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// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

contract MoneyTransfer {

    uint public balance_p = 100;
    uint public balance_a = 100;
    uint public balance_m = 100;

    event Transfer(string from, string to, uint amount);
    event Deposit(string to, uint amount);

    // Function to send money from one user to another
    function send(
        string memory from,
        string memory to,
        uint amount
    ) public {

        if (keccak256(abi.encodePacked(from)) == keccak256(abi.encodePacked("P"))) {

            require(amount <= balance_p, "Insufficient balance for P");
            balance_p -= amount;

            if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("A"))) {
                balance_a += amount;
            }
            else if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("M"))) {
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            balance_m += amount;
        }
        else {
            revert("Invalid recipient");
        }
    }

    else if (keccak256(abi.encodePacked(from)) == keccak256(abi.encodePacked("A"))) {

        require(amount <= balance_a, "Insufficient balance for A");
        balance_a -= amount;

        if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("P"))) {
            balance_p += amount;
        }
        else if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("M"))) {
            balance_m += amount;
        }
        else {
            revert("Invalid recipient");
        }
    }

    else if (keccak256(abi.encodePacked(from)) == keccak256(abi.encodePacked("M"))) {

        require(amount <= balance_m, "Insufficient balance for M");
        balance_m -= amount;
```

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            if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("P"))) {
                balance_p += amount;
            }
            else if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("A"))) {
                balance_a += amount;
            }
            else {
                revert("Invalid recipient");
            }
        }

        else {
            revert("Invalid sender");
        }

        emit Transfer(from, to, amount);
    }

    // Function to deposit money into a user's account
    function deposit(string memory to, uint amount) public {

        if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("P"))) {
            balance_p += amount;
        }
        else if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("A"))) {
            balance_a += amount;
        }
        else if (keccak256(abi.encodePacked(to)) == keccak256(abi.encodePacked("M"))) {
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            balance_m += amount;
        }
        else {
            revert("Invalid recipient");
        }

        emit Deposit(to, amount);
    }
}
```

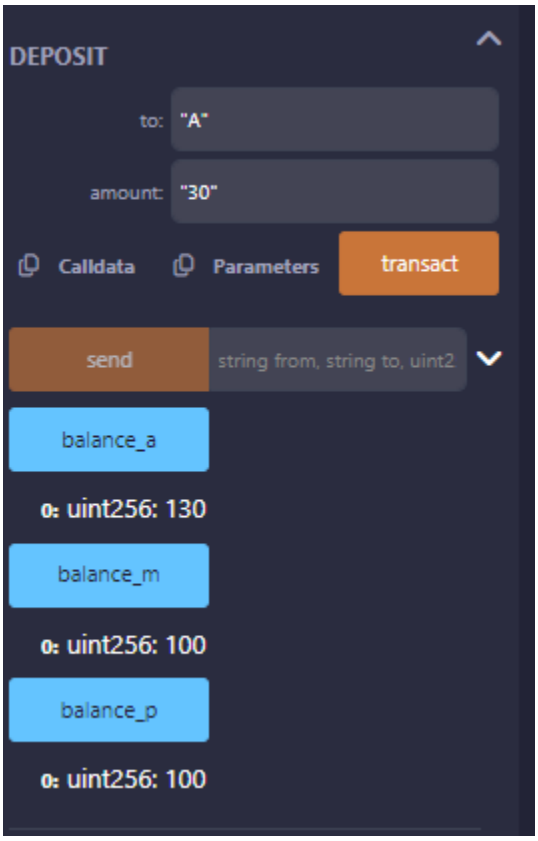


Balance: 0 ETH
deposit
string to, uint256 amount
SEND
from: "a"
to: "p"
amount: "10"
Calldata
Parameters
transact
balance_a
0: uint256: 160
balance_m
0: uint256: 100
balance_p
0: uint256: 100