for Bitcoin miners will change over time as part of the system design. It is not enough to argue that Bitcoin has worked from 2009– 2014 and will therefore continue likewise. We do not yet have sufficient understanding to conclude with confidence that Bitcoin will continue to work well in practice, which is a crucial research challenge that requires insight from computer science theory.

7. Cryptocurrency trading: A comprehensive survey

Fan Fang,Carmine Ventre

In recent years, the tendency of the number of financial institutions to include cryptocurrencies in their portfolios has accelerated. Cryptocurrencies are the first pure digital assets to be included by asset managers. Although they have some commonalities with more traditional assets, they have their own separate nature and their behaviour as an asset is still in the process of being understood. It is therefore important to summarise existing research papers and results on cryptocurrency trading, including available trading platforms, trading signals, trading strategy research and risk management.
This paper provides a comprehensive survey of cryptocurrency trading research, by covering 146 research papers on various aspects of cryptocurrency trading (*e.g.*, cryptocurrency trading systems, bubble and extreme condition, prediction of volatility and return, crypto-assets portfolio construction and crypto-assets, technical trading and others). This paper also analyses datasets, research trends and distribution among research objects (contents/properties) and technologies, concluding with some promising opportunities that remain open in cryptocurrency trading.
Cryptocurrencies have experienced broad market acceptance and fast development despite their recent conception. Many hedge funds and asset

managers have begun to include cryptocurrency-related assets into their portfolios and trading strategies. The academic community has similarly spent considerable efforts in researching cryptocurrency trading. This paper seeks to provide a comprehensive survey of the research on cryptocurrency trading, by which we mean any study aimed at facilitating and building strategies to trade cryptocurrencies.

8. Abuses of Cryptocurrency in Dark Web and Ways to Regulate Them
Shiv Hari Tiwari

The blockchain technology is a distributed ledger system where it is distributed among the users who does the transactions using this technique, it first came in trend after the sudden rise in the value of bitcoin in 2017 and then people get to know about this blockchain system and its working, it provides anonymity and security both to the user and that is why cryptocurrencies like Bitcoin and now Monero are using the blockchain method to ensure the safe, secure and untraceable transactions. Anonymity and security are like two edges of the same sword, they can be used for the great purposes like protecting the privacy of people, fostering, freedom of speech etc on the other hand they can be misused for the illegal activities happening over the internet like cyber terrorism and perpetrators often go unaccounted for their acts. Where there are many qualities of blockchains there are also some downsides too, because of increased security and anonymity it worked as a fuel for the dark web users to illicit transactions and do the illegal activities on the dark web. In this paper we have shown what are the downsides of blockchain, how the transaction happen on the dark web happens and how we can regulate and track the illegal activities on the dark web using regulated and sovereign backed cryptocurrencies.

9. A bibliometric review of cryptocurrencies: how have they grown?
Francisco Javier García-Corral, José Antonio Cordero-García

With the development of new technologies, some concepts become relevant in the economic area, as is the case with cryptocurrencies, in general, or Bitcoin and Ethereum, in particular. Due to the impact of these tools, a detailed bibliometric study that allows us to obtain all information about cryptocurrencies must be conducted. This study will help scientific production by specifying the development and lines of related research that have been followed and are currently being followed. We have used Tableau, R (Bibliometrix R Package), and VOSviewer software to analyze

the information. These have been combined to create and review unified metadata from the Web of Science (WoS) and Scopus databases. The bibliometric analysis shows 771 articles on the WoS database and 648 articles on Scopus published between 2010 and early 2019. They present the most relevant articles, research areas, countries, institutions, authors, journals, and trends during the last few years. In conclusion, the number of publications has grown in the last 3 years. The analysis shows the evolution of blockchain technology used in this type of cryptocurrency. The review of this period marks a possible end to the historical part of cryptocurrencies, thereby opening the current topic to its multiple applications.

In the last decade, secondary payment methods other than legal tender have been developed to boost the market (Corrons 2017). Lietaer and Hallsmith (2006) defined one of these payment mechanisms as an agreement to use more than just legal tender as a means of exchange to link unused sources to unmet needs. In particular, a series of complementary currencies incorporated into the economic world are mentioned. Although these new supplementary payment methods are not listed in any global database, more than 6000 types are presumed to exist. Among them, new electronic payment methods have recently been incorporated, including virtual currencies or cryptocurrencies. Although complementary currencies have been used for a longer period, by historical amount and weight, the central focus of this study is the most innovative cryptocurrencies.

