**Assignment No.1**

1) What is your understanding of blockchain ?

* Blockchain is a distributed database existing on multiple computers at the same time. It is constantly growing as new sets of recordings, or 'blocks', are added to it. Each block contains a timestamp and a link to the previous block, so they actually form a chain.
* It is a type of diary or spreadsheet containing information about transactions. Each transaction generates a hash. Each block refers to the previous block and together make the Blockchain. A Blockchain is effective as it is spread over many computers, each of which have a copy of the Blockchain.

2) What is the core problem Blockchain trying to solve ?

* Blockchain Addresses the Problem of Data Loss due to Hardware or Connectivity Issues
* Blockchain Addresses the Problem of Data Corruption due to Intermittent Hardware or Connectivity Issues.

3) What are the few features which blockchain will give you?

* It has a public distributed ledger, which works using a hashing encryption.
* Every block has a hash value, which is the digital signature of the block.
* All the transactions are approved and verified on the Blockchain network using a proof-of-work consensus algorithm.

4) What all things does a block contain?

* Each block contains, among other things, the current time, a record of some or all recent transactions, and a reference to the block that came immediately before it. It also contains an answer to a difficult-to-solve mathematical puzzle - the answer to which is unique to each block.
* Before adding a transaction to their block, a miner needs to check if the transaction is eligible to be executed according to the blockchain history. If the sender's wallet balance has sufficient funds according to the existing blockchain history, the transaction is considered valid and can be added to the block.

5) How is the verifiability of blockchain has been attained ?

* The Blockchain ledger is distributed across several nodes, meaning the data is replicated and stored instantaneously on each node across the system. When a transaction is recorded in the blockchain, details of the transaction such as price, asset, and ownership, are recorded, verified and settled within seconds across all nodes.
* Blockchain is the underlying technology that maintains the transaction ledger for Bitcoin transactions. The blockchain technology as for example the one used for Bitcoin allows for the recording of transactions on a distributed ledger across a network of users**.**