Blockchain Essentials

1. **What is your understanding of blockchain?**

    - Blockchain is the distributed, decentralized system that is used to keep all the data of the transactions has been made.
    - It is an expanding ledger that is growing vigorously and storing the transactions.
    - It provides various benefits such as data transparency, a very huge amount of security, verifiability, etc.
    - There is no any the one centralized person present here to look at the transactions. So, the major issue that is trusting on third party is removed from blockchain.
    - Blockchain cannot be hacked.
    - It allows only two operations on data from CRUD i.e. create and read. No one can update or delete any data from the blockchain.
    - Once the data is been created, then it is stored into blocks. These blocks are connected to each other consisting of block number, transactions, previous block's security key and the mining key.

2. **What is the core problem blockchain trying to solve?**

    - The very first core problem behind the generation of blockchain is International Banking Crisis by Lehman Brothers in 2008 in USA.
    - Other problem is that hacking and data vulnerability are been shown in each field.
    - There is a lot corruption and all. It means that trusting on any third party about system security is the most dangerous thing nowadays.
    - So the solution for this is the blockchain.
    - In blockchain there is no any single person or third party that will handle the whole system. There are many people having the record of the transactions which is contained in a chain of blocks and also having the key of previous block in it.

3. **What are the few features that blockchain will give you?**

The features that blockchain will give us are:

a. Verifiability
b. Huge amount of security
c. Data Transparency
d. Immutability
e. Unchangeability

4. **What all things does a block contain?**

Block is contained of four parameters:

a. Block Number
b. Transactions
c. Security key of previous block
d. Mining Key

5. **How is verifiability of blockchain is been attained?**

- Blockchain is nothing but a distributed, decentralized system where no the one centralized person is not present.
- So, if any transaction is made, then it is stored into a block.
- Then the block is encrypted with a mining key and the security key of whole block is created and it is given to the block which is next to it.
- Then again if any transaction is happened, it is stored into the second block which is already having the security key of most previous block.

- Now the security key of the second block is created and given to third block. And the process goes on.
- So if anybody has to verify his/her data, then it'll be given by security key.
- If the security key is lost, then it is achieved by the next recent block and data will be given to that person.