# BLOCKCHAIN ADVANCEMENT IN BANK LOAN TRANSPARENCY

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*Abstract*— **The Blockchain is an encrypted, distributed database that records data, or in alternative words it's a digital ledger of any transactions, contracts that must be separately recorded. Whether you're planning to start a business, buy inventory for an existing one or expand operations, you almost certainly need a considerable amount of cash. If you do not have the cash lying around, you'll need financing. one option is to secure a bank loan. As many bank loans require some sort of guarantee, for start-ups and existing businesses without any assets may find it difficult to urge their loan applications approved. If these borrowers prefer to choose unsecured loans, keys are hit with higher interest rates.**

**However, you want to meet a variety of loan requirements and therefore the burden of repayment can wear you down. To overcome this dispute, Blockchain technology is often utilized within the bank loan transaction and create transparency. This technology removes the necessity for brokers or intermediaries and ensures transparency and elective management of transactional data. Diversely, the blockchain could certainly save banks billions in cash by radically reducing processing costs. Applying blockchain would help banks to get increasingly profitable  returns.**

**Keywords: -** *Security, blockchain, encryption*

## I. INTRODUCTION

Mostly Blockchain referred to as the underlying technology of bitcoin. Primarily it uses a peer-to-peer network of nodes where each node is a computer which are responsible in validating transactions. Blockchain may be an arrangement to make and share distributed ledger of transactions among a network of computers. It allows user to form and verify transactions immediately without a central authority. Blockchain technology in financial sector, the customers can interact directly and may make transactions across the web without any interaction of a 3rd party. Such transactions by Blockchain won't share any personal information regarding the contributor and it creates a transaction is recorded in encryption method and it also

identifies information. The foremost character of Blockchain is that it reduces the chances of a knowledge breach. In divergence with old process, in Blockchain had multiple shared duplicates of an identical database that makes it demanding to gain a knowledge breach attack or cyber-attack. With all the fraud resistant characters, the blockchain technology reorganizes various business quarter and make processes smarter, secure, transparent, and more efficient compared to the normal business.
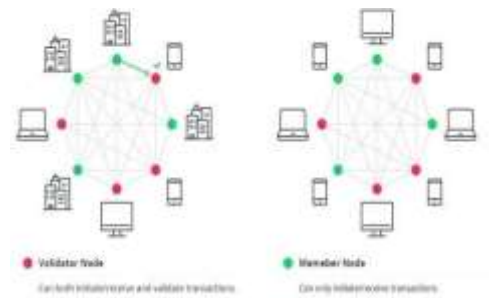
Database vs. Blockchain Architecture:
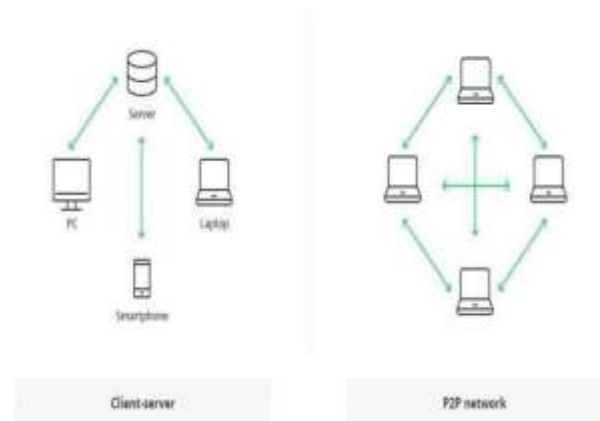


Client-Server vs P2P Network

*CLIENT-SERVER NETWORK:*

World Wide Web uses a client-server network. Within the case of the distributed network of blockchain architecture, network maintains, authorize, and updates new arrivals. The system is managed by everybody within the blockchain network including individual. Each member ensures that every record is in site, who's outcome is data validity and
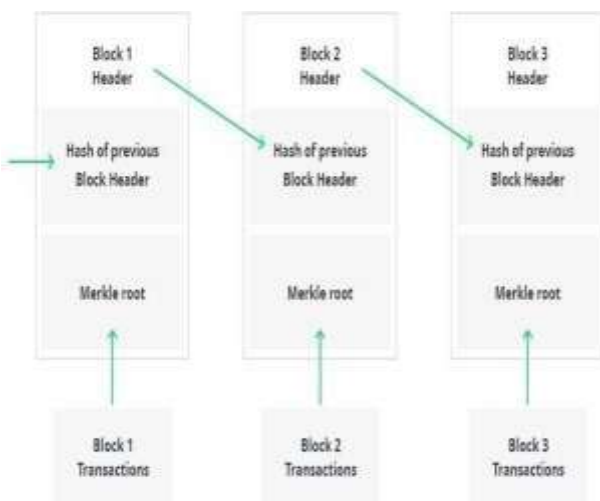
security. Thus, parties that do not necessarily trust each other are reach to reach a customary consensus.

