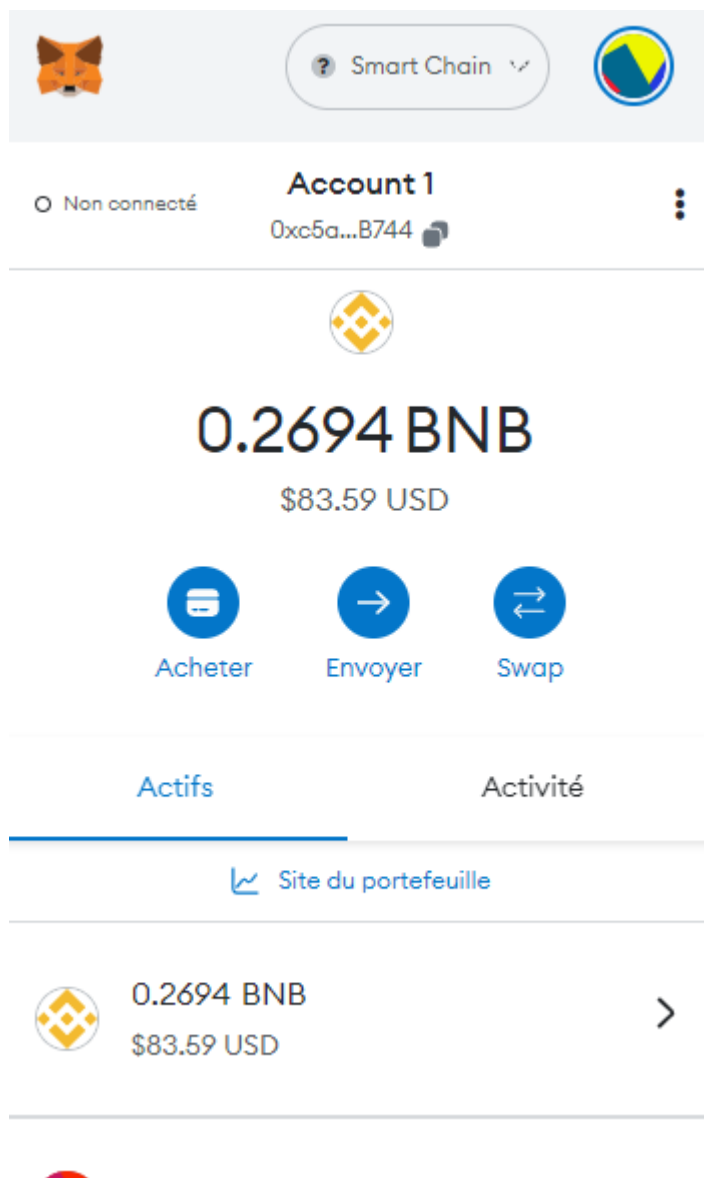


a)b)c) J'avais déjà un compte Metamask :



d) J'ai ajouté un réseau :

chrome-extension://nkbihfbeogaeaoehlefnkodbefgpgknn/home.html#settings/networks/add-network

Paramètres avancés

Contacts

Sécurité et confidentialité

Alertes

Réseaux

À propos

Un fournisseur de réseau malveillant peut mentir quant à l'état de la blockchain et enregistrer votre activité réseau. N'ajoutez que des réseaux personnalisés auxquels vous faites confiance.

Nom du réseau

SUDRIA TESTNET

Nouvelle URL de RPC

https://data-seed-prebsc-1-s1.binance.org:8545

ID de chaîne ⓘ

97

Symbole de la devise

ETH

Le réseau avec l'ID de chaîne 97 peut utiliser un symbole de devise différent (tBNB) de celui que vous avez saisi. Veuillez vérifier avant de continuer.

URL de l'explorateur de blocs (Facultatif)

https://testnet.bscscan.com/

Annuler

Enregistrer

e) J'ai envoyé un mail pour recevoir mes premiers ETH.

