

Unit 4 BT.

Fiat money - legal tender by government.

→ Stable.

Bitcoin

- decentralized peer to peer network.
- + public transaction ledger (DLT)
- + Consensus rule
- + PoW algorithm.

Bitcoin wallet.

application for transaction.

Hot wallets.

- ① Desktop wallet - Windows / MacOS
- ② Mobile wallet - iOS / Android.
- ③ Web wallet - Web browser and
Server owned by third party

Cold wallet

- ① Paper wallet - key printed on paper
- ② Hardware wallet - USB, pendrive.

- Full node - can store full history of Bitcoin.
- Lightweight client → connect to full node Bitcoin
- Third party API.

Bitcoin transaction Lifecycle.

Rob want to send BTC to Laura.

(a) Rob's end

1. Rob open his bitcoin wallet
2. He then scan or copies Laura's address
3. fill required amt., info and fees and press send

(b) process by bitcoin network

- 1) wallet sign the transⁿ using Rob's Private Key
- 2) Transⁿ validated by network node
- 3) Miner.
- 4) network verify the result and propagate the block

(c) Laura See the first Confirmation.

Cryptocurrency

Digital Money + Cryptography + Blockchain +
Decentralized + Key + Digital wallet

- * No need of Central authority
- * Virtual currency
- * Set of programming code
- * Person have account and manage through wallet.

Pros.

1. No restriction on payment
2. Use of Complex Algorithm

3. Speed of Exchange
4. No Third party
5. Less transⁿ fee

Cons

1. Lack of awareness
2. Highly volatile
3. Black market
4. No recovery.
5. Not accepted everywhere
6. Scaling issue.

Types of Cryptocurrency

- ① Bitcoin - First currency.
- ② Altcoin
- ③ Token.

Coin

- It is Cryptocurrency that come with own dedicated Blockchain
- They are attached to their native blockchain.
eg. Bitcoin in Bitcoin.
Ether in Ethereum.

Token

- Cryptocurrency that runs on another cryptocurrency's Blockchain.
eg. USD Coin on Ethereum.

Altcoin

→ alternative to Bitcoin.

→ other than Bitcoin

Derived from Bitcoin

eg. Dogecoin

derived original blockchain

eg. Ether, NXT.

Token.

(I) Utility token

- It is intended to provide access to the blockchain based service or product.

(II) Security token.

- Investment instrument
- Use and issuance are subject to financial regulation like stock, bond etc.

(III) Payment token

- used for payment

(IV) Exchange token

Exchange platform.

fungible Token

- Interchangeable and exchange with another asset with similar kind

- eg. 1rs = 1rs
100rs = 50 + 50rs.

Non fungible Token

- unique asset, and not interchangeable.

→ Non divisible.

→ Unique value

eg. Mona Lisa painting.
Home.

IPO Initial public offering

ICO - Initial coin offering

Cryptocurrency usage

(1) DeFi

(2) Digital payment

(3) Online shopping

(4) International Payment

(5) A form of investment

(6) Pay for services.

Crypto wallet.

① MetaMask

→ It allow to run Ethereum DApp without running a full ethereum node.

→ full install take too much space & time

→ web browser.

→ You required web3.js to interact with Ethereum on local system

→ In metamask. Inject web3.js in each page.

- This eliminate the installation of web3.js.
- User can create the ~~app~~ account and access the app and deploy.
- It has Vault account for storing, token, key, password.

Walled seed - 12 words group, used as password for login metamask.

Benefit of Metamask.

- Secure identity.
- No need of local installment
- Manage account.

② Coinbase.

- Platform allow users to buy, sell, transfer and store digital currencies securely online.
- Financial System.

features

- (1) Easy transaction.
- (2) Free.
- (3) Security and backup.
- (4) Simple interface.

③ Binance.

- A Crypto Exchange platform.
- 1400000 orders per second.

features

- Spot trading
- Margin trading
- futures
- Decentralized Exchange
- Anonymous instant Exchange.

Mobile, Web, PC interface.

BNB → Cryptocurrency by binance.
- Post poAC authority).

BUSD ⇒ Stablecoin by binance.