10. Bitcoin: A regulatory nightmare to a libertarian dream

Primavera De Filippi

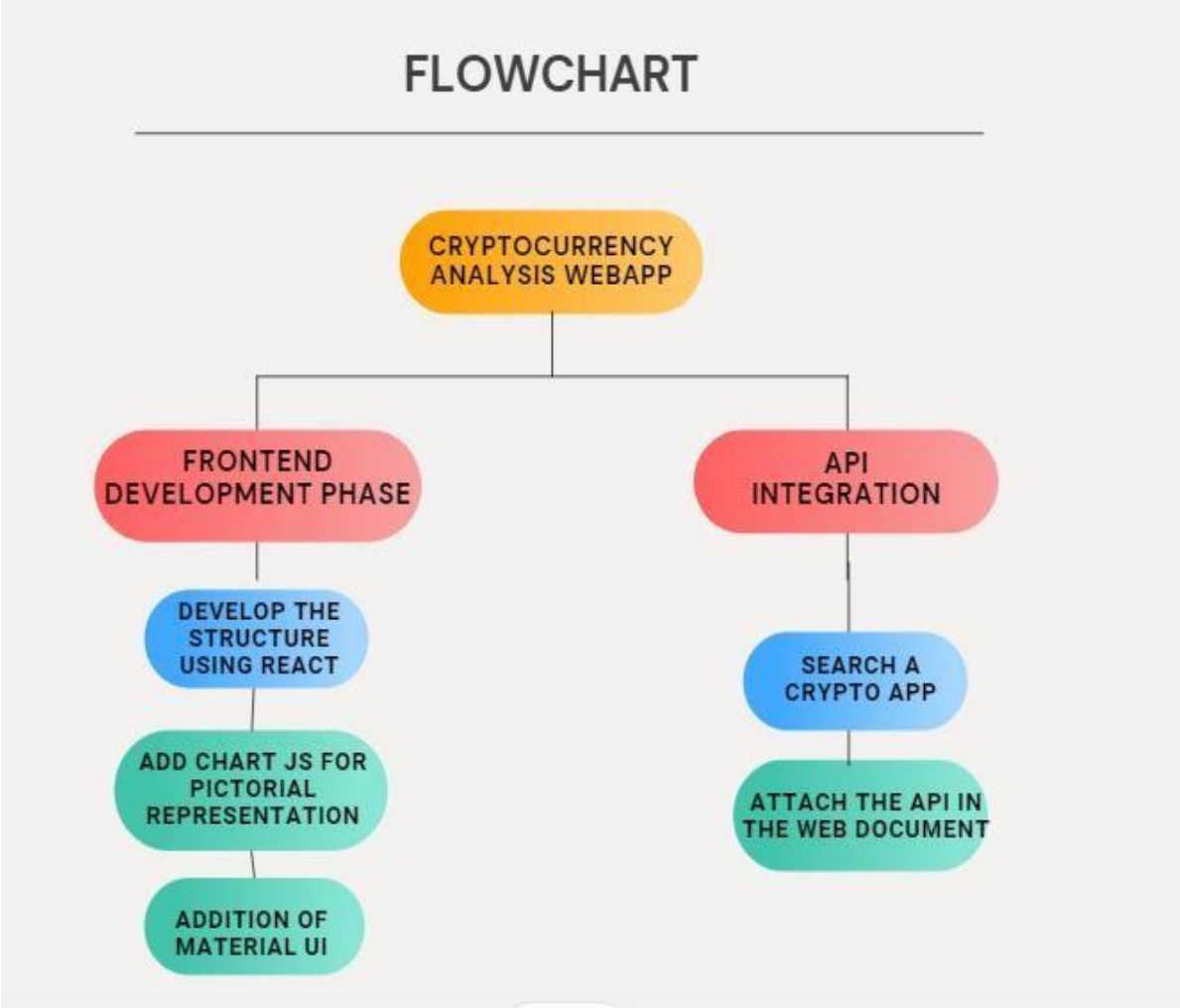
Cryptocurrencies are digital currencies that rely on a cryptographic protocol to regulate the manner in which (and the extent to which) currency can be created and/or exchanged. As opposed to previous digital currencies (such as Second Life's Linden dollars, or World Of Warcraft's gold) which are both issued and regulated by a central server, bitcoin is a distributed, worldwide, decentralised cryptocurrency that is managed solely and exclusively by an open source cryptographic protocol: there is no government, company, or bank in charge of issuing or managing bitcoins.

