**BLOCKCHAIN ESSENTIALS: Assignment Day 1**

1. **What is your understanding of Block chain?**

Blockchain is mixture of technology called Distributed database (making copy of same document at different place) and Cryptography (converting text into digital signature) where information is Verifiable, Unchangeable, Tamper-proof and Immutable.

Block-chain is used for avoiding hacking, huge security boost, decentralization, data transparency, removing third party, verifiable.

Block-chain is a constantly growing ledger that keeps record of all transactions in a secure, chronological and immutable way in decentralized distributed network.

1. **What is the core problem Block-chain trying to solve?**

The three core problems block-chain is trying to solve are: Authenticity, Security and Need of powerful third party trust.

Block-chain is focusing on solving:

1. Slow cross border payments
2. Vulnerable identity management and theft
3. Digital copyright and piracy
4. Costly supply chain management
5. Slow government systems and public sectors
6. Managing and protecting patient data in Health care organizations.

1. **What are the features which Block-chain will give you?**

Features are:

1. Verifiable
2. Unchangeable
3. Tamper-proof
4. Immutable
5. **What all things does a Block contain?**

A block contains:

1. Block number
2. Transaction record
3. Previous block signature
4. Mining key
5. **How is the verifiability of block-chain been attained?**

The same copy of data is stored differently across many devices of the network and thus if the data is changed in one document then it can be identified by all other documents of the network. So in this way, the verifiability of the block-chain can be achieved.