
Cryptocurrency

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Previous Lessons / Catch-Up

In general terms, a **blockchain** is an immutable transaction **ledger**, maintained within a **distributed** network of **peer** nodes. These nodes each maintain a copy of the ledger by applying **transactions** that have been validated by a **consensus** protocol, grouped into blocks that include a **hash** that bind each **block** to the preceding block.

The first and most widely recognized application of blockchain is the **Bitcoin** cryptocurrency, though others have followed in its footsteps.

Cryptocurrency, we look at

- Bitcoin
- Ethereum
- Libra

Introduction to Bitcoin and Cryptocurrency

Bitcoin is an open-source international ***currency*** and also the first cryptocurrency. The very first decentralized digital currency.

We can send and receive Bitcoin from across the world, through Bitcoin purchase of goods becomes possible. Meaning of decentralized is that it does not controlled by only one bank, country, individual or a company.

What is Bitcoin?

Bitcoin is a ***digital money*** which means it does not exist in the physical form completely or even in digital form.

What we really own when we have a Bitcoin, a collective ***agreement*** of each and every other computer on this Bitcoin network that this Bitcoin is created by a "***miner***" and then passes to you by a series of transaction

There are exactly two methods of owning Bitcoin:

1. You can become a miner which means investing a lot of money to the electricity bills it might be a case the money you invested is greater than the money you will make by it unless you are really smart.
2. You can buy Bitcoins from the people who already own it using the mode of conventional money.

Blockchain ≠ Bitcoin

- Bitcoin launched 2009
- Bitcoin is just a currency
- Bitcoin has limited ability to make it 'smart'...
 - Bitcoin Script - no loops or iterations



Ethereum

- Open source, managed by Ethereum Foundation
 - Supported by Microsoft
- Launched in July 2015
- Cryptocurrency - Ether
- Public Blockchain
 - Anyone can read data
 - Anyone can write data
- Smart Contracts
 - Ethereum Virtual Machine
 - Behaves like typical client-server
 - Solidity



Ethereum

- Ecosystem, many learning resources
 - <https://cryptozombies.io/>
- Solidity is a C-Style language
- Built-in coin/token architecture
 - Used for fractional asset ownership solutions
 - Used for customer loyalty / rewards
 - Used for gaming
- Large focus on identity management and role based access
- <https://etherscan.io/>

Libra

- Mobile-first
- Stable-value

"1.7 billion adults globally remain outside of the financial system with no access to a traditional bank, even though one billion have a mobile phone and nearly half a billion have internet access"

```
>> Creating/retrieving next account from wallet
```

```
Created/retrieved account #0 address
```

```
3ed8e5fafae4147b2a105a0be2f81972883441cfaaadf93f  
c0868e7a0253c4a8
```



Libra

The Opportunity

As we embark on this journey together, we think it is important to share our beliefs to align the community and ecosystem we intend to spark around this initiative:

- We believe that many more people should have access to financial services and to cheap capital.
- We believe that people have an inherent right to control the fruit of their legal labor.
- We believe that global, open, instant, and low-cost movement of money will create immense economic opportunity and more commerce across the world.
- We believe that people will increasingly trust decentralized forms of governance.
- We believe that a global currency and financial infrastructure should be designed and governed as a public good.
- We believe that we all have a responsibility to help advance financial inclusion, support ethical actors, and continuously uphold the integrity of the ecosystem.




<https://libra.org/en-US/white-paper/#introduction>
<https://developers.libra.org/docs/move-paper>

Ripple

- RippleNet makes it easy for its diverse network of 200+ financial institutions worldwide to enable faster, lower-cost payments around the world.
- Alternative to “Swift” money transfer ecosystem. (Interbank messaging system)
- Low-cost for money transfer



AMERICAN
EXPRESS

 MoneyGram

 PNC

 Santander

SCB
ไทยพาณิชย์ 

 SBI Remit

 INSTAREM

 BANCO RENDIMENTO

















 BeeTech

 Interbank

Pontual
Money Transfer

Vitesse

Coinmarkets

<div>Cryptocurrencies ▾ Exchanges ▾ Watchlist</div>							
<div>USD ▾ Next 100 → View All</div>							
#	Name	Market Cap	Price	Volume (24h)	Circulating Supply	Change (24h)	Price Graph (7d)
1	 Bitcoin	\$145.605.009.560	\$8.090,45	\$15.002.414.680	17.997.150 BTC	0,85%	 ...
2	 Ethereum	\$19.170.829.653	\$177,21	\$7.086.697.955	108.183.634 ETH	1,22%	 ...
3	 XRP	\$12.752.457.931	\$0,295423	\$1.719.691.940	43.166.787.298 XRP *	4,15%	 ...
4	 Tether	\$4.125.230.075	\$1,00	\$18.316.420.082	4.108.044.456 USDT *	0,05%	 ...
5	 Bitcoin Cash	\$3.960.456.557	\$219,27	\$1.237.783.945	18.062.025 BCH	0,29%	 ...
6	 Litecoin	\$3.430.989.421	\$54,04	\$2.933.089.621	63.485.554 LTC	2,41%	 ...
7	 Binance Coin	\$2.899.795.946	\$18,64	\$211.582.158	155.536.713 BNB *	5,47%	 ...
8	 EOS	\$2.765.691.334	\$2,95	\$1.440.875.933	936.249.145 EOS *	1,54%	 ...

Please feel free to contact me if you need any further information

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