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Assignment 4

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel is active, displaying the 'Remix VM (Merge)' environment. The account '0x5B3...eddC4 (99.999999%)' is selected. The gas limit is set to 3,000,000 and the value is 0 Wei. The contract 'NDCoinERC20 - ass4.sol' is selected. The 'Deploy' button is highlighted. Below the deployment options, it shows 'Transactions recorded' and 'Deployed Contracts'.

The main editor displays the Solidity code for the NDCoinERC20 contract:

```
1 // SPDX-License-Identifier: GPL-3.0
2 pragma solidity >=0.7.0 <0.9.0;
3
4 contract NDCoinERC20 {
5
6     event Transfer(address indexed from, address indexed to, uint tokens);
7     event Approval(address indexed tokenOwner, address indexed spender, uint tokens);
8
9     string public constant name = "VANEET SINGLA Coin";
10    string public constant symbol = "VS";
11    uint8 public constant decimals = 10;
12
13    mapping(address => uint256) balances;
14
15    mapping(address => mapping (address => uint256)) allowed;
16
17    uint256 totalSupply_;
18
19    constructor(uint256 total) {
20        totalSupply_ = total;
21        balances[msg.sender] = totalSupply_;
22    }
23
24    function totalSupply() public view returns (uint256) {
25        return totalSupply_;
26    }
27
28    function balanceOf(address tokenOwner) public view returns (uint) {
```

The bottom status bar shows a successful deployment: '[vm] from: 0x5B3...eddC4 to: NDCoinERC20.(constructor) value: 0 wei data: 0x608...06ea6 logs: 0 hash: 0xbf4...d7c39'.

The screenshot shows the same Remix IDE interface, but the code editor now displays the implementation of the NDCoinERC20 contract functions:

```
28    function balanceOf(address tokenOwner) public view returns (uint) {
29        return balances[tokenOwner];
30    }
31
32    function transfer(address receiver, uint numTokens) public returns (bool) {
33        require(numTokens <= balances[msg.sender]);
34        balances[msg.sender] -= numTokens;
35        balances[receiver] += numTokens;
36        emit Transfer(msg.sender, receiver, numTokens);
37        return true;
38    }
39
40    function approve(address delegate, uint numTokens) public returns (bool) {
41        allowed[msg.sender][delegate] = numTokens;
42        emit Approval(msg.sender, delegate, numTokens);
43        return true;
44    }
45
46    function allowance(address owner, address delegate) public view returns (uint) {
47        return allowed[owner][delegate];
48    }
49
50    function transferFrom(address owner, address buyer, uint numTokens) public returns (bool) {
51        require(numTokens <= balances[owner]);
52        require(numTokens <= allowed[owner][msg.sender]);
53
54        balances[owner] -= numTokens;
55        allowed[owner][msg.sender] -= numTokens;
```

The bottom status bar shows a successful deployment: '[vm] from: 0x5B3...eddC4 to: NDCoinERC20.(constructor) value: 0 wei data: 0x608...06ea6 logs: 0 hash: 0xbf4...d7c39'.

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT
Remix VM (Merge)

ACCOUNT
0x5B3...eddC4 (99.999999%)

GAS LIMIT
3000000

VALUE
0 Wei

CONTRACT (Compiled by Remix)
NDCoinERC20 - ass4.sol

Deploy 0x736b2bc8223f936dcf69fE

Publish to IPFS

OR

At Address Load contract from Address

Transactions recorded

Deployed Contracts
NDCoinERC20 AT 0XD91...39138

ass4.sol

```
44 }
45
46 function allowance(address owner, address delegate) public view returns (uint) {
47     return allowed[owner][delegate];
48 }
49
50 function transferFrom(address owner, address buyer, uint numTokens) public returns (bool) {
51     require(numTokens <= balances[owner]);
52     require(numTokens <= allowed[owner][msg.sender]);
53
54     balances[owner] -= numTokens;
55     allowed[owner][msg.sender] -= numTokens;
56     balances[buyer] += numTokens;
57     emit Transfer(owner, buyer, numTokens);
58     return true;
59 }
60 }
```

listen on all transactions

Search with transaction hash or address

[vn] from: 0x5B3...eddC4 to: NDCoinERC20.(constructor) value: 0 wei data: 0x608...06ea6 logs: 0 hash: 0xbf4...d7c39

Debug

METAMASK

Goerli test network

< Account 1 / VS

0.0001VS

→ Send

↔ Swap

You have no transactions