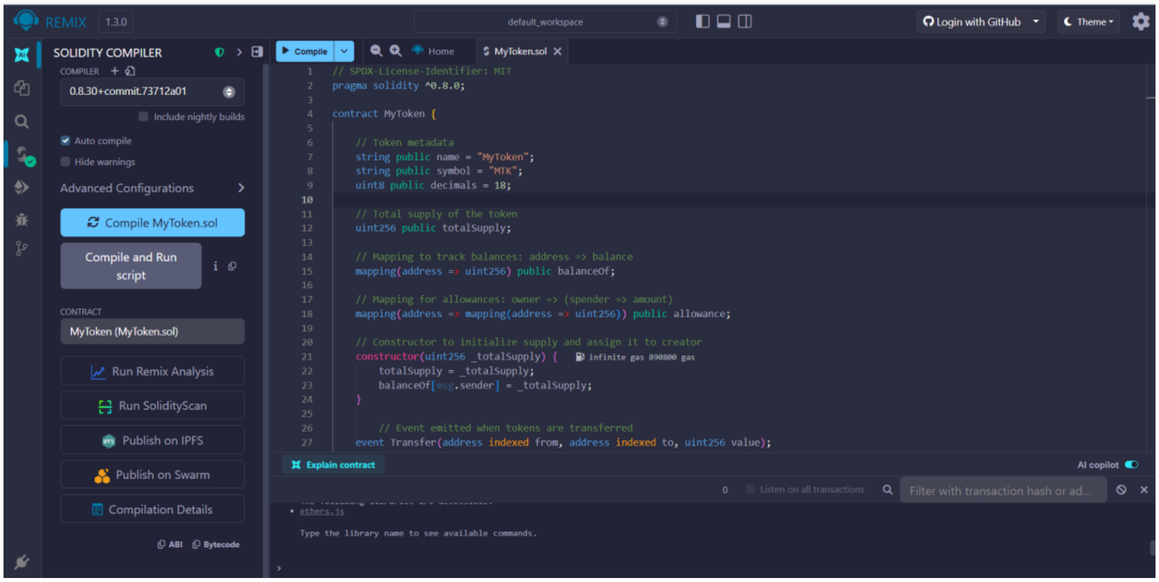
First ERC-20 Token on Ethereum

Compilation Success



COMPILER: 0.8.30+commit.73712a01

□ Include nightly builds

☑ Auto compile

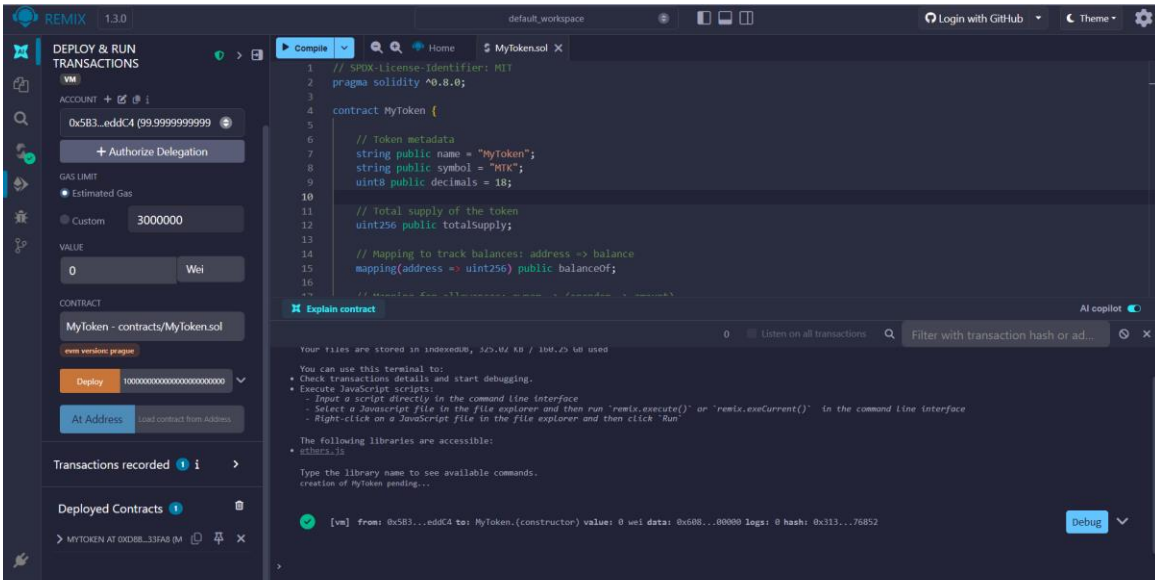
□ Hide warnings

CONTRACT: MyToken (MyToken.sol)

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

contract MyToken {

    // Token metadata
    string public name = "MyToken";
    string public symbol = "MTK";
    uint8 public decimals = 18;

    // Total supply of the token
    uint256 public totalSupply;

    // Mapping to track balances: address => balance
    mapping(address => uint256) public balanceOf;

    // Mapping for allowances: owner => (spender => amount)
    mapping(address => mapping(address => uint256)) public allowance;

    // Constructor to initialize supply and assign it to creator
    constructor(uint256 _totalSupply) {    infinite gas 890800 gas
        totalSupply = _totalSupply;
        balanceOf[msg.sender] = _totalSupply;
    }

        // Event emitted when tokens are transferred
    event Transfer(address indexed from, address indexed to, uint256 value);
```

```
• ethers.js

Type the library name to see available commands.
```

Deployment Screenshot



ACCOUNT: 0x5B3...eddC4 (99.9999999999

GAS LIMIT: ● Estimated Gas ○ Custom 3000000

