**LetsUpgrade – Blockchain Essentials online course**

**Day 1 – Assignment**

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

According to me, blockchain maintains a list of records(transactions) by means of distributed database. And, each block contains it’s number and data along with cryptographic data of previous block. In simple, blockchain technology also termed as a ‘distributed ledger’ of bitcoins.

1. **What is the core problem blockchain trying to solve?**
2. Data Authentication (Integrity and verification)
3. Security attacks (Risk of hacking)
4. Decentralisation(Many of the blockchains are private)
5. **What are the features of blockchain?**

* Immutable (Data cannot be changed)
* Tamper proof (Secure)
* Decentralised (Distributed ledger)
* Verifiable

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

1. Block header(Meta data – previous block hash, mining key, root of merkle tree)
2. Block identifiers(SHA 256 digital hash)
3. Merkle trees(contains transactions)
4. **How is the verifiability of blockchain been attained?**

Blocks are linked with each other containing digital signatures of both previous and current block. If there occurs any single change in data of any block, then it’s digital hash key changes along with hash keys of all other blocks that are connected by verifying previous hash key. This is how verifiability happens in blockchain.