Tp blockchain 🔍

FI

Furkan Ikiz

À : christophe.ozcan@gmail.com

Mar 28/03/2023 10:49


Adresse de mon portefeuille : 0xc5a522099d73D9a5aa9E3a6a5eB193dc6CBfB744

↳ Répondre

↳ Transférer

f) J'ai bien reçu mes premiers ETH :

Account 1
0xc5a...B744


0.02 ETH
\$34.59 USD

Acheter


Envoyer

Swap

Actifs

Activité

[Site du portefeuille](#)

 0.02 ETH
\$34.59 USD

>

Vous ne voyez pas votre jeton ?
[Importer des jetons](#)

Vous avez besoin d'aide ? Contactez [Assistance MetaMask](#)

Voici les détails de la transaction ci-dessous :


Transactions

BEP-20 Token Txns

🔍

Dernière 1 sur un total de 1 transactions

ⓘ

Hachage Txn	Méthode①	Bloc	Âge	Depuis ⌵	Pour ⌵	Valeur	[Frais de transmission]
 0x880a3dfdd7719acf3df...	Transfert	28434237	il y a 3 minutes	0x533fb0469d523dfd5bf...	DANS 0xc5a522099d73d9a5aa...	0.02 BNB	0.00021

Overview	
[This is a Bsc Testnet transaction only]	
Transaction Hash:	0x880a3dfdd7719acf3df7408dde0b4e92a22973252037f3168677eabdbd523494 🔗
Status:	Success
Block:	28434237 123 Block Confirmations
Timestamp:	6 mins ago (Mar-28-2023 08:51:54 AM +UTC)
From:	0x533fb0469d523dfd5bf3d97e0ad75ea66328d08e 🔗
To:	0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744 🔗
Value:	0.02 BNB (\$0.00)
Transaction Fee:	0.00021 BNB (\$0.07)
Gas Price:	0.00000001 BNB (10 Gwei)
Click to see More ↓	

g) Ci-dessous nous avons le numéro de Block de la transaction. Ci-dessous les détails :

Overview	
[This is a Bsc Testnet block only]	
Block Height:	28434237 < >
Timestamp:	6 mins ago (Mar-28-2023 08:51:54 AM +UTC)
Transactions:	11 transactions and 76 contract internal transactions in this block
Validated by:	0xd474cf03ccef28abc65c9cbac594f725c80e12d in 3 secs
Block Reward:	0.016381996 BNB
Difficulty:	2
Total Difficulty:	56,692,559
Size:	5,099 bytes
Gas Used:	1,597,922 (3.20%)
Gas Limit:	50,000,000
Fee Burnt:	0.0016381996 BNB 🔗

h) J'ai générer ma première transaction en envoyant 0.01 ETH :


Envoyer

✓

0x533fB0469D523dfD5BF3D97e0Ad75ea66328D08E

✕

Actif:

ETH

Solde: 0.02 ETH

Montant:

Max.

0.01 ETH

\$17.29 USD

↕

Prix du gaz (GWEI)

10

Montant maximal des frais de transaction

21000

Données Hex:

Facultatif

Carburant (estimé)

\$0.36


0.00021 ETH

Annuler

Suivant

Account 1

0xc5a...B744



0.0098 ETH

\$16.93 USD

Acheter

Envoyer

Swap

Actifs

Activité

Site du portefeuille

↗

Envoyer

Mar 28 • Vers: 0x533...d08e

-0.01 ETH

-\$17.29 USD

Vous avez besoin d'aide ? Contactez [Assistance MetaMask](#)

i)j) IDE Remix a bien été ouvert et le code source de notre premier smart contract a été récupérer :

maitre

1 succursale

0 balises

Aller au dossier

Ajouter le fichier

Code

Google Translate

Propos

Cette branche a 10 commits d'avance sur MosesSamPaul:master .

cozcan	Correction de la solidité version 0.4.12	3facee	le 25 mars 2022	11 engagements
construction/ contrats	premier engagement			il y a 5 ans
contrats	Correction de la solidité version 0.4.12			l'année dernière
migrations	premier engagement			il y a 5 ans
node_modules	premier engagement			il y a 5 ans
src	premier engagement			il y a 5 ans
test	premier engagement			il y a 5 ans
bs-config.json	premier engagement			il y a 5 ans
package-lock.json	premier engagement			il y a 5 ans
package.json	premier engagement			il y a 5 ans
truffle.js	premier engagement			il y a 5 ans

