BLOCKCHAIN TECHNOLOGY

Blockchain Technology

- ## History

  Cryptographer David Chaum first proposed a blockchain-like protocol in his 1982 dissertation "Computer Systems Established, Maintained, and Trusted by Mutually Suspicious Groups.

  In 2008 Satoshi Nakamoto used that concept to build the bitcoins backend database for security enhance. In August 2014, the bitcoin blockchain file size, containing records of all transactions that have occurred on the network, reached 20 GB and at the early 2020 the ledger size had exceeded 200 GB of storage.

  The words *block* and *chain* were used separately in Satoshi Nakamoto's original paper, but were eventually popularized as a single word, *blockchain,* by 2016.

  Reference by- Wikipedia, Google.

- ## What is Blockchain?

  Blockchain is a backend database that maintains distributed ledger that can be inspected openly. Blockchain is a decentralized system, also its not easy to change or difficult to change or modify. Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network. An *asset* can be tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyrights, branding). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved.

- ## Blockchain in Hindi

  Blockchain ek tarah ki backend database hai jo ki aapko next level security provide karta hai. Blockchain ke concept ki suruvat 1982 me David Chaum dwara lai gai thi per tab computers and technology’s itne develop nahi the uske karan tab ye technology build karna kafi kathin tha aur mehenga bhi per 2008 me Satoshi Nakamoto namak vyakti aur unke group dwara is technique ka use kiya gaya aur ek Bitcoin namak company ka database is technology ke use se likha gaya aur iski madat se Bitcoin company ka database kafi had tak Secure kiya gaya taki data lose avoid kar sake ya hackers bachao kiya ja sake.

  Blockchain ek tarah ka Chain(network) create karta hai jisme Blocks yani ki jisne kuch data ya fir information storage kiye jate hai aur fir use data ya information ki

jach karke uska ek Hash code create hota hai(Hash ek 64 character ka set hota hai jo ki 256 bits se bana hota hai 1 character = 4bits memory ishi trah 64*4 =254 Hash) is tarah ke Hash code ko SHA 256 ki madat se banaya jata hai SHA stands for Secure Hash Algorithm. Hash code is also unique code, this hash code helps to connect block with another block in a chain.

Example- Suppose we have created 3 block and entered data in first that block will create their unique hash code that hash is created as per their data which we stored in that block then in the 2nd block we must to enter previous block's hash and then enter data into 2nd block it will also create their unique hash that hash is for 3rd blocks previous hash field. Now 3 blocks are connected in the chain with their hash codes.

Now if anyone can try to change data of assigned block that blocks hash will change as per the new entered data then algorithm will check the next blocks previous hash and compare that then algorithm found the different hash and next block of chain will be invalid and chain will be break and that algorithm makes the blockchain as a secure database.

As per the blockchain technology if any one want to change their data they have get the vote in their favor of more than 51% nodes of that chain.

Blockchain mainly contains previous hash, timestamp, tx root(merkle), nonce and current hash.

- Blockchain is a group of blocks that connected to another block and making a chain.
- Blockchain contains previous Hash, Timestamp, Tx root, Nonce, Current hash.

- Important Terms in Blockchain

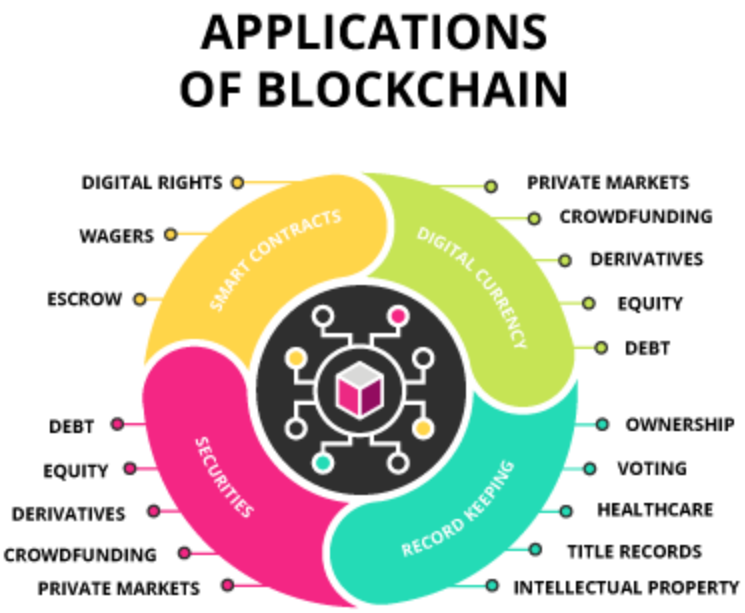
  - Ledger
  - Miner
  - Consensus
  - Nodes

- Types Of Blockchain

  - Public Blockchain
    Ex-Bitcoin
  - Private Blockchain

- Hybrid Blockchain
- Consortium Blockchain

- Applications of Blockchain



- Advantages of Blockchain

- Secure
- No third party interference
- Secure transactions
- Instant transactions

- Disadvantages of Blockchain

- 51% Attacks
- Data modification
- Private Key Issues