VALUE: 0 Wei

CONTRACT: MyToken - contracts/MyToken.sol

evm version: prague

Deploy 1000000000000000000000000

Transactions recorded 1

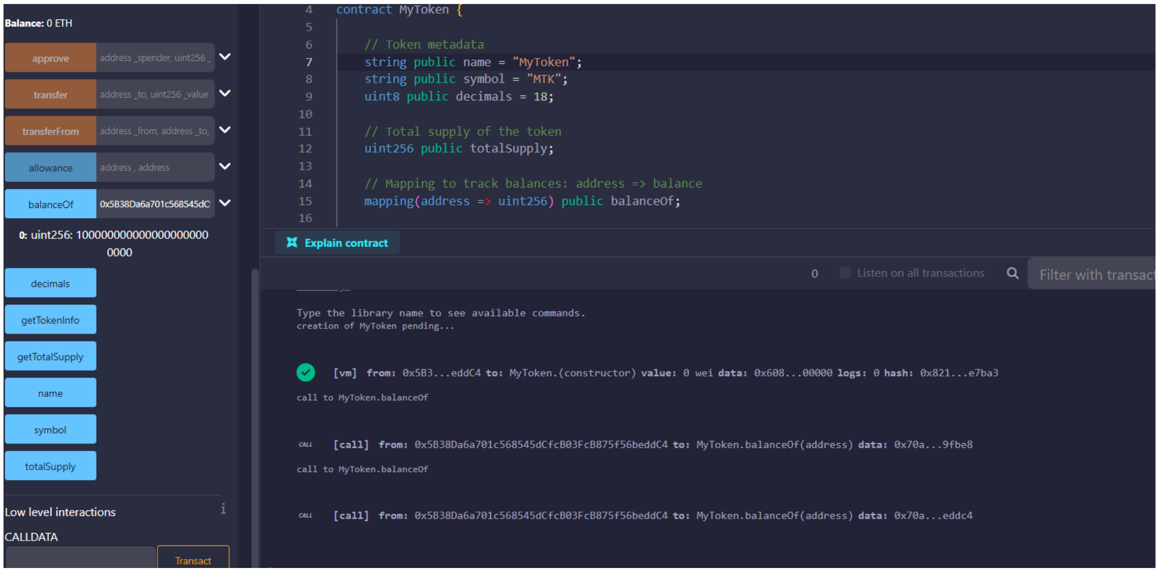
Deployed Contracts 1

> MYTOKEN AT 0XD8B...33FA8 (M

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

contract MyToken {

    // Token metadata
    string public name = "MyToken";
    string public symbol = "MTK";
    uint8 public decimals = 18;

    // Total supply of the token
    uint256 public totalSupply;

    // Mapping to track balances: address => balance
    mapping(address => uint256) public balanceOf;
```

```
Your files are stored in indexedDB, 325.02 KB / 160.25 GB used

You can use this terminal to:
• Check transactions details and start debugging.
• Execute JavaScript scripts:
  - Input a script directly in the command line interface
  - Select a Javascript file in the file explorer and then run `remix.execute()` or `remix.exeCurrent()`  in the command line interface
  - Right-click on a JavaScript file in the file explorer and then click `Run`

The following libraries are accessible:
• ethers.js

Type the library name to see available commands.
creation of MyToken pending...

[vm] from: 0x5B3...eddC4 to: MyToken.(constructor) value: 0 wei data: 0x608...00000 logs: 0 hash: 0x313...76852
```