Une élection Dapp

1 étoile

1 regarder

45 fourchettes

Communiqués

Aucun communiqué publié

Paquets

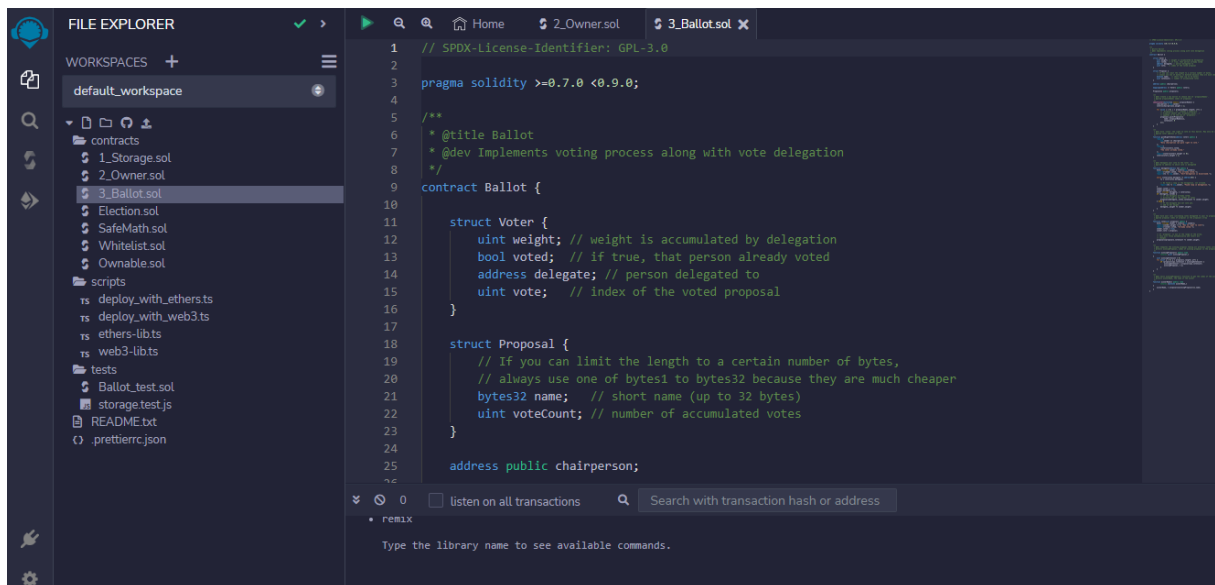
Aucun package publié

Langues

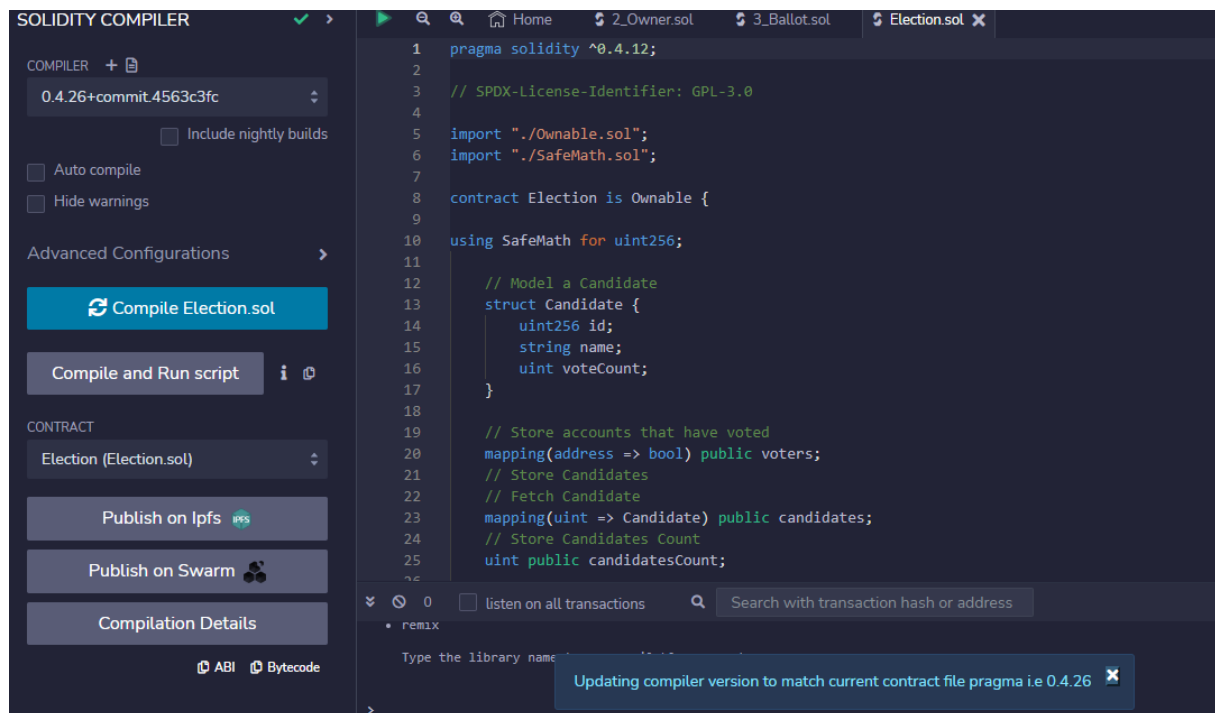
Javascript 95,6 %

HTML 1,8 %

k) L'ensemble des fichiers Solidity ont été ajouté sur notre environnement Remix :



l) Le smart contract « Election » a bien été compilé :



ABI :

```
[
  {
    "constant": false,
    "inputs": [
      {
        "name": "_candidateId",
        "type": "uint256"
      }
    ],
    "name": "vote",
    "outputs": [],
    "payable": false,
    "stateMutability": "nonpayable",
    "type": "function"
  },
  {
    "constant": true,
    "inputs": [],
    "name": "candidatesCount",
    "outputs": [
      {
        "name": "",
        "type": "uint256"
      }
    ],
    "payable": false,
```

```

        "stateMutability": "view",
        "type": "function"
    },
    {
        "constant": true,
        "inputs": [
            {
                "name": "",
                "type": "uint256"
            }
        ],
        "name": "candidates",
        "outputs": [
            {
                "name": "id",
                "type": "uint256"
            },
            {
                "name": "name",
                "type": "string"
            },
            {
                "name": "voteCount",
                "type": "uint256"
            }
        ],
        "payable": false,
        "stateMutability": "view",
        "type": "function"
    },
    {
        "constant": false,
        "inputs": [
            {
                "name": "_name",
                "type": "string"
