



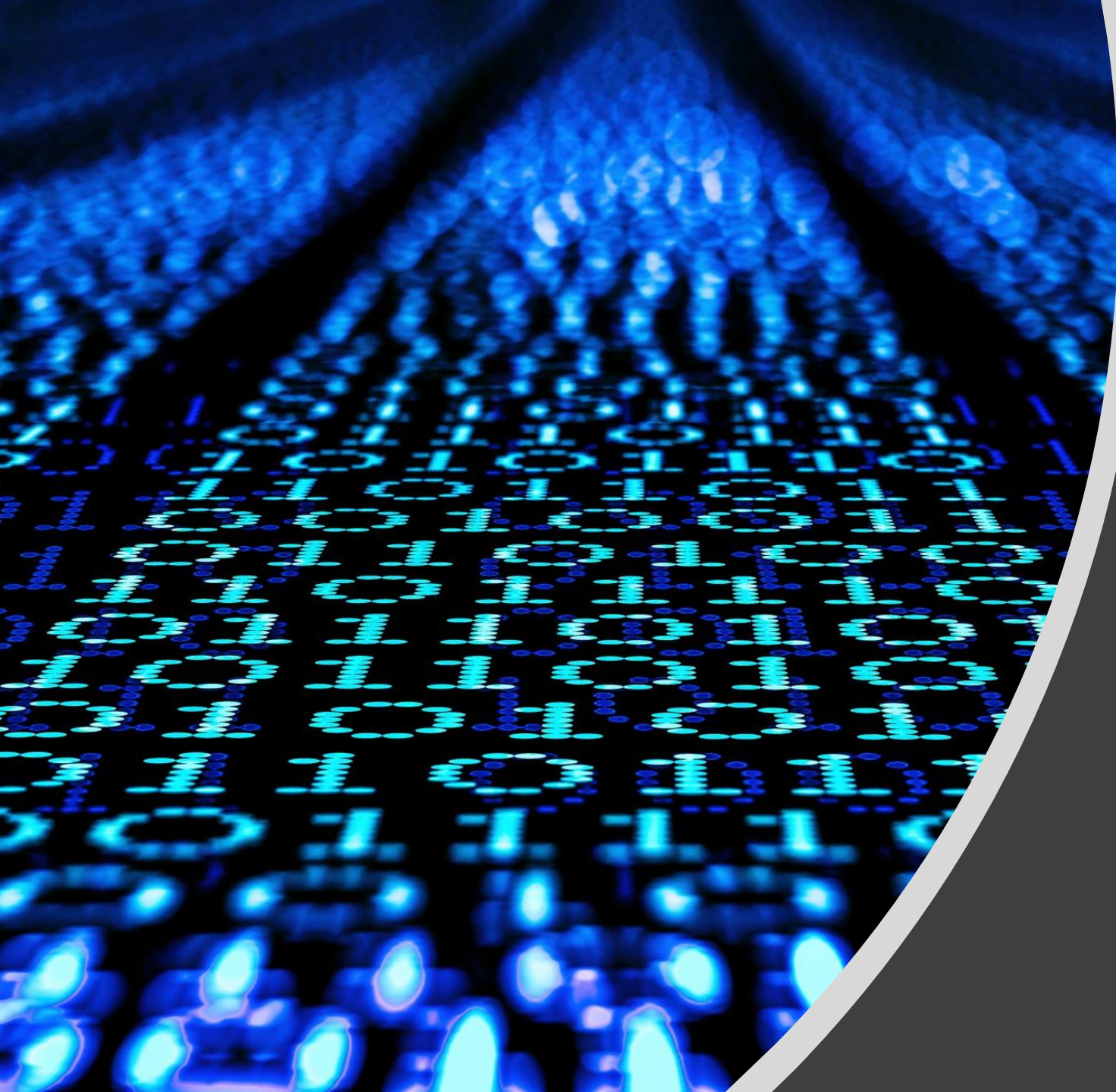
# Blockchain and Cryptocurrency

By: Syeda Tayyaba Bukhari





What is  
Bitcoin?



