

Experiment No: 4

Aim: Write a program in Solidity to implement transactions by embedding of wallet.

Theory:

Blockchain is a decentralized digital ledger that records transactions across many computers so that the record cannot be altered retroactively.

- So that the record cannot be altered.

- It operates in a peer-to-peer network where each participant maintains a copy of the ledger.

- This ledger is immutable and transparent ensures that once recorded, it is permanent.

- In this decentralized ecosystem, smart contracts are self-executing agreements

- coded directly into the blockchain, automating and enforcing terms without intermediaries.

- Smart contracts are self-executing contracts with the terms written directly into code.

- They run on blockchain platforms like Ethereum.

- These contracts automatically enforce and execute terms of an agreement based on predefined rules and conditions.

- It has its own cryptocurrency ether (ETH) which is used to pay for transaction fees and computational services on the network.

→ Mapping stores users' balances, accounting allowing efficient data retrieval, functions define the contract's logic, including methods for depositing funds and transferring ether between addresses with built-in checks to ensure correctness & security.

- Transactions in Ethereum involve sending ether or tokens from one address to another.

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