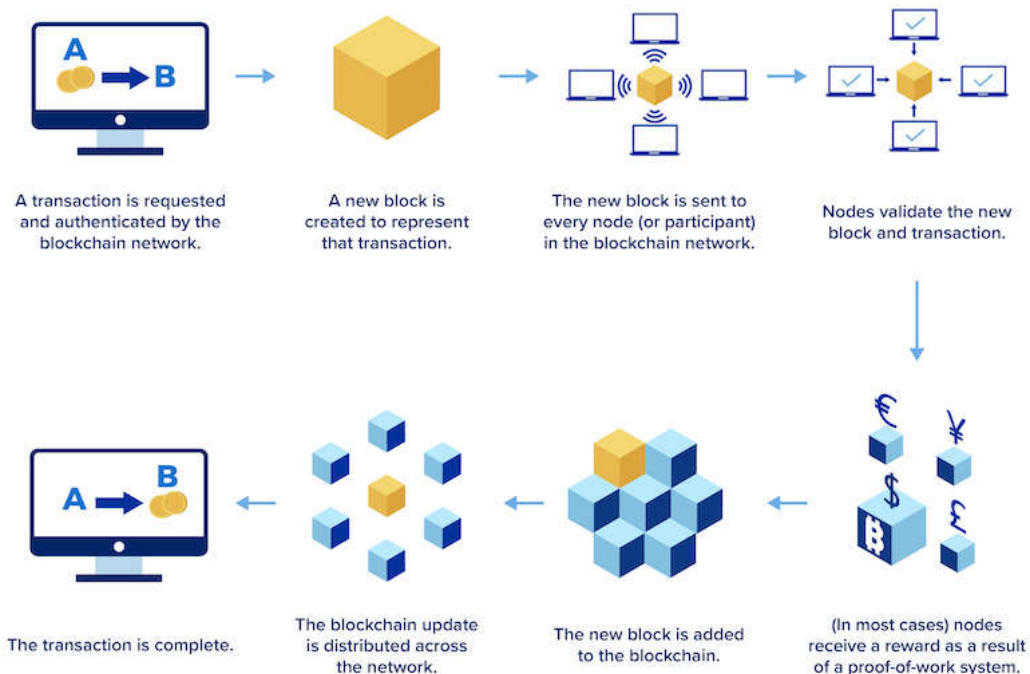


Contact: Ph: 09353205447 Email: [bbaktech@gmail.com](mailto:bbaktech@gmail.com) for help on smart contract development

## Introduction to block chain:

1. Security, safety and privacy are the mazer concerns on internet, cloud and IoT networks , virus and hackers could alter or transact with your bank account under your name and create fraud.
2. Transparent, secure transactions (others could not hack, alter the information) and some special cases you would like to maintain privacy - for this solution is Block chain Technologies
3. Third party not needed for maintaining record(transactions) as well as to establish trust between two parties for transactions.
4. Smart contracts work as middle man governing the transactions, block chains are maintained by community. (100% reliable and secured)
5. Identity of persons who involved in transactions are kept highly confidential and no one could trace, but still there will be a trust between parties without 3<sup>rd</sup> party to establish trust.
6. Example for block chain is **Ethereum-Block** Chain, to connect to Ethereum-Block Chain you need wallet like **MetaMask**, you could conduct transactions and upload smart contract using your public Id.
7. You are going to learn **solidity** and **Remix IDE** - a programing language specially designed to develop smart contracts and distributed apps for Ethereum block chain,
8. Ethereum has main-net as well as test-net (Goerli Testnet),
9. Candidate will know concepts include nodes, DAPPs, smart contracts, transactions, gas, Ether

## The blockchain process



**Goerli** – Goerli is the default and recommended network for executing testing of staking and validating. Goerli is open for developers wanting to run a testnet validator. Consequently, stakers looking to test a protocol upgrade should use Goerli before deploying to the Ethereum mainnet.

### Development infrastructure needed:

- Ethereum Networks (Goerli Test Network)
- Ethereum Wallets (MetaMask)
- Ethereum Clients(Node, Moralis – Node Service provider)
- Transactions,
- Smart Contracts (using Solidity language) , DAP (Python)

### Example:

**Blind Auction:** it is to create a completely blind auction where it is not possible to see the actual bid until the bidding period ends.

Process for BID:

- a) All contractors who want to participate in bid must have Ethereum-public network external user account otherwise they must create one.
- b) Organization, that calls for bid(proposal) must also require to have Ethereum-public network external user account.
- c) Organization will announce call for bid(proposal) over blockchain on Ethereum-public network with closing date, it will be very transparent
- d) Contractors send their bids during bidding period; this bid will also include sending money to organization in order to bind the Contractors to their bid.
- e) Bids received by organization are hashed, so that no one including heads of organization, hackers or any technical specialist could not see the details in the bid for their own use or for any other purpose (100% secured).
- f) After the end of the bidding period, contractors will send the actual bids, these bids are verified against the hash value sent earlier by the contractors for the correctness of their bid.
- g) Once the bids from Contractors are verified, the beneficiary(contractor) will be selected by organization