3 important  
layers in  
Crypto World

TECHNOLOGY

PROTOCOL  
/ COIN /

TOKEN

TECHNOLOGY

Blockchain

PROTOCOL  
/ COIN /

TOKEN



TECHNOLOGY

Blockchain

PROTOCOL  
/ COIN /

Bitcoin

TOKEN

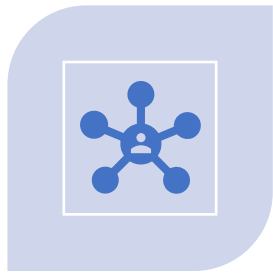


# Protocol:

Set of rules that guide how participants of network communicate with each other

e.g: IP (Internet Protocol), HTTP protocols

# Bitcoin Protocol:



SET OF RULES HOW PARTICIPANTS  
OF BITCOIN NETWORK WILL  
COMMUNICATE TO EACH OTHER  
AND AGREE ON THINGS



FOR EXAMPLE, PROTOCOL  
DICTATES HOW THEY COME TO  
CONSENSUS OVER THINGS



HOW PUBLIC KEYS AND  
SIGNATURES CAN BE USED FOR  
AUTHENTICATION



ALSO DICTATES ON HOW AGREE ON  
UPDATES TO THE PROTOCOL ITSELF  
ETC.