*PEER TO PEER NETWORK:*

To summarize things, the blockchain may be a decentralized, distributed ledger (public or private) of different sorts of transactions arranged into a P2P network. This network consists of the many computers, but during a way that the information can't be altered without the consensus of the entire network (each separate computer). The organization of blockchain technology is constituted by a catalog of blocks with transactions during specific order. These lists are often stored as a file (txt. Format). Two main data structures utilized are: Pointers and variables that keep information about the position of other variables. They always point to the position of another variable. Linked list are sequence of blocks in which each block has specific data and links to the subsequent block with the assistance of a pointer.
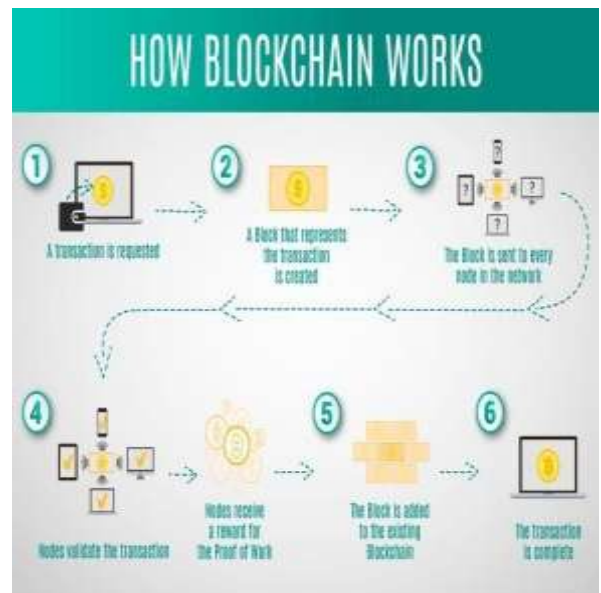


*BLOCKCHAIN HASHING:*

Logically, the primary block doesn't contain the pointer since this one is that the first during a chain. At an equivalent time, there's potentially going to be a final block within the blockchain database that features a pointer with no value. Basically, the subsequent blockchain sequence diagram may be a connected list of records.

Types of Blockchain Architecture Explained



*NODES IN PUBLIC VS. PRIVATE BLOCKCHAINS*

Three categories involved in blockchain are: A public blockchain architecture means the information and access to the system are out there to anyone who is willing to participate (e.g. Bitcoin, Ether urn, and Litecoin blockchain systems are public). Private blockchain architecture: As against public blockchain architecture, the private system is controlled only by users from a selected organization or authorized users who have an invitation for participation. Consortium blockchain architecture: This blockchain structure can contain a couple of organizations. Burning a consortium, procedures are found out and controlled by the preliminary assigned users.

## II. WORKING OF BLOCKCHAIN

In blockchain each and every block consists of bound information of the hash and hash of the previous block.

The data keep within every block depends on the kind of blockchain. as an example, at intervals the Bitcoin blockchain structure, the block maintains information concerning the receiver, sender, and so the number of coins. A hash is the form of a fingerprint (long record consisting of some digits and letters). Consequently, this helps to identify every block throughout a blockchain structure simply. the moment a block is formed, it mechanically attaches a hash, whereas any changes created throughout a block have an effect on the change of a hash too. merely expressed, hashes facilitate to observe any changes in blocks. The final component at intervals the block is that the hash from a previous block. This creates a sequence of blocks and is that the most component behind blockchain architecture's security. As associate degree example, block forty-five points to dam forty-six. The terribly 1st block throughout a series is also a small amount special - all confirmed and valid blocks area unit derived from the genesis block. Any corrupt makes an attempt to provoke the block to the amendment. All the following blocks then carry info and render the complete blockchain system invalid. On the alternative hand, this would be doable to regulate all the blocks with the approach of sturdy laptop processors. There is a solution that eliminates this risk referred to as proof-of-work. This allows a user to hamper the tactic of the creation of the latest blocks. In Bitcoin blockchain design, it takes around ten minutes to figure out the specified proof-of-work and add a replacement block to the chain. This work is completed by miners - special nodes at intervals the Bitcoin blockchain structure. Miners get to remain the dealing fees from the block that they verified as a present.