            }
        ],
        "name": "addCandidate",
        "outputs": [],
        "payable": false,
        "stateMutability": "nonpayable",
        "type": "function"
    },
    {
        "constant": true,
        "inputs": [],
        "name": "owner",
        "outputs": [
            {

```



```

        "name": "",
        "type": "address"
    }
],
"payable": false,
"stateMutability": "view",
"type": "function"
},
{
    "constant": true,
    "inputs": [
        {
            "name": "",
            "type": "address"
        }
    ],
    "name": "voters",
    "outputs": [
        {
            "name": "",
            "type": "bool"
        }
    ],
    "payable": false,
    "stateMutability": "view",
    "type": "function"
},
{
    "constant": false,
    "inputs": [
        {
            "name": "newOwner",
            "type": "address"
        }
    ],
    "name": "transferOwnership",
    "outputs": [],
    "payable": false,
    "stateMutability": "nonpayable",
    "type": "function"
},
{
    "anonymous": false,
    "inputs": [
        {
            "indexed": true,
            "name": "_candidateId",
            "type": "uint256"
        }
    ],

```

```

        "name": "votedEvent",
        "type": "event"
    },
    {
        "anonymous": false,
        "inputs": [
            {
                "indexed": true,
                "name": "previousOwner",
                "type": "address"
            },
            {
                "indexed": true,
                "name": "newOwner",
                "type": "address"
            }
        ],
        "name": "OwnershipTransferred",
        "type": "event"
    }
]

