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**Batch: EL2**

**Course Name & Course Code: 2CSDE93 & Blockchain Technology**

**Practical-8**

## Aim: - To design and develop end-to-end decentralized applications (Dapps).

**Code:-**

**Voting Smart Contract code**

**Voting.sol**

pragma solidity ^0.4.21;

contract Election {

    struct Candidate {

        string name;

        uint voteCount;

    }

    struct Voter {

        bool authorized;

        bool voted;

        uint vote;

    }

    address public owner;

    string public electionName;

    mapping(address => Voter) public voters;

    Candidate[] public candidates;

    uint public totalVotes;

    modifier ownerOnly() {

        require(msg.sender == owner);

        \_; //remaining body of addCandidate to be executed

    }

    function Election(string \_name) public {

        owner = msg.sender;

        electionName = \_name;

    }

    function addCandidate(string \_name) ownerOnly public {

        candidates.push(Candidate(\_name,0));

    }

    function getNumCandidate() public view returns(uint) {

        return candidates.length;

    }

    function authorize(address \_person) ownerOnly public {

        voters[\_person].authorized = true;

    }

    function vote(uint \_voteIndex) public {

        require(!voters[msg.sender].voted);

        require(voters[msg.sender].authorized);

        voters[msg.sender].vote = \_voteIndex;

        voters[msg.sender].voted = true;

        candidates[\_voteIndex].voteCount += 1;

        totalVotes += 1;