*Blockchain Network Creation*

Once a company, or a few, conceive to implement a blockchain resolution, they are already making a network. The network may be viewed as firms with their personnel or from the perspective of the technical infrastructure at intervals these firms. To make it additional concrete, let's take the instance of diamonds. Risks and challenges associated with diamonds exist throughout each region of the tactic, from the extraction of diamonds to their final, industrial result. customers need to form bound they are buying real and moral diamonds. Government establishments need to remain track of their taxation and exports. Blockchain design area unit typically accustomed to eliminate these risks. Blockchain solutions organize those parties into a peer-to-peer network that helps to urge eliminate all the mentioned risks and build a transparent system. everybody would receive access to the synchronal information of a "shared, changeless ledger" and be able to keep track of the diamond's moving from producing to the final word client. The blockchain ledger would hold the order of all activities occurring like diamond mining, refining, and distribution. at intervals the top, all the transactions throughout this path area unit unbroken throughout a ledger (e.g. information with diamond photos, place of extraction, color, serial range, place wherever it had been cut, purified, sold, etc.). This info is complete and authentic. Give below is a high-level Hyperledger design diagram that establish a blockchain resolution.
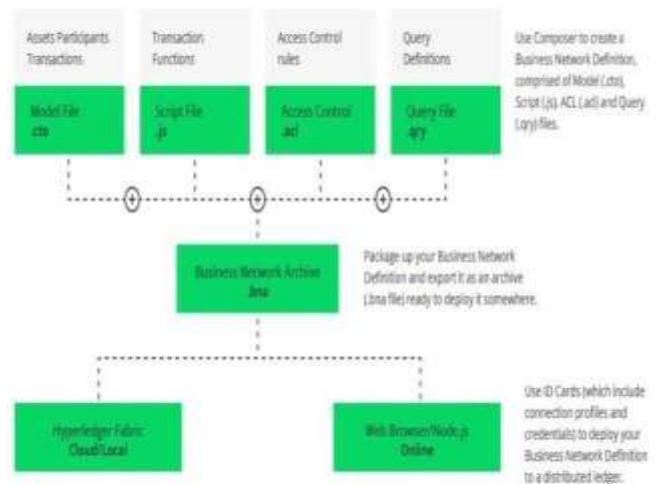


Diagram from the Hyperledger Composer

## III. EXISTING SYSTEM

The digitization of financial instruments — comprising digital assets, good contracts, and programmable cash — makes the benefits of blockchain any by shaping new levels of property and pourability between merchandise, services, assets, and holdings. These digitalized instruments can redefine the processes of economic and monetary markets, making a brand-new paradigm wherever the price is brought at each bit's purpose.

## IV. PROPOSED SYSTEM

Blockchain Technology is not solely set to revolutionize the globe however its already creating inroads into numerous sorts of variety of industries globally. This potential for transparency internally and outwardly will facilitate offer banks the prospect to exchange bound middle- and back-office functions, offer new cohesion to internal accounting procedures. This project involves the blockchain idea terribly effectively once a recipient desires to require a loan from the

bank, 1st he should deposit Cryptocurrency to the p2p network. This network sends a loan up to the seventieth of value by the bank once process the request from the p2p network. currently their intermediaries throughout this method and once he repays the loan through cryptocurrency to blockchain and it's back in full form. The bank receives its full fledge loan quantity with interest from the recipient. This method is extraordinarily simply machine- controlled and accessible to the overall public with secure connections and info.

## V. ARICHITECTURE DIAGRAM
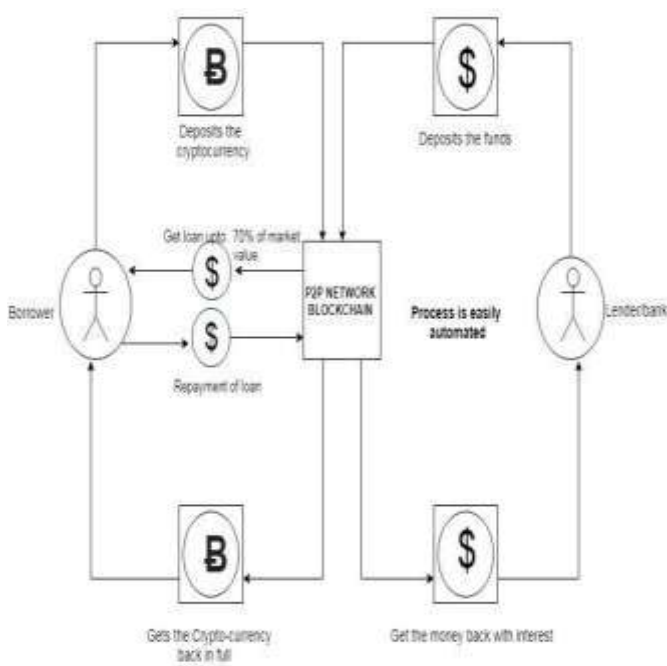


## VI. MERITS

Blockchain design will distribute the following functions for organizations and enterprises: Cost reduction - several cash are spent on sustaining centrally control databases (e.g. banks, governmental institutions) by keeping information current secure from cybercrimes and alternative corrupt intentions. History of information - at intervals a blockchain structure, it's doable to ascertain the history of any dealing at any moment in time. {this is |this is typical |this can be} often an ever-growing archive, whereas centralized info is

additional of exposure of information at a particular purpose. Data validity & security - once entered, the data is hard to tamper with due to the blockchain's nature. It takes time to proceed with record validation since the tactic happens in every freelance network rather than via compound process power. This implies that the system sacrifices performance speed, however, it instead guarantees high information security and validity.

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