**What is Block Chain**

**(Lesson 2)**

**1.0**

Yapese example to understand the basic concept of blockchain and bitcoin.

Blockchain is transparent i.e. every transaction is visible to public but it is a hash which will be publicly shown not the user exact info .

Hash will be the identity of bitcoin user which will transparent to everyone.

2.0 **How blockchain works**

Make New Block

Node keeps the Transaction in its Transaction Pool

Added in Block Chain

(register in ledger)

Solve the Puzzle (approx. in 10 minutes)

**New Transactions**

4.0 **Blockchain Uses Old Technologies**

1.Accounting Ledger

2.Peer-to-peer network

3.Cryptography

5.0 **Key Points Which make Blockchain secure and immutable**

1.Hashing

2.Public Key encryption

3.Mining

**Hashing:**

**Hashing** gives you a fixed length of **alphanumeric string** .If you use **Sha256** algorithm it gives you **256bit** length string**(32bytes).**

Whatever the large or small input **Sha256** will generate a fixed length of string which is **encrypted**.

**And this process is irreversible and it need huge amount of computation to make it reversible which is not possible in this universe.**

**The network is designed so that if some peers crash or attack the network maliciously, the network can still operate; this is known as Byzantine fault tolerance**

In a permissioned network, only pre-authorized parties can add nodes to the Blockchain network.

Whereas in a permission less network, anyone can add nodes to the Blockchain network.

Business Blockchains such as Hyperledger are designed to be permissioned networks.

Bitcoin and Ethereum are designed to be permissioneless networks where everyone can add a node.