1. **Blockchain Basics**
2. **What is a Blockchain**

* Bit coin is one of the first protocol to use the revolutionary technology called Block chain.
* Bitcoin whitepaper created by Satoshi Nakamoto, where it was outlined how a) Bitcoin can make peer to peer transactions in a decentralized network

b) This network was powered by cryptography, decentrality.

c) Allowed people to engage in censorship resistant finance

d) People took it as Superior digital store of value like Gold

e) Similar to gold, there is only finite number of Bitcoins available in world

* Some people want to take this technology farther and do more with blockchain technology

1. **Ethereum**

* Vitalik Buterin released whitepaper for new protocol called Ethereum
* Ethereum uses the same blockchain infrastructure with an additional feature
* In 2015 Ethereum was released, where people could not only make decentralized transactions and all these ways to interact with each other without a centralized intermediary or Centralized governing force
* In addition, Ethereum created decentralized agreements(smart contracts), decentralized organizations
* In 1994, Nick Zabo came up with these idea of smart contracts, which was reused in Ethereum

**SMART CONTRACTS:**

* Smart contracts are a set of instructions executed in a decentralized way, without the need for a centralized or third party intermediary
* Smart contracts is the main differentiator between Bitcoin and Ethereum

**BITCOIN VS ETHEREUM**

* Bitcoin developers saw bitcoin as Store of value
* While Ethereum developers saw Ethereum as Both store of value and a utility to facilitate these decentralized agreements

**ORACLE PROBLEM**

* Blockchains to interact with real world agreements, they need data from the real world.
* Blockchain by themselves cannot read or listen from real world
* This is known as Oracle problem
* Blockchains are deterministic problems and are deterministic on purpose.

**Blockchain ORACLE**

* Any device that interacts with off-chain world to provide external data or computation to smart contracts
* To stay decentralized, we cannot work with a single Oracle or Single data provider or single source that is running these external computations
* So we need a decentralized oracle network similar to our decentralized blockchain network
* ***Combining the on chain decentralized logic with off chain decentralized data gives rise to something called HYBRID SMART CONTRACTS***
* Most of the big protocols we interact today are some type of Hybrid smart contract or they interact with Hybrid smart contracts
* This is where protocol chain comes into play

**Chain Link:**

* It is a modular decentralized Oracle network that can both external data and external computation into our smart contracts to make sure , they are decentralized end to end – while giving them the feature richness that we need for our agreements