Assignment.3: smart contract for bank account

CODE and OUTPUT:

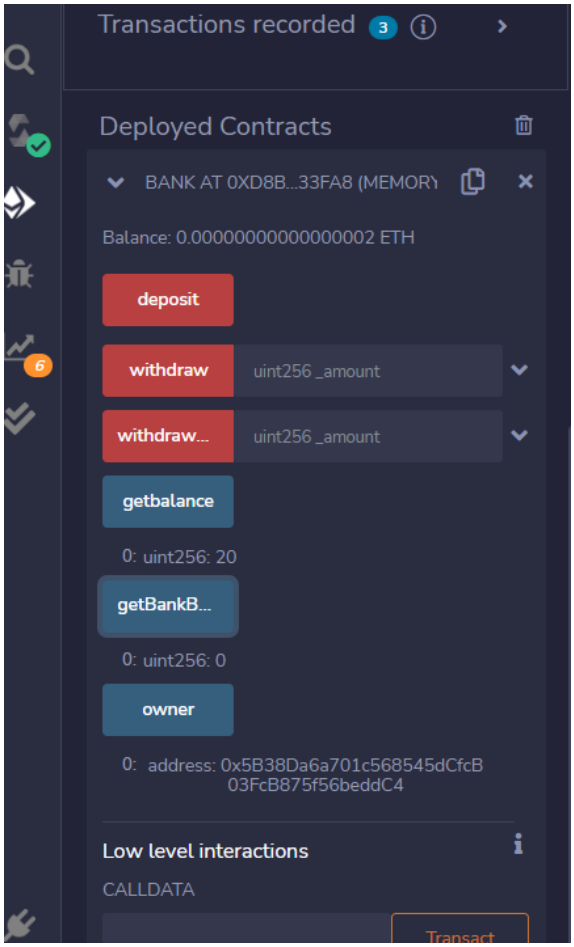
```
// SPDX-License-Identifier: MIT
pragma solidity >=0.7.0 <0.9.0;

contract Bank {

    address public owner;

    mapping(address =>uint256) private userbalance;

    constructor() {
       owner = msg.sender;
    }

    modifier onlyOwner(){
       require (msg.sender==owner, 'You are not the owner of this contract');
    _;
    }

    function deposit() public payable returns(bool) {
       require(msg.value >10 wei, 'Please deposit at least 10 wei');
       userbalance[msg.sender] +=msg.value;
       return true;
    }

    function withdraw(uint256 _amount) public payable returns (bool) {
       require(_amount <=userbalance[msg.sender], 'You dont have sufficient funds');
       userbalance[msg.sender] -=_amount;
       payable(msg.sender).transfer(_amount);
```

```
        return true;
    }

    function getbalance() public view returns(uint256){
        return userbalance[msg.sender];
    }

    function getBankBalance() public view onlyOwner returns(uint256){
        return address(this).balance;
    }

    function withdrawBankBalance (uint256 _amount) public payable onlyOwner returns (bool){
        payable(owner).transfer (_amount);
    return true;
    }

}
```

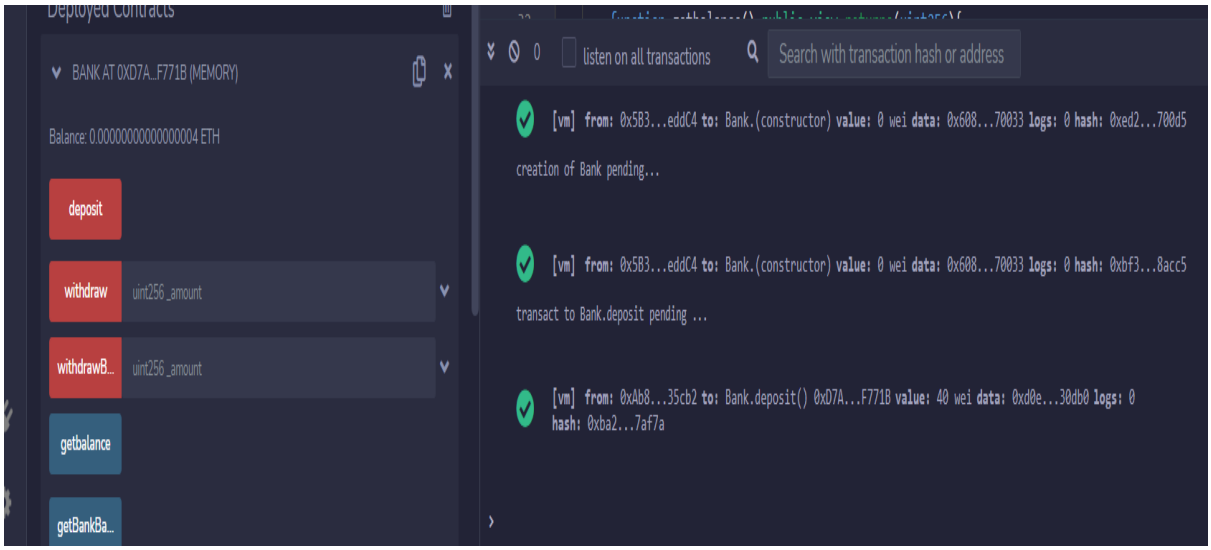
Bank contract with id (will be bank account): 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4

