

SPPU-BE-COMP-CONTENT - KSKA Git

BT

classmate

Date :

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ASSIGNMENT-1

Q1

Types of Blockchain

1. Public Blockchain: open to everyone, fully decentralized with no restrictions.
ex: Bitcoin, Ethereum.
2. Private Blockchain: Restricted access, controlled by one organization.
Ex: Hyperledger, Corda.
3. Consortium Blockchain: controlled by group of organizations, partially decentralized.
ex: Energy web Foundation, R3-corda consortium
4. Hybrid Blockchain: combⁿ of public & private blockchain features
ex: Dragonchain, XinFin.

Q2

Ethereum is open source, a ^{public} blockchain platform that supports smart contracts & decentralized apps. Unlike bitcoin which is mainly peer-to-peer transactions, ethereum allows developers to deploy programmable logic (smart contracts).

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Ether (ETH) is the native cryptocurrency of ethereum it is used to:

1. Pay for transaction fees & computational services (Gas)
2. Reward miners/validators who maintain the network
3. Act as a store of value and medium of exchange within ethereum ecosystem.

Q3

Advantages of Metamask:

1. User friendly → easy to install as a browser extension or mobile app
2. Secure → stores private keys locally on user's device
3. Multipurpose → can send/receive ether ERC-20/721 tokens.
4. DApp connecting → Directly connects users to decentralised applications.
5. Cross platform → Works on chrome, Firefox, Brave & mobile devices
6. Custom networks → Allows adding test nets & custom RPC networks

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Wallet:

digital tool that allows users to store, send & receive cryptocurrencies & digital assets.

contains private keys (for signing transⁿs) & public address (for receiving funds)

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Types of wallets.

1. Hot wallets (online: metamask, Trust wallet)
2. Cold wallets (offline: eg: hardware wallets like ledger, Trezor)

Usage

- Manage crypto assets securely.
- Authenticate user identity on blockchain
- Interact with Dapps
- execute & sign transactions.

Q5

Etherscan:

blockchain explorer for ethereum allows users to track & analyze transactions blocks, wallet addresses & smart contracts

ether observed through etherscan includes

- 1) Wallet balance → Shows total ether held in addresses
- 2) Transaction history → Details of sent / received ether, including sender, receiver, amount & timestamp.
- 3) Gas fees: How much ether spent for transⁿ validation.
- 4) Smart contract interactions: Records execution of Dapps & token transfers.
- 5) Block details: Information about which block confirmed the transaction.