InnoDEX

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Smart contract definition

DEX.sol
makeOrder cancelOrder swap matchOrders
token1 token2 get/count/balance

Token.sol
origin total_supply constructor Transfers transferCount