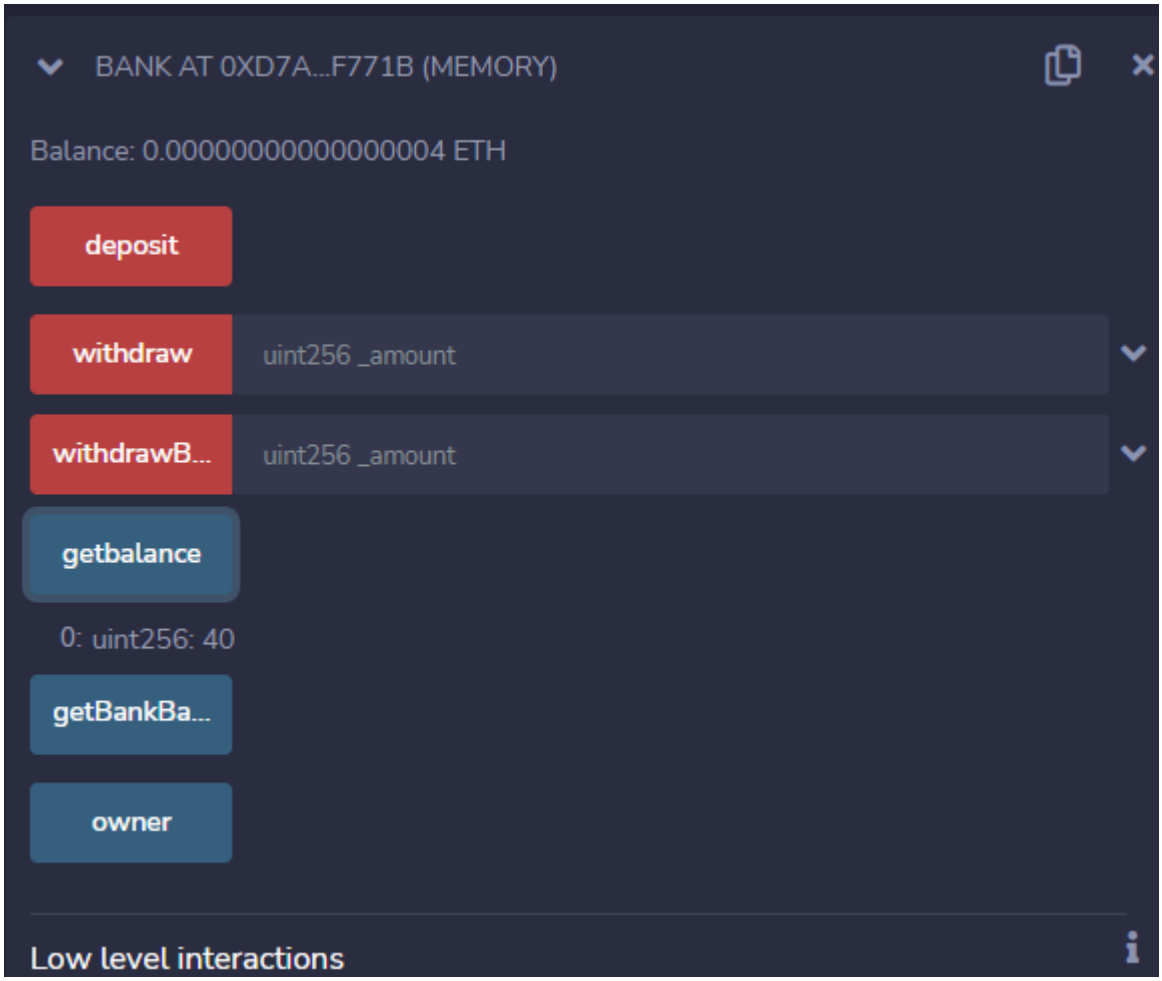
Bank customer with id : 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2

