



BLOCKCHAIN TECHNOLOGY LAB

(20CP406P)

LAB ASSIGNMENT - 9



B.Tech in Computer Science and Engineering Dept.,
Pandit Deendayal Energy University,
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Branch: Computer Engineering

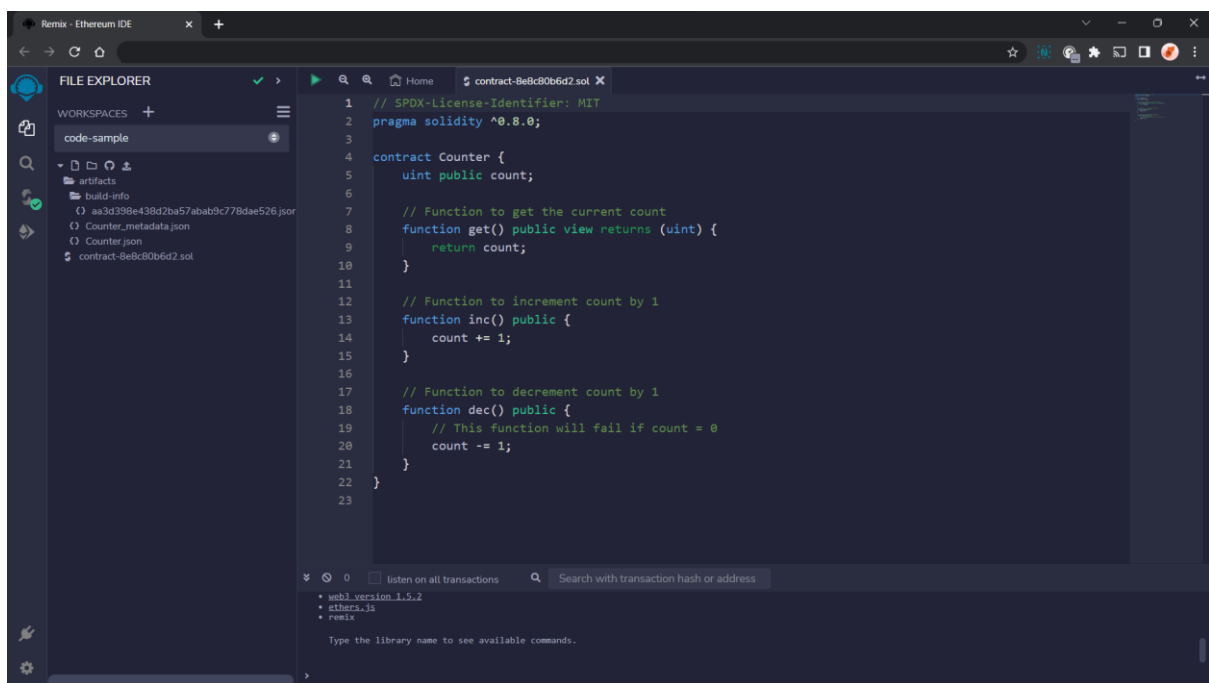
Lab Assignment 9

Aim: Create your own Application of Blockchain Technology

Introduction:

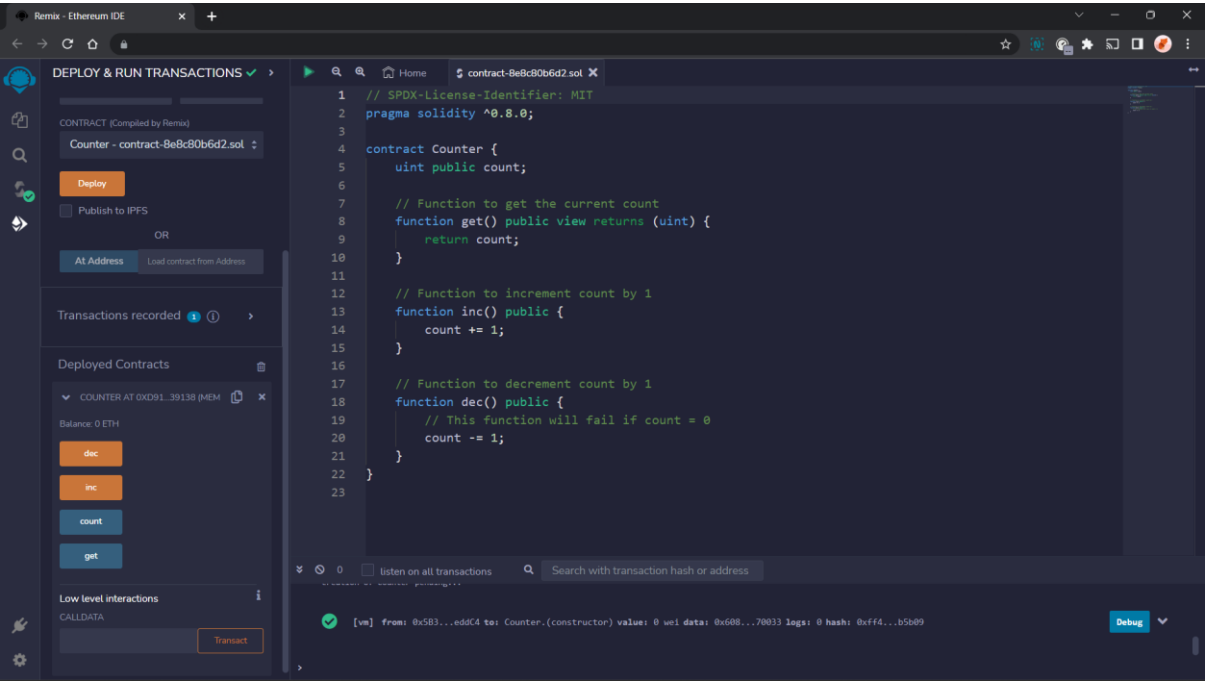
Here is a simple contract application, increment and decrement the count store in this contract.

Source Code and Result:

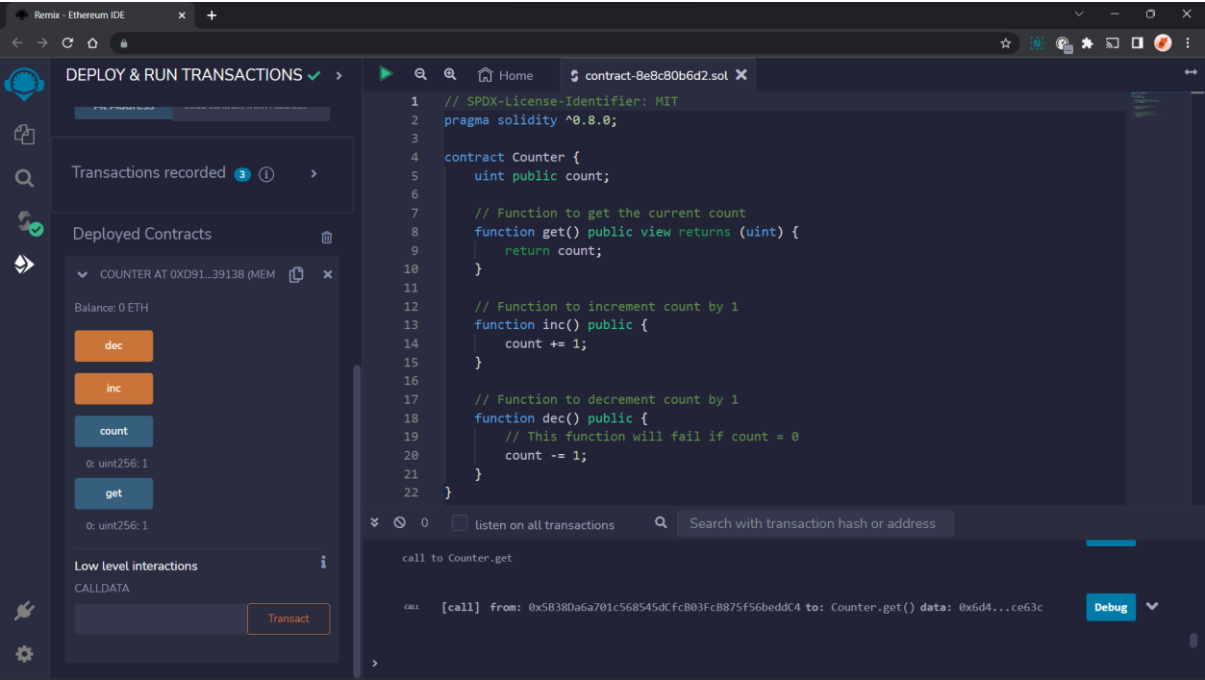


```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 contract Counter {
5     uint public count;
6
7     // Function to get the current count
8     function get() public view returns (uint) {
9         return count;
10    }
11
12    // Function to increment count by 1
13    function inc() public {
14        count += 1;
15    }
16
17    // Function to decrement count by 1
18    function dec() public {
19        // This function will fail if count = 0
20        count -= 1;
21    }
22 }
23
```