Bitcoins are created through the process of ‘mining’ - a process which rewards users for contributing computing power to the network by awarding newly created bitcoins to every user who resolves a complicated mathematical problem (the so-called ‘Proof of Work’) whose difficulty increases with overall network strength1. The mining process ultimately serves to ensure the security and integrity of the overall system, by providing a means to verify transactions through a decentralised network of peers simultaneously processing transaction data (often in exchange of a fee) before they are recorded into a public ledger or ‘blockchain’. Thus, instead of relying on a centralised bank or authority, bitcoin relies on cryptographic algorithms and peer-to-peer technologies to allow users to transfer money securely and pseudonymously, without passing through any given intermediary (Nakamoto, 2008).2 It is important to note that - contrary to common belief - bitcoin transactions are not, strictly speaking, anonymous, to the extent that the bitcoin protocol makes it possible to trace all transactions to and from a pseudonymous bitcoin address, which can eventually be linked to a particular identity (Brito & Castillo, 2013). Yet, although the bitcoin protocol does not itself incorporate any specific feature for anonymity, the use of bitcoin in combination with anonymisation services (see e.g., DarkWallet or the various bitcoin mixing/laundry services, such as BitMixer, BitLaunder, CoinJoin, etc) could, as a matter of fact, provide the necessary degree of “unlikability” to preserve the anonymity of bitcoin users.

CHAPTER 3

PROPOSED METHODOLOGY

FLOW CHART



ALGORITHM

```
[NoInterfaceObject,Exposed=(Window,Worker)]
interface GlobalCrypto {
  readonly attribute Crypto crypto;
};

Window implements GlobalCrypto;
WorkerGlobalScope implements GlobalCrypto;

[Exposed=(Window,Worker)]
interface Crypto {
  [SecureContext] readonly attribute SubtleCrypto subtle;
  ArrayBufferView getRandomValues(ArrayBufferView array);
};
```

TECHNOLOGY USED

Various technologies which is to be used in developing the project are-

- REACT JS
- MATERIAL UI
- CHART JS
- CSS
- JAVASCRIPT

CONCLUSION

The cryptocurrency is the trend of today's generation and people are investing in these cryptocurrencies to gain maximum benefit from these investments hence a centralized data is required so that people can analyze the various cryptocurrencies and can make the best possible investment based on the market price,trends,market cap of these cryptos hence a crypto tracker web app came to rescue as they provide a centralized system where people can watch and compare cryptos before making any investments hence to secure and maximize the profit.

REFERENCES

[1]Androulaki, E., Karame, G. O., Roeschlin, M., Scherer, T., & Capkun, S. (2013). Evaluating user privacy in bitcoin. In Financial Cryptography and Data Security (pp. 34-51). Springer Berlin Heidelberg.

[2]Barber, S., Boyen, X., Shi, E., & Uzun, E. (2012). Bitter to better—how to make bitcoin a better currency. In Financial Cryptography and Data Security (pp. 399-414). Springer Berlin Heidelberg.

[3]Brito, J. & Castillo, A. (2013). Bitcoin: a Primer for Policymakers. Mercatus Center, GeorgeMason University.

[4]Bearman, J. (2015, May). The Untold Story of Silk Road, Pt. 1. Retrieved fromWired.com Website: https://www.wired.com/2015/04/silk-road-1/

[5]Bitcoin: A New Global Economy. (2015, August 4). Retrieved July 2016, from BitPay, Inc.Website: https://blog.bitpay.com/bitcoin-a-new-global-economy/

[6]Bovaird, C. (2016, June 24). Bitcoin Rollercoaster Rides Brexit As Ether Price Holds AmidDAO Debacle. Retrieved June 2016, from CoinDesk Website: http://www.coindesk.com/bitcoin-brexit-ether-price-rollercoaster/