**Day-1**

**Assignment**

1. Blockchain is a powerful and versatile technology combining of distributed database & Cryptography. In layman words, it is linked list concept added with a extra feature of security. Basically, these blockchains are shared across a network of computers. These blocks are linked by hash key which contains block no, previous block key, Trans record and mining key. Thus, a Blockchain is constantly growing public ledger that keeps permanent record of database and has numerous features like data transparency, Huge security boost, hack - proof, Verifiability, decentralization. It allows digital information to be recorded but cannot be edited i.e. Update and Delete operations are disabled out of CRUD operations.
2. With the help of Blockchain, the core problem of data security & Trust is solved by making ledger public. In 2008, The international banking crisis with the collapse of investment led to the idea of blockchain technology. The US Housing mortgage problem by Lehmann Bro’s ignited Satoshi Nakomoto to come up with his Blockchain idea in his paper. Even before this in 1930, idea of blockchain was discussed but came into noticing after the paper released in 2008 by Satoshi Nakomoto. Thus, Blockchain tries to solve core problem like data security, Trust, Verifiability, etc.
3. Some of few features that blockchain will give us are listed down below:
4. Data transparency
5. Huge security boost with enhancements
6. Verifiable
7. Hack - proof
8. Decentralized
9. Unchangeable
10. Immutable
11. Faster settlements
12. Tamper-proof
13. A Block contains the following:
14. Block No(integer)
15. Trans record (Any important data you want to store)
16. Previous block key
17. Mining Key
18. The verifiability of blockchain is explained by following a simple syntax i.e.

(Previous fingerprint + current data(new) + get new fingerprint). When there is need to add new data, then the current fingerprint will become previous fingerprint for the same and it goes on. This generated fingerprint is passed to group(community) maybe via WhatsApp to check whether everyone getting same fingerprint i.e. will verify whether everyone is getting same fingerprint or any one is getting different.

If one getting different fingerprint, he/her need to change the entire data from nearby friend or people. This is one simple example to understand how verifiability concept works in Blockchain. This means that anyone can check all the transactions and trace the origin.