Token Metadata(Balance check)



Balance: 0 ETH

approve: address _spender, uint256 _

transfer: address _to, uint256 _value

transferFrom: address _from, address _to,

allowance: address , address

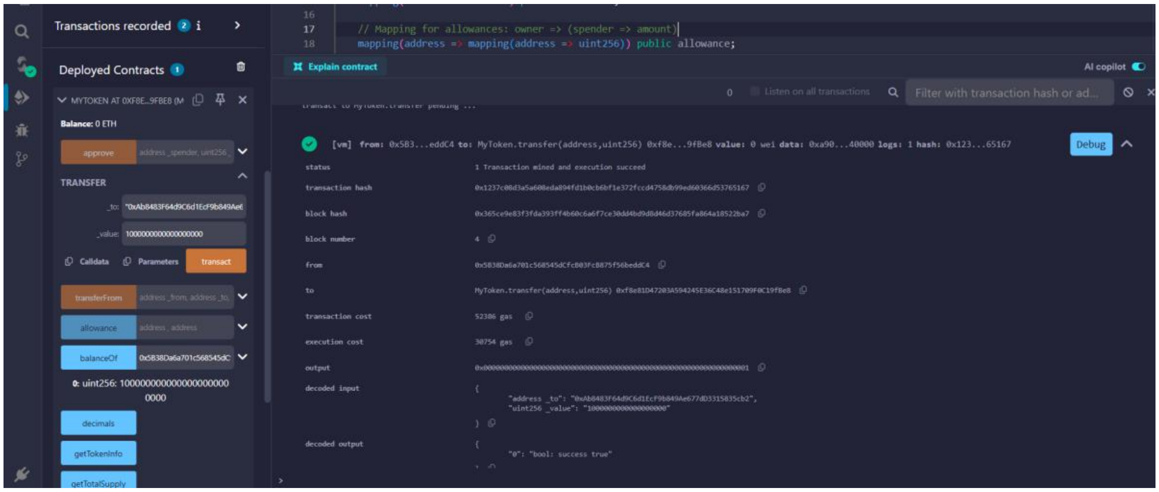
balanceOf: 0x5B38Da6a701c568545dC

0: uint256: 1000000000000000000000000

```
contract MyToken {

    // Token metadata
    string public name = "MyToken";
    string public symbol = "MTK";
    uint8 public decimals = 18;

    // Total supply of the token
    uint256 public totalSupply;

    // Mapping to track balances: address => balance
    mapping(address => uint256) public balanceOf;

```

```
Type the library name to see available commands.
creation of MyToken pending...

[vm] from: 0x5B3...eddC4 to: MyToken.(constructor) value: 0 wei data: 0x608...00000 logs: 0 hash: 0x821...e7ba3
call to MyToken.balanceOf

CALL  [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...9fbe8
call to MyToken.balanceOf

CALL  [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...eddc4
```