```

Bytecode :

```

6080604052336000806101000a81548173ffffffffffffffffffffffffffffffff021916908373ffffffffffffffffffffffffffffffff
ff160217905550610897806100536000396000f300608060405260043610610083576000357c0100000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
80633477ee2e146100e0578063462e91ec146101945780638da5cb5b146101fd578063a3ec138d14610254578063f2fde
38b146102af575b600080fd5b34801561009457600080fd5b506100b3600480360381019080803590602001909291905
050506102f2565b005b3480156100c157600080fd5b506100ca610415565b60405180828152602001915050604051809
10390f35b3480156100ec57600080fd5b5061010b6004803603810190808035906020019092919050505061041b565b6
04051808481526020018060200183815260200182810382528481815181526020019150805190602001908083836000
5b8381101561015757808201518184015260208101905061013c565b50505050905090810190601f1680156101845780
820380516001836020036101000a031916815260200191505b5094505050505060405180910390f35b3480156101a057
600080fd5b506101fb600480360381019080803590602001908201803590602001908080601f01602080910402602001
604051908101604052809392919081815260200183838082843782019150505050505091929192905050506104dd565
b005b34801561020957600080fd5b5061021261055a565b604051808273ffffffffffffffffffffffffffffffff1673fffff
ffffffffffffffffffffffff16815260200191505060405180910390f35b34801561026057600080fd5b506102956004803603
81019080803573ffffffffffffffffffffffffffffffff16906020019092919050505061057f565b6040518082151515158152
60200191505060405180910390f35b3480156102bb57600080fd5b506102fd600480360381019080803573ffffffffffff
ffffffffffffffff16906020019092919050505061059f565b005b600160003373ffffffffffffffffffffffffffffffff1673ff
ffffffffffffffffffffffff16815260200190815260200160002060009054906101000a900460ff1615151561034b57
600080fd5b60008111801561035d57506003548111155b151561036857600080fd5b60018060003373fffffffffffff
ffffffffffff1673ffffffffffffffffffffffff16815260200190815260200160002060006101000a81548160ff0219
16908315150217905550600260008281526020019081526020016000206002016000815480929190600101919050555
0807fff3e900d938d21d0990d786e819f29b8d05c1ef587b462b939609625b684b1660405160405180910390a250565b6
0035481565b600260205280600052604060002060009150905080600001549080600101805460018160011615610100
0203166002900480601f016020809104026020016040519081016040528092919081815260200182805460018160011
6156101000203166002900480156104cd5780601f106104a2576101008083540402835291602001916104cd565b82019
1906000526020600020905b8154815290600101906020018083116104b057829003601f168201915b50505050509080
60020154905083565b60036000815480929190600101919050555060606040519081016040528060035481526020018
28152602001600081525060026000600354815260200190815260200160002060008201518160000155602082015181
60010190805190602001906105499291906107c6565b506040820151816002015590505050565b60008090549061010
00a900473ffffffffffffffffffffffff1681565b60016020528060005260406000206000915054906101000a90046

```

```

0ff1681565b6000809054906101000a900473ffffffffffffffffffffffff1673ffffffffffffffffffffffff1633
73ffffffffffffffffffffffff16141515610663576040517f08c379a000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000
206f70657261746966f6e00000000000000000000000000000000000000000000000000000000000000000
ffffffff168173ffffffffffffffffffffffff1614151515610708576040517f08c379a00000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000
2073686f756c646e2774206265207a65726f00000000000000000000000000000000000000000000000000
ffffffff166000809054906101000a900473ffffffffffffffffffffffff1673ffffffffffffffffffffffff16
ffffffff167f8be0079c531659141344cd1fd0a4f28419497f9722a3daafe3b4186f6b6457e060405160405180910390a380
6000806101000a81548173ffffffffffffffffffffffff021916908373ffffffffffffffffffffffff16021790555
050565b828054600181600116156101000203166002900490600052602060002090601f016020900481019282601f106
1080757805160ff1916838001178555610835565b82800160010185558215610835579182015b8281111561083457825
1825591602001919060010190610819565b5b5090506108429190610846565b5090565b61086891905b808211156108
6457600081600090555060010161084c565b5090565b905600a165627a7a72305820c2b1daaf1ae81292340b32ac261cc
a45ecfd2e95a4ad3032438fba078984ae80029