    }

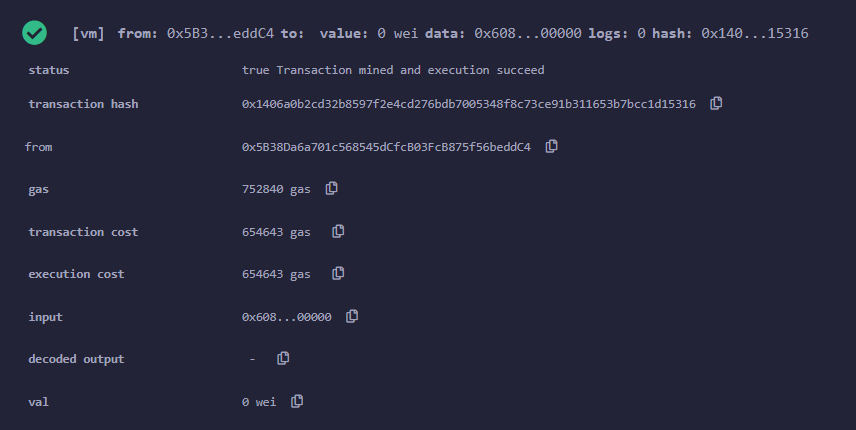
    function end() ownerOnly public {

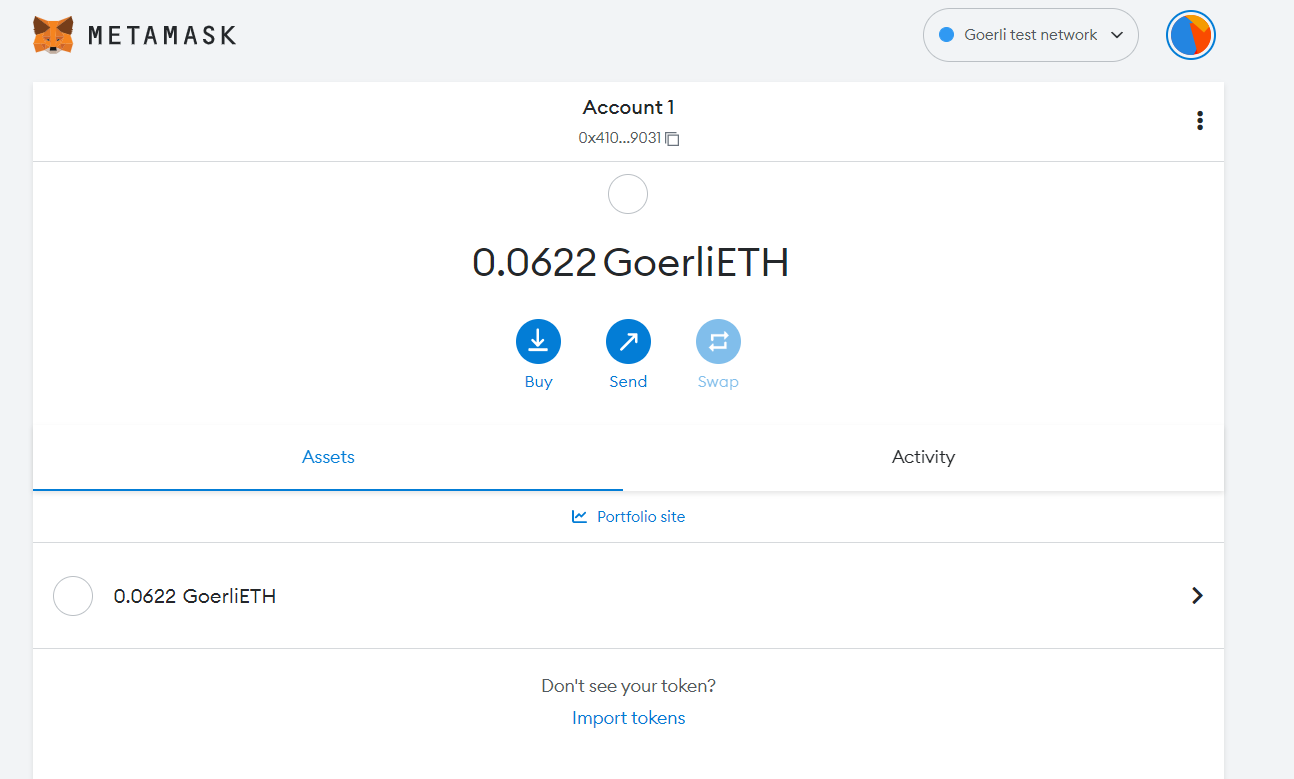
        selfdestruct(owner);