Compiling the contract



Incrementing count



Remix - Ethereum IDE

DEPLOY & RUN TRANSACTIONS ✓

Transactions recorded 4 ⓘ

Deployed Contracts

▼ COUNTER AT 0XD91...3913B (MEM) ✕

Balance: 0 ETH

dec

inc

count

get

0: uint256: 2

0: uint256: 2

Low level interactions ⓘ

CALLDATA

Transact

contract-8e8c80b6d2.sol

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 contract Counter {
5     uint public count;
6
7     // Function to get the current count
8     function get() public view returns (uint) {
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15    }
16
17    // Function to decrement count by 1
18    function dec() public {
19        // This function will fail if count = 0
20        count -= 1;
21    }
22 }
```

0 ☐ listen on all transactions 🔍 Search with transaction hash or address

call to Counter.get

CALL [call] from: 0x5B38Da6a701c56854dCfc803Fc8875F56beddC4 to: Counter.get() data: 0x6d4...ce63c Debug ▼

Remix - Ethereum IDE

DEPLOY & RUN TRANSACTIONS ✓

Transactions recorded 5 ⓘ

Deployed Contracts

▼ COUNTER AT 0XD91...3913B (MEM) ✕

Balance: 0 ETH

dec

inc

count

get

0: uint256: 3

0: uint256: 3

Low level interactions ⓘ

CALLDATA

Transact

contract-8e8c80b6d2.sol

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
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0 ☐ listen on all transactions 🔍 Search with transaction hash or address

call to Counter.get

CALL [call] from: 0x5B38Da6a701c56854dCfc803Fc8875F56beddC4 to: Counter.get() data: 0x6d4...ce63c Debug ▼

Decrementing count

DEPLOY & RUN TRANSACTIONS

Transactions recorded 6

Deployed Contracts

COUNTER AT 0XD91...39138 (MEM)

Balance: 0 ETH

dec

inc

count

0: uint256: 2

get

0: uint256: 2

Low level interactions

CALLDATA

Transact

contract-8e8c80b6d2.sol

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 contract Counter {
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16
17    // Function to decrement count by 1
18    function dec() public {
19        // This function will fail if count = 0
20        count -= 1;
21    }
22 }
```

call to Counter.get

CALL [call] from: 0x5B38Da6a701c568545dCfcB03Fc8875F56beddC4 to: Counter.get() data: 0x6d4...ce63c

Debug

DEPLOY & RUN TRANSACTIONS

Transactions recorded 7

Deployed Contracts

COUNTER AT 0XD91...39138 (MEM)

Balance: 0 ETH

dec

inc

count

0: uint256: 1

get

0: uint256: 1

Low level interactions

CALLDATA

Transact

contract-8e8c80b6d2.sol

```
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call to Counter.get

CALL [call] from: 0x5B38Da6a701c568545dCfcB03Fc8875F56beddC4 to: Counter.get() data: 0x6d4...ce63c

Debug