1. **Contract signed**

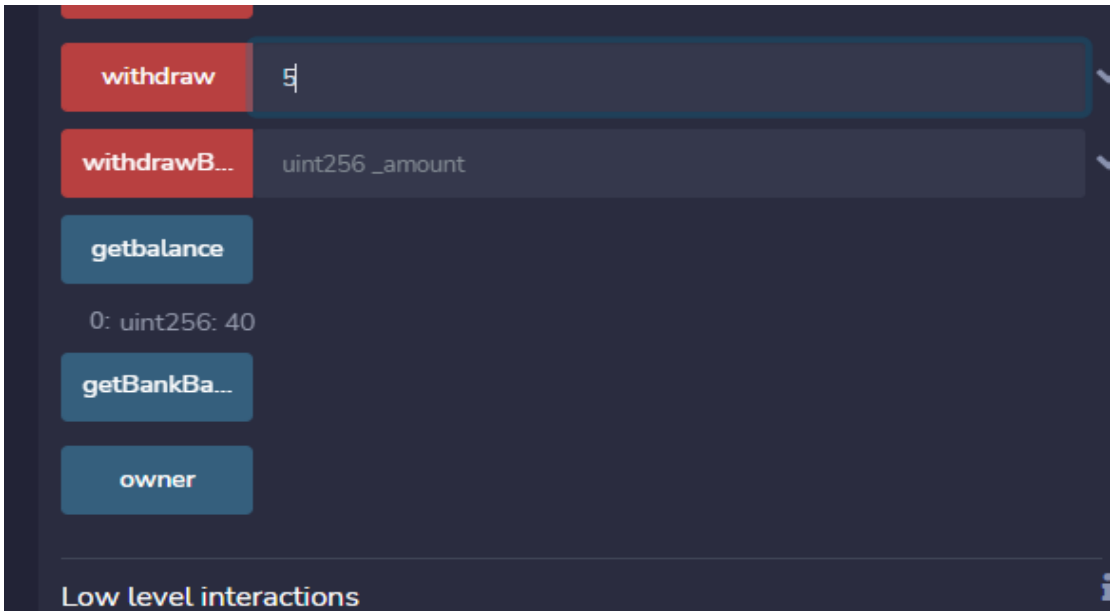


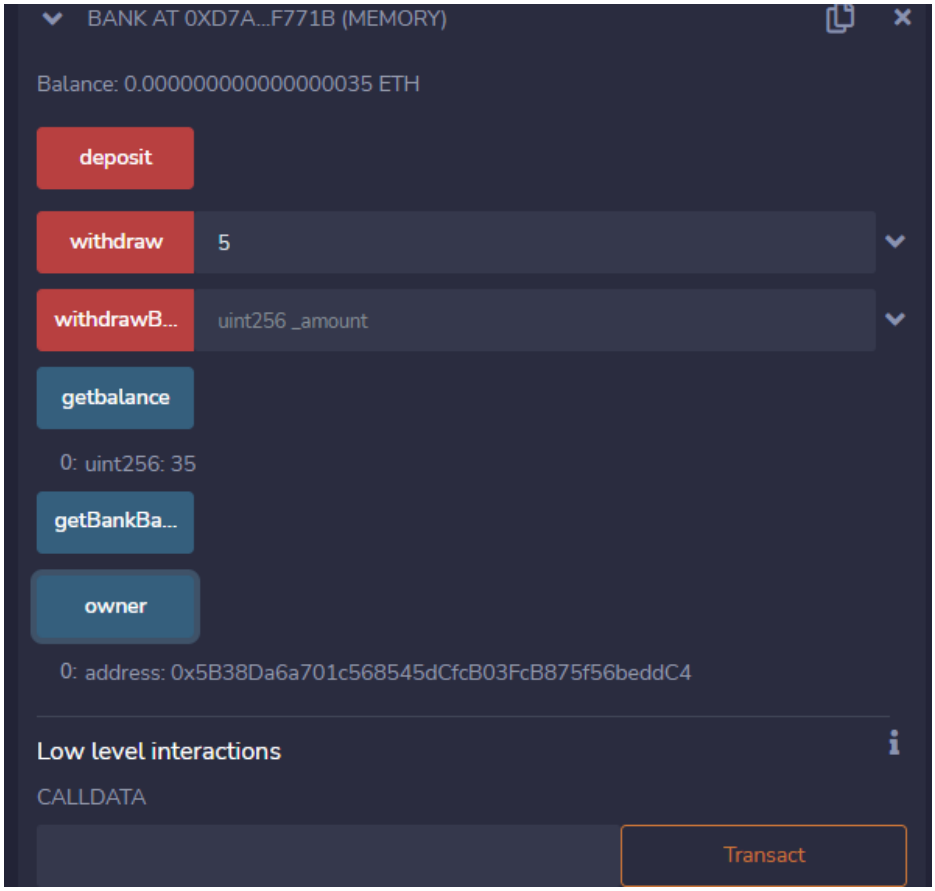
2 User deposits 40





3 **User withdraw**





4 .Bank balance becomes 35 (as 40 - 5)