# **GROUP 5 – HOMEWORK n.2**

### **SCRIPTS**

### 1) giveRightToVote script

In the following two results are showcased:

a) An address must be provided as argument of the script

```
PS C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node ——files .\scripts\addVot erViem.ts
C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot\node_modules\ts-node\dist\bin.js
C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot\scripts\addVoterViem.ts
Error: You have to provide an address to the script!
```

b) A voter who is not the chairperson cannot assign the right to vote to someone else

### 2) delegate script

In the following three results are showcased:

a) An address must be provided as argument of the script

```
PS C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node —files .\scripts\delega teViem.ts

Error: You must provide an address to delegate to!
```

b) It is not possible the self-delegation

```
PS C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node —files .\scripts\delega teViem.ts "0xC35c40Bd72F7528893a259dbf40Fcb266002663e" Delegating votes to address: 0xC35c40Bd72F7528893a259dbf40Fcb266002663e Delegator address: 0xC35c40Bd72F7528893a259dbf40Fcb266002663e Delegator address: 0xC35c40Bd72F7528893a259dbf40Fcb266002663e Delegator address: 0xC35c40Bd72F7528893a259dbf40Fcb266002663e Delegator balance: 0.378899252968472095 ETH Error: Self-delegation is disallowed.
```

c) It is not possible to delegate someone else if the delegator already voted

```
PS C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node ---files .\scripts\delega teViem.ts "0x2A276A9F7e4A24c52DEdDdb6732a49944a59043a2"

Delegating votes to address: 0x2A276A9F7e4A24c52DEdDdb6732a49944a59043a2

Delegator address: 0x35c408d72F7528893a259dbf40Fcb266002663e

Delegator balance: 0.3788992529684772095 ETH

Delegating votes...

ContractFunctionExecutionError: The contract function "delegate" reverted with the following reason:

You already voted.

Contract Call:

address: 0x2f10e393076f2637ebfb3cef00ca8faa00cc3288
function: delegate(address to)
args: (0x2A276A0F7e4A24c52DEdDdb6732a4944a59043a2)
sender: 0xC35c408d72F7528893a259dbf40Fcb266002663e
```

### 3) vote script

In the following one result is showcased:

a) It is not possible to vote twice

#### 4) queryResults script

In the following three results are showcased:

a) It is possible to retrieve informations about the chairperson, the proposals and which is the winning one

```
PS C:\Users\mgian\OneDrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node ---files .\scripts\queryR esults\time.ts
Last block number: 7920766n
Contract address: 0x2f10e393076f2637ebfb3cef00ca8faa00cc3288
--- Ballot Contract Query Results ---
Chairperson: 0x0936203E154ed749c099fc585770063fAD30BE35
Winning Proposal Index: 0n
Winning Proposal Name: Star Wars
--- All Proposals ---
Proposal 0:
Name: Star Wars
Vote Count: 3
Proposal 1:
Name: Star Trek
Vote Count: 0
```

b) If an address is passed as an argument to the script, it is possible to retrieve informations about the voters. Two different voters are reported, one that voted and one that didn't

```
PS C:\Users\mgian\OneDrivo\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node --files .\scripts\queryR esultsVien.ts 'myC35c40Bd72F7528893a259dbf40Fcb266002663e"
Last block number: '7926782n
Contract address: 0x2f10e393076f2637ebfb3cef00ca8faa00cc3288
--- Ballot Contract Query Results ---
Chairperson: 0x0936203E154ed749c099fc585770063fAD308E35
Winning Proposal Index: 0n
Winning Proposal Name: Star Wars
--- All Proposals ---
Proposal 0:
Name: Star Wars
Vote Count: 3
Proposal 1:
Name: Star Trek
Vote Count: 0
--- Voter Information ---
Voter Address: 0xC35c40Bd72F7528893a259dbf40Fcb266002663e
Weight: 1
Has Voted: true
Delegated To: Nobody
Voted for Proposal: 0
```

```
PS C:\Users\main\nnebrive\Desktop\GIT REPOS\EncodeEVMBootcampProjects\Homework2\evm_bootcamp_25_group5\ballot> npx ts-node ---files .\scripts\queryR esultsViem.ts "0x81D51adbc06827784cE72184Fce6861FFF31D16C"
Last block number: "928788n
Contract address: 0x2f10e393076f2637ebfb3cef00ca8faa00cc3288
--- Ballot Contract Query Results ---
Chairperson: 0x0936203E154ed749c099fc585770063fAD30BE35
Winning Proposal Index: 0n
Winning Proposal Name: Star Wars
--- All Proposals ---
Proposal 0:
Name: Star Wars
Vote Count: 3
Proposal 1:
Name: Star Trek
Vote Count: 0
--- Voter Information ---
Voter Address: 0x81D51adbc06827784cE72184Fce6861FFF31D16C
Weight: 1
Has Voted: false
Delegated To: Nbody
Voted for Proposal: Has not voted
```

## **TESTNET INTERACTIONS**

### 1) Contract creation

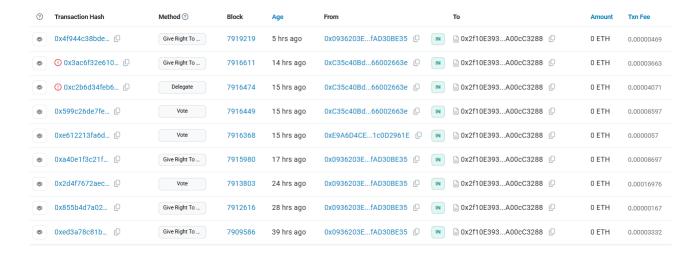
Address: 0x2f10E393076f2637ebFB3CeF00Ca8fAA00cC3288

Tx hash: 0x5639bdbe4292b3a824aa9233f49d491a5926ea9b4babead651afdb807d7f5153

Contract creator: 0x0936203E154ed749c099fc585770063fAD30BE35

Event: successful

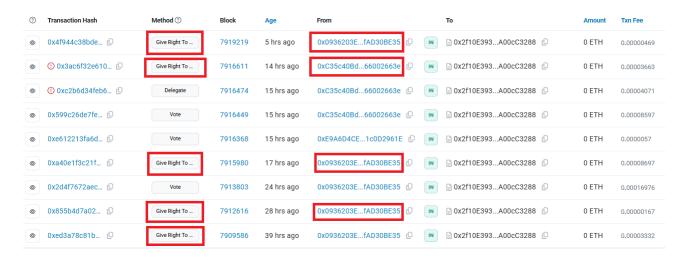
#### List of contract interactions:



### 2) giveRightToVote function call

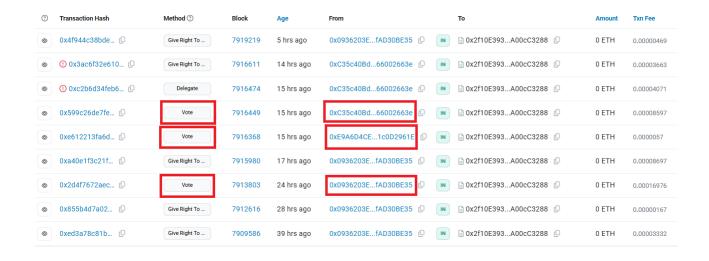
As can be seen, the chairperson gave the right to vote to 4 different persons.

It is possible to see also that one voter tried to give right to vote to someone else, but the transaction failed since he/she was not the chairperson.



## 3) vote function call

As can be seen, only 3 of 4 persons voted.



### 4) delegateVote function call

As can be seen, one of the voters tried to delegate someone else for voting, but he/she already voted, so the transaction failed.