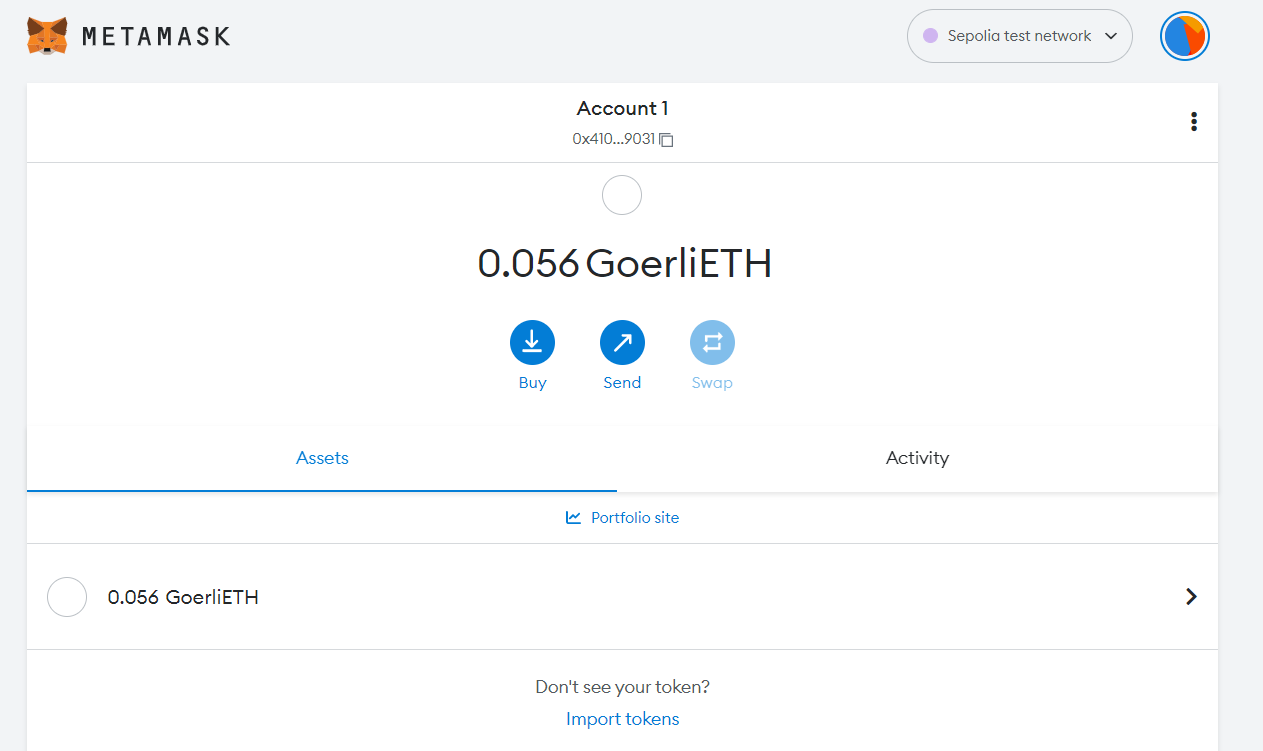
    }

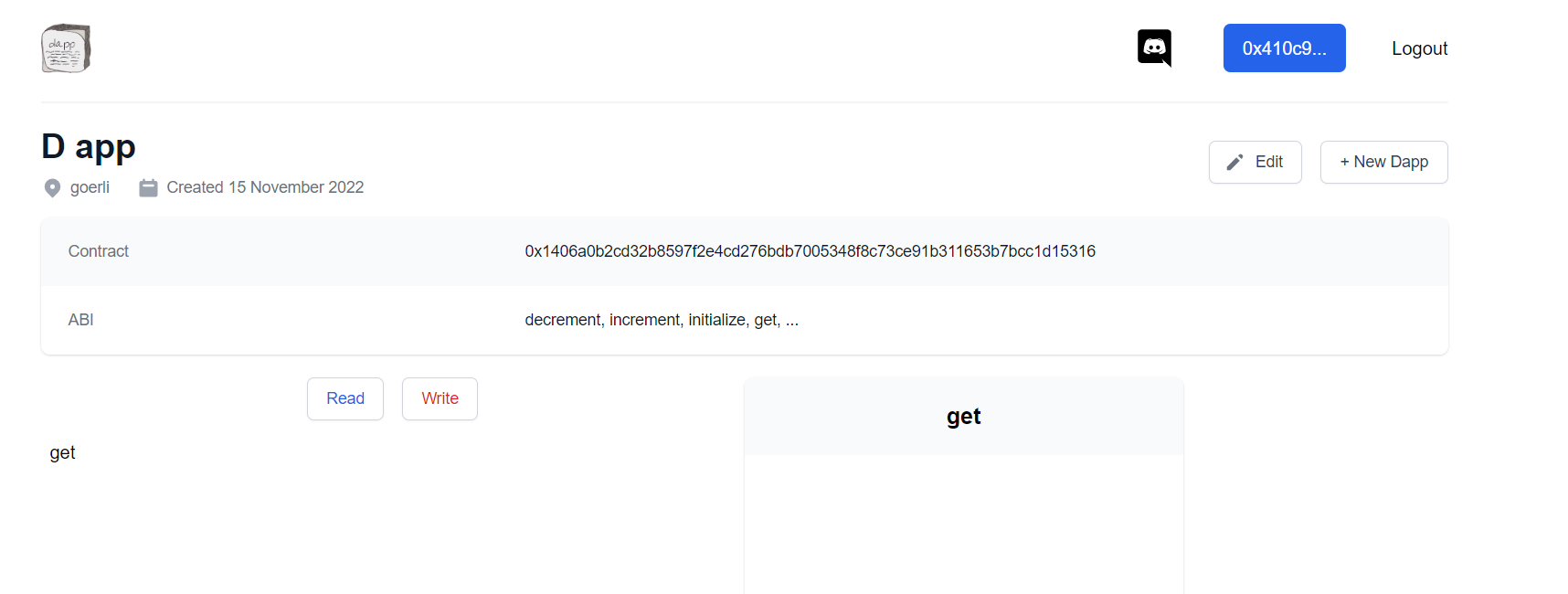
}

**Output :-**

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