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Experiment No: 3

Aim: Write a program in Solidity Programming to create Transaction using the Remix IDE

Theory:

- In blockchain, a transaction is a transfer of data or assets between participants.
- It involves recording information on the blockchain ledger, ensuring it is secure, transparent and immutable.
- Once a transaction is validated by the Network (through consensus mechanisms like pow / pos) it is grouped into a block and added to a blockchain, making it permanent part of themselves.
- Transactions are designed to be tamper proof and transparent.
- Each transactions typically includes details such as the sender, recepient, amount and a timestamp.
- After a transaction is initiated, it is broadcasted to the network where nodes verify its authenticity using cryptographic algorithms.
- Once validated, the transaction is included in a block, and the block is appended to the existing chain.
- This process ensures that all participants in the network have a consistent and

accurate record of transaction, making fraud and double speeding difficult.

- The list of transaction is a component of the header.
- It forms a tree like structure called as Merkle tree.
- The Merkle root is used to construct the block hash.
- If you change a transaction, you need to change all the subsequent block hash.