```

m) Déploiement du smart contract « Election.sol »

The screenshot displays the Remix IDE interface for deploying a smart contract. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel shows the environment settings (Injected Provider - MetaMask, Custom (B7) network) and the account address (0xc5a...f8744). The main editor shows the Solidity code for the 'Election.sol' contract, which defines an 'Ownable' contract with a 'Candidate' struct, a 'voters' mapping, and functions for managing candidates and votes. The right sidebar shows the 'Remix.ethereum.org' deployment page, which includes a 'DÉPLOIEMENT DE CONTRAT' button and a summary of fees (Frais de carburant estimés: 0.005485 ETH, Total: 0.00548492 ETH). The bottom status bar shows the transaction details: [block:28434799 txIndex:2] from: 0xc5a...f8744 to: Election.(constructor) value: 0 wei data: 0x608...80029 logs: 0.

Ci-dessous les détails de la transaction :

Overview

[This is a Bsc Testnet transaction only]

Transaction Hash:	0x3af423ffe98c5440f230151ee19ef5c3ab4ec70d45a1a311810e6df7696dbce7
Status:	Success
Block:	28434799 22 Block Confirmations
Timestamp:	1 min ago (Mar-28-2023 09:20:00 AM +UTC)
From:	0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744
To:	[Contract 0x2a3a1d37a81666a8ecf25d9b08d4f63b5a8c8f41 Created]
Value:	0 BNB (\$0.00)
Transaction Fee:	0.00548492 BNB (\$1.70)
Gas Price:	0.00000001 BNB (10 Gwei)

[Click to see More](#)

On a des frais de transaction plus élevé que les transactions précédentes. Les frais de transaction (Transaction fees) sont des frais payés pour effectuer une transaction sur un réseau de blockchain. Ces frais sont payés pour rémunérer les mineurs qui valident et permettent la transaction sur le réseau. Les frais sont plus élevés lors d'un déploiement car les mineurs ont plus de mal pour permettre la transaction.

from	0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744
to	Election.owner() 0x2a3a1d37a81666a8ecf25d9b08d4f63b5a8c8f41

0x2a3a1D37a81666a8ecf25d9B08D4F63B5A8C8f41

n) Nom du premier candidat ajouté (mon nom de famille) :

Deployed Contracts

▼ ELECTION AT 0X2A3...C8F41 (BLO)

Balance: 0 ETH

addCandidate ikiz

transferOwner address newOwner

vote uint256 _candidateId

candidates uint256

candidatesCov

owner

```

22 // Fetch Candidate
23 mapping(uint => Candidate) public candidates;
24 // Store Candidates Count
25 uint public candidatesCount;
26
27 // voted event
28 event votedEvent ( uint indexed _candidateId);
29
30 function addCandidate (string memory _name) public {
31     candidatesCount ++;
32     candidates[candidatesCount] = Candidate(candidatesCount, _name, 0);
33 }
34
35 function vote (uint _candidateId) public {
36     // require that they haven't voted before
37     require(!voters[msg.sender]);
38

```

listen on all transactions

Search with transaction hash or address

o) Voici ci-dessous les détails de la transaction :

Overview

[This is a Bsc Testnet transaction only]

Transaction Hash:

0x3159455fd06a6a704e7fb77d3ae51d1d76cf3c50e991c55f83031aa6cee0b918

Status:

Success

Block:

2843519016 Block Confirmations

Timestamp:

48 secs ago (Mar-28-2023 09:39:33 AM +UTC)

From:

0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744

To:

Contract 0x2a3a1d37a81666a8ec25d9b08d4f63b5a8c8f41

Value:

0 BNB (\$0.00)

Transaction Fee:

0.00086552 BNB (\$0.27)

Gas Price:

0.00000001 BNB (10 Gwei)

Click to see More

p) Voici ci-dessous la valeur de mon CandidateID ainsi que le détail :

candidatesCoin

0: uint256: 1

candidates

1

0: uint256: id 1

1: string: name ikiz

2: uint256: voteCount 0

q) L'ajout d'un second candidat a été effectué :



[block:28435456 txIndex:6] from: 0xc5a...fB744 to: Election.addCandidate(string) 0x2a3...C8f41 value: 0 wei data: 0x462...00000 logs: 0 hash: 0x1b2...bee3c

Voici les détails de la transaction :

Overview

[This is a Bsc Testnet transaction only]

Transaction Hash:	0xe3ae115ce9e0b438bddbe5f9f70361b3d24ac2705d3e4436748f4d4c13581bf
Status:	Success
Block:	28435456 6 Block Confirmations
Timestamp:	22 secs ago (Mar-28-2023 09:52:51 AM +UTC)
From:	0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744
To:	Contract 0x2a3a1d37a81666a8ecf25d9b08d4f63b5a8c8f41
Value:	0 BNB (\$0.00)
Transaction Fee:	0.00071576 BNB (\$0.22)
Gas Price:	0.00000001 BNB (10 Gwei)

Click to see More

r) Voici ci-dessous la valeur du second CandidateID ainsi que le détail :

candidates 2

0: uint256: id 2
1: string: name furkan
2: uint256: voteCount 0

candidatesCou

0: uint256: 2

s) En dessous d'owner l'adresse du propriétaire du contrat qui est le mien :

candidates 2

0: uint256: id 2
1: string: name furkan
2: uint256: voteCount 0

candidatesCou

0: uint256: 2






owner


0: address: 0xc5a522099d73D9a5aa9E3a6a5eB193dc6CBfB744

t) Réalisation du premier vote voici ci-dessous les détails de la transaction :

Overview Logs (1)

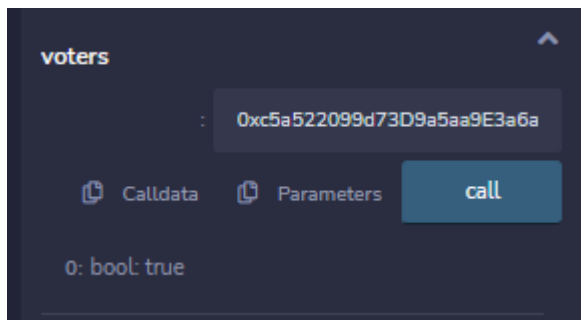
[This is a Bsc Testnet transaction only]

Transaction Hash:	0x8abbd2399195d956da8553db60edac96467fd0f75248baed5f52b92811b74867 
Status:	 Success
Block:	28435572  4 Block Confirmations
Timestamp:	13 secs ago (Mar-28-2023 09:58:39 AM +UTC)
From:	0xc5a522099d73d9a5aa9e3a6a5eb193dc6cbfb744 
To:	Contract 0x2a3a1d37a81666a8ecf25d9b08d4f63b5a8c8f41  
Value:	0 BNB (\$0.00)
Transaction Fee:	0.00066241 BNB (\$0.20)
Gas Price:	0.00000001 BNB (10 Gwei)

