BLOCKCHAIN

* Cryptography
* Distributed Systems
* Peer-to-Peer Network
* Asymmetric Cryptography - Public/private key Encryption
* Digital Signature

1.Confidentiality

2.Integrity

3.Authentication

4.Non-repudiation

* Nodes

1.a) Full Nodes (Contains full Blockchain – Should have high computing power)

1.b) Partial Nodes (Contains some part of it for Mobiles etc.)

Miners\*

* Hashing
* Merkle Tree
* Types of BlockChain

2.a) Public Blockchain

2.b) Private Blockchain (Specific to a group of people like a company)

2.c) Federated Blockchain

* Consensus
* Proof of Work
* Proof of Stake / proof of Capacity
* Etherum – Ether – Dapps -Solidity
* Smart Contracts
* Hyperledger
* Drawbacks of Blockchain

3.a Complex

3.b Slow Speed

3.c Wastage of Resources

3.d Security/Privacy

3.e 51% Attack

* Smart Contracts – MetaMask (extension for browser)
* Gas (fee)
* Test network
* Remixetherum
* Web3.js [Api between etherum and webapp]
* Hyperledger Fabric (private Blockchain) contains channels
* If we want to join a network MSP
* Chaincode javascript/java/go