Transfer Test



Balance: 0 ETH

approve: address _spender, uint256 _

_to: "0xAb8483F64d9C6d1EcF9b849Ae6

_value: 1000000000000000000

transferFrom: address _from, address _to,

allowance: address , address

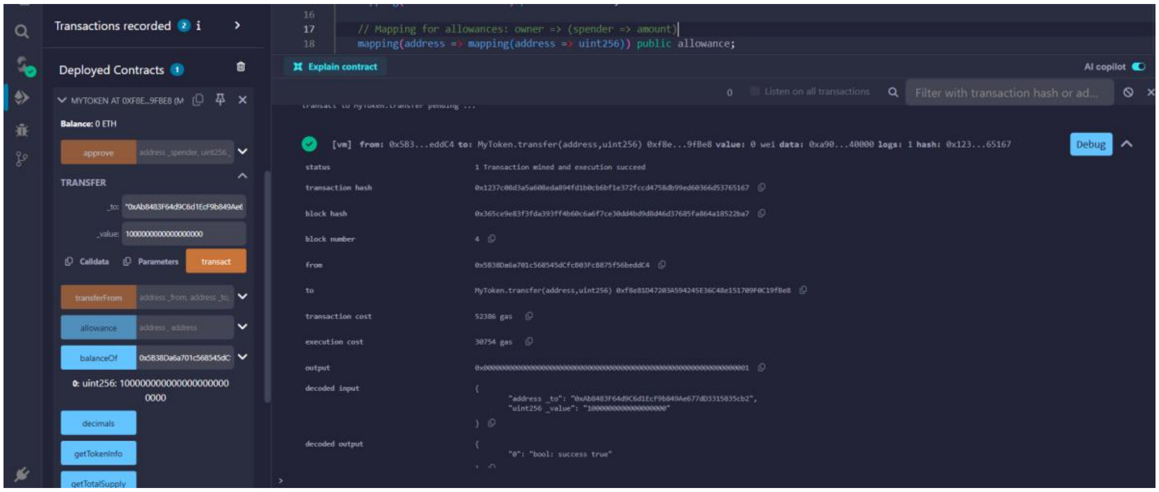
balanceOf: 0x5B38Da6a701c568545dC

0: uint256: 1000000000000000000000000

```
    // Mapping for allowances: owner => (spender => amount)
    mapping(address => mapping(address => uint256)) public allowance;
```

```
transact to MyToken.transfer pending ...

[vm] from: 0x5B3...eddC4 to: MyToken.transfer(address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0xa90...40000 logs: 1 hash: 0x123...65167
status               1 Transaction mined and execution succeed
transaction hash     0x1237c08d3a5a608eda894fd1b0cb6bf1e372fccd4758db99ed60366d53765167
block hash           0x365ce9e83f3fda393ff4b60c6a6f7ce30dd4bd9d8d46d37685fa864a18522ba7
block number         4
from                 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to                   MyToken.transfer(address,uint256) 0xf8e81D47203A594245E36C48e151709F0C19fBe8
transaction cost     52386 gas
execution cost       30754 gas
output               0x0000000000000000000000000000000000000000000000000000000000000001
decoded input        {
                             "address _to": "0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2",
                             "uint256 _value": "1000000000000000000"
                     }
decoded output       {
                             "0": "bool: success true"
```

Balance check of Account-2:



Balance: 0 ETH

_to: "0xAb8483F64d9C6d1EcF9b849Ae6

_value: 1000000000000000000

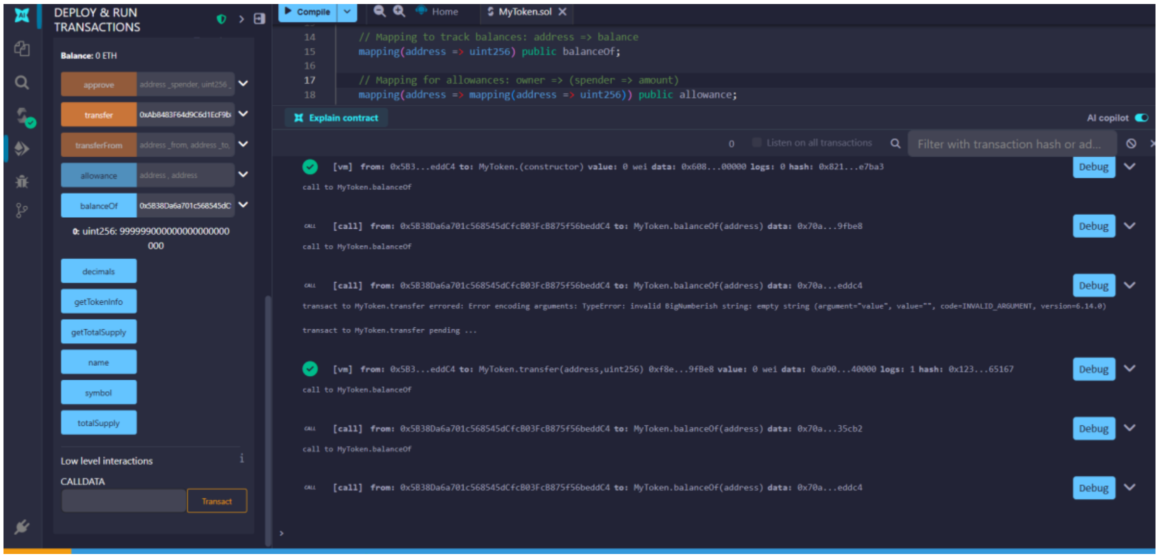
balanceOf 0x5B38Da6a701c568545dC

0: uint256: 1000000000000000000

```
    // Mapping for allowances: owner => (spender => amount)
    mapping(address => mapping(address => uint256)) public allowance;
```

```
[vm] from: 0x5B3...eddC4 to: MyToken.transfer(address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0xa90...40000 logs: 1 hash: 0x123...65167
status                  1 Transaction mined and execution succeed
transaction hash        0x1237c08d3a5a608eda894fd1b0cb6bf1e372fccd4758db99ed60366d53765167
block hash              0x365ce9e83f3fda393ff4b60c6a6f7ce30dd4bd9d8d46d37685fa864a18522ba7
block number            4
from                    0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to                      MyToken.transfer(address,uint256) 0xf8e81D47203A594245E36C48e151709F0C19fBe8
transaction cost        52386 gas
execution cost          30754 gas
output                  0x0000000000000000000000000000000000000000000000000000000000000001
decoded input           {
                                "address _to": "0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2",
                                "uint256 _value": "1000000000000000000"
                        }
decoded output          {
                                "0": "bool: success true"
```

Balance check of Account-1:



Balance: 0 ETH

transfer 0xAb8483F64d9C6d1EcF9b

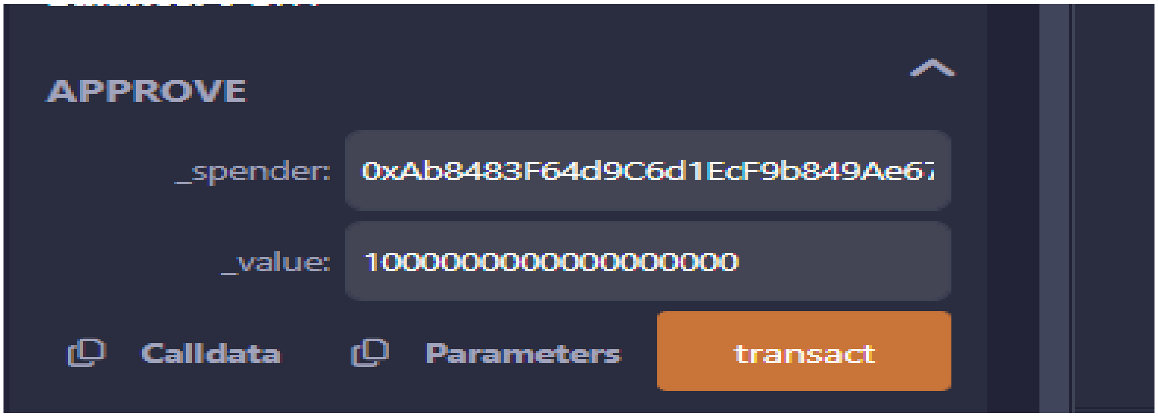
balanceOf 0x5B38Da6a701c568545dC

0: uint256: 999999000000000000000000

```
    // Mapping to track balances: address => balance
    mapping(address => uint256) public balanceOf;

    // Mapping for allowances: owner => (spender => amount)
    mapping(address => mapping(address => uint256)) public allowance;
```

```
[vm] from: 0x5B3...eddC4 to: MyToken.(constructor) value: 0 wei data: 0x608...00000 logs: 0 hash: 0x821...e7ba3
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...9fbe8
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...eddc4
transact to MyToken.transfer errored: Error encoding arguments: TypeError: invalid BigNumberish string: empty string (argument="value", value="", code=INVALID_ARGUMENT, version=6.14.0)

transact to MyToken.transfer pending ...

[vm] from: 0x5B3...eddC4 to: MyToken.transfer(address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0xa90...40000 logs: 1 hash: 0x123...65167
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...35cb2
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...eddc4
```

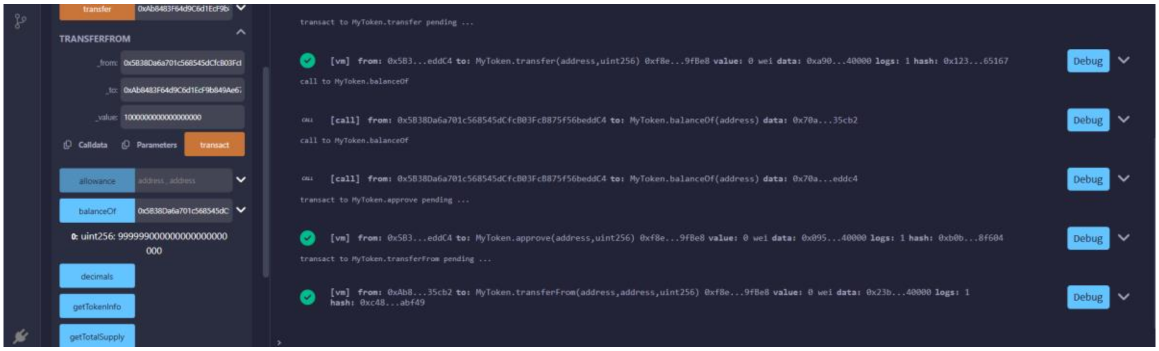
Approve Test



_spender: 0xAb8483F64d9C6d1EcF9b849Ae67

_value: 1000000000000000000

transferFrom Test



transfer 0xAb8483F64d9C6d1EcF9b

_from: 0x5B38Da6a701c568545dCfcB03Fcl

_to: 0xAb8483F64d9C6d1EcF9b849Ae67

_value: 1000000000000000000

allowance address , address

balanceOf 0x5B38Da6a701c568545dC

0: uint256: 99999000000000000000
000

```
transact to MyToken.transfer pending ...

[vm] from: 0x5B3...eddC4 to: MyToken.transfer(address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0xa90...40000 logs: 1 hash: 0x123...65167
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...35cb2
call to MyToken.balanceOf

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: MyToken.balanceOf(address) data: 0x70a...eddc4
transact to MyToken.approve pending ...

[vm] from: 0x5B3...eddC4 to: MyToken.approve(address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0x095...40000 logs: 1 hash: 0xb0b...8f604
transact to MyToken.transferFrom pending ...

[vm] from: 0xAb8...35cb2 to: MyToken.transferFrom(address,address,uint256) 0xf8e...9fBe8 value: 0 wei data: 0x23b...40000 logs: 1
hash: 0xc48...abf49
```