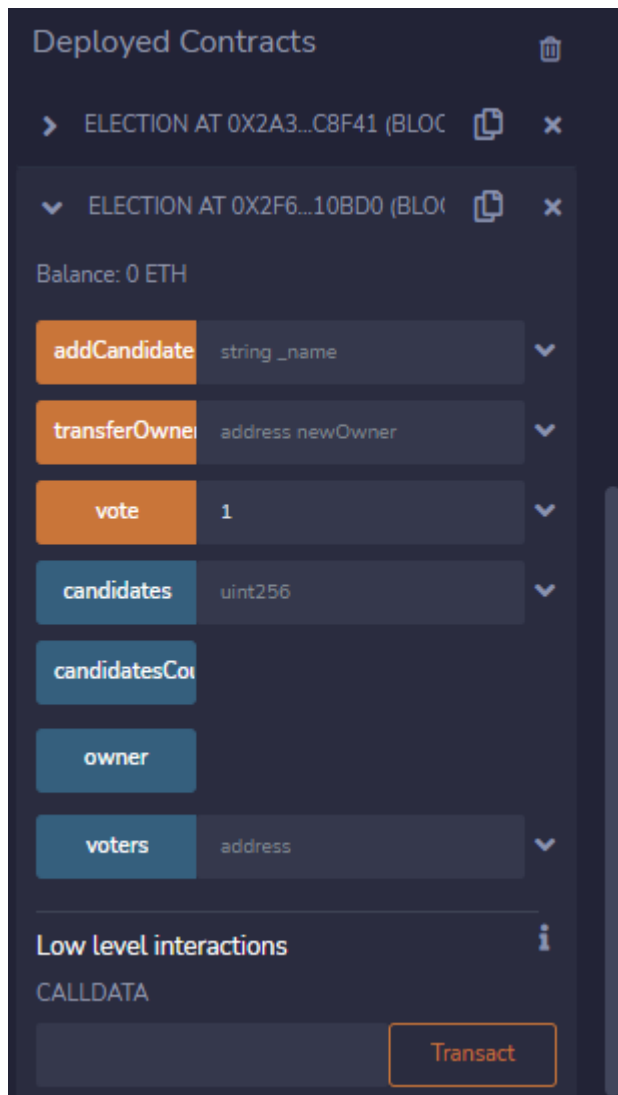
[Click to see More](#) 



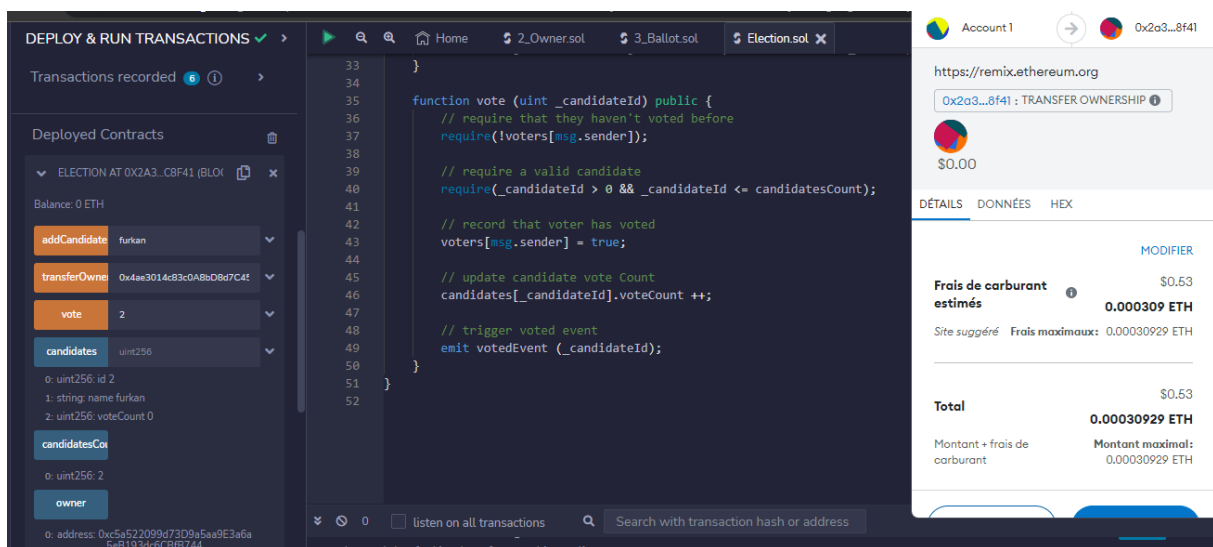
u) Le vote a bien été pris en compte :



v) J'ai interagis avec le contrat de mon camarade



w) J'ai bien effectué le transfert de la propriété à mon camarade :



x) Pour sécuriser il faudrait mettre la fonction addCandidate en private.

y) Voici la modification du code :

```
function addCandidate (string memory _name) private {  
    candidatesCount ++;  
    candidates[candidatesCount] = Candidate(candidatesCount, _name, 0);  
}
```