TECHNOLOGY

Blockchain

PROTOCOL  
/ COIN /

Waves

Ethereum

Bitcoin

Neo

Ripple

TOKEN

TECHNOLOGY

Blockchain

PROTOCOL  
/ COIN /

Waves



Ethereum



Bitcoin



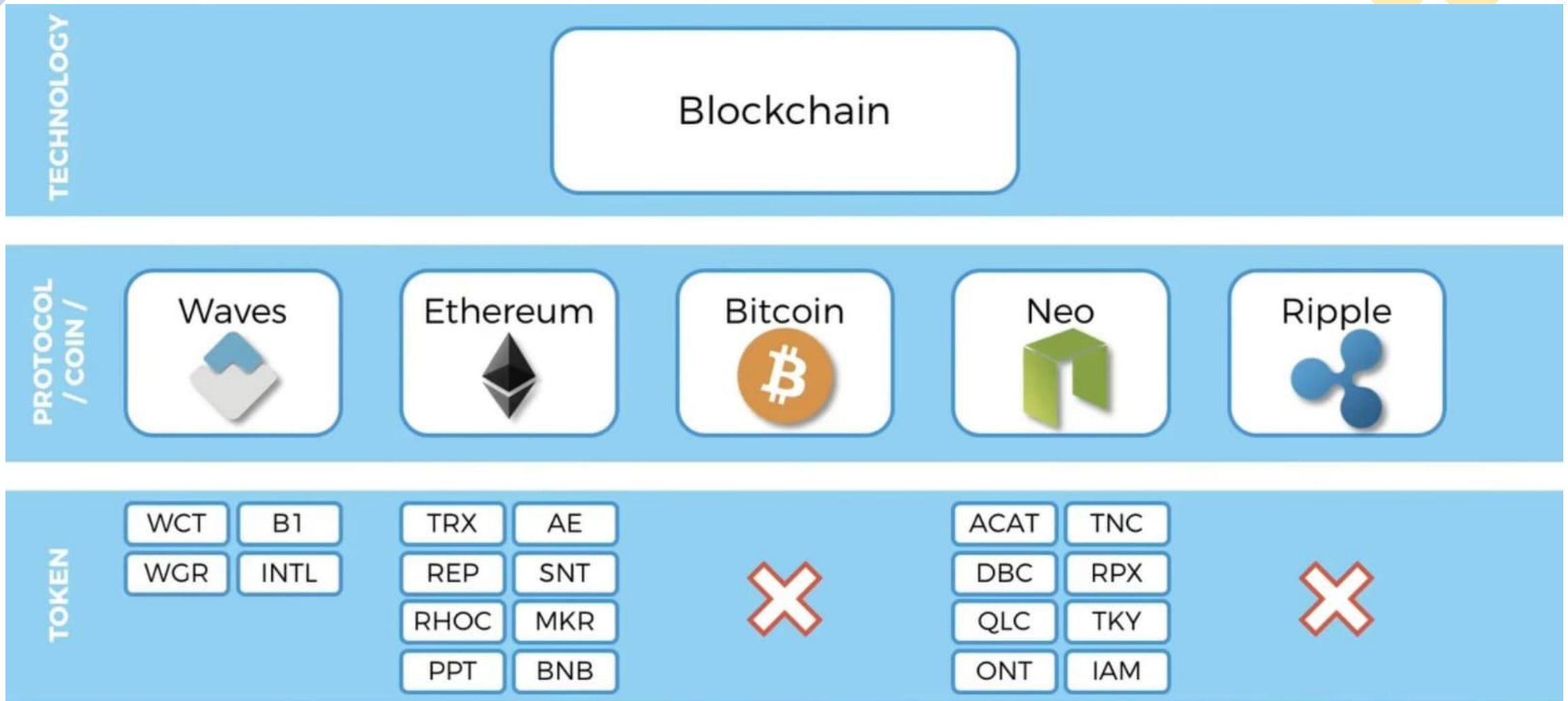
Neo



Ripple



TOKEN



::: ICO: Initial Coin Offering ---term related to tokens

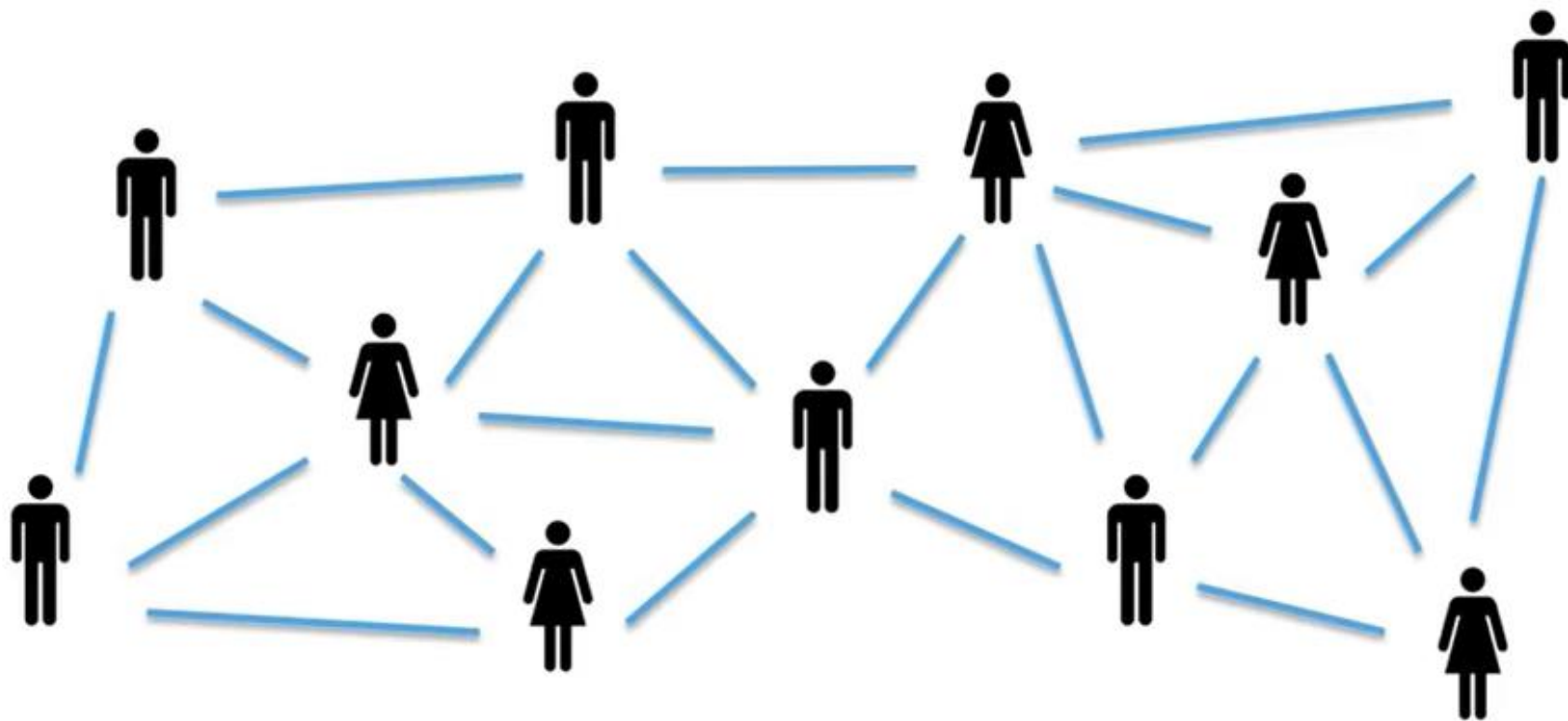




<https://coinmarketcap.com>



Satoshi Nakamoto





# The Bitcoin Ecosystem:

- Nodes



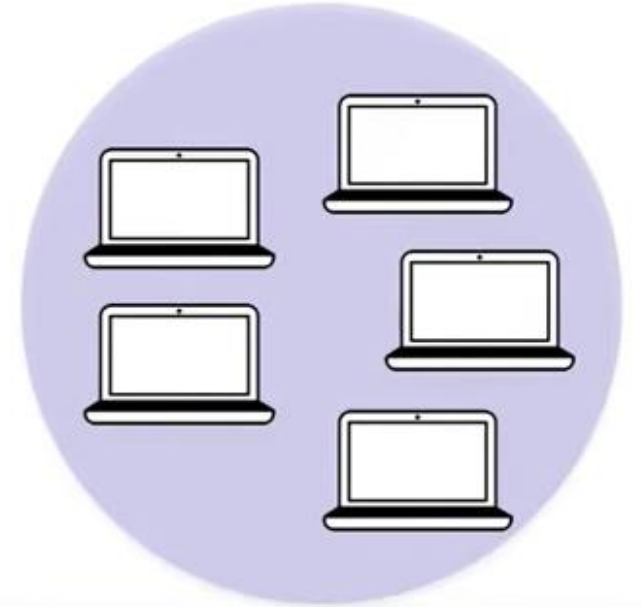
- Miners



- Large Mines



- Mining Pools





# Bitcoin Monetary Policy

# Bitcoin's Monetary Policy

```
graph TD; A[Bitcoin's Monetary Policy] --> B[The Halving]; A --> C[Block Frequency]
```

The Halving

Block Frequency



## The Halving

~2020: 6.25

~2024: 3.125

Date reached	Block	Reward Era	BTC/block
2009-01-03	0	1	50.00
2010-04-22	52500	1	50.00
2011-01-28	105000	1	50.00
2011-12-14	157500	1	50.00
2012-11-28	210000	2	25.00
2013-10-09	262500	2	25.00
2014-08-11	315000	2	25.00
2015-07-29	367500	2	25.00
2016-07-09	420000	3	12.50
2017-06-23	472500	3	12.50

## The Halving

**TRANSACTION FEES ARE MEANT TO  
REPLACE BLOCK REWARDS**







Source: <https://bitsonblocks.net>



<https://chart-studio.plotly.com/~BashCo/5.embed>



## Block Frequency

Cryptocurrency	Average block time
 <b>bitcoin</b>	10 min
 <b>ethereum</b>	15 sec
 <b>ripple</b>	3.5 sec
 <b>litecoin</b>	2.5 min



<https://www.blockchain.com>

# Acknowledgement and Source:

- <https://www.udemy.com/course/build-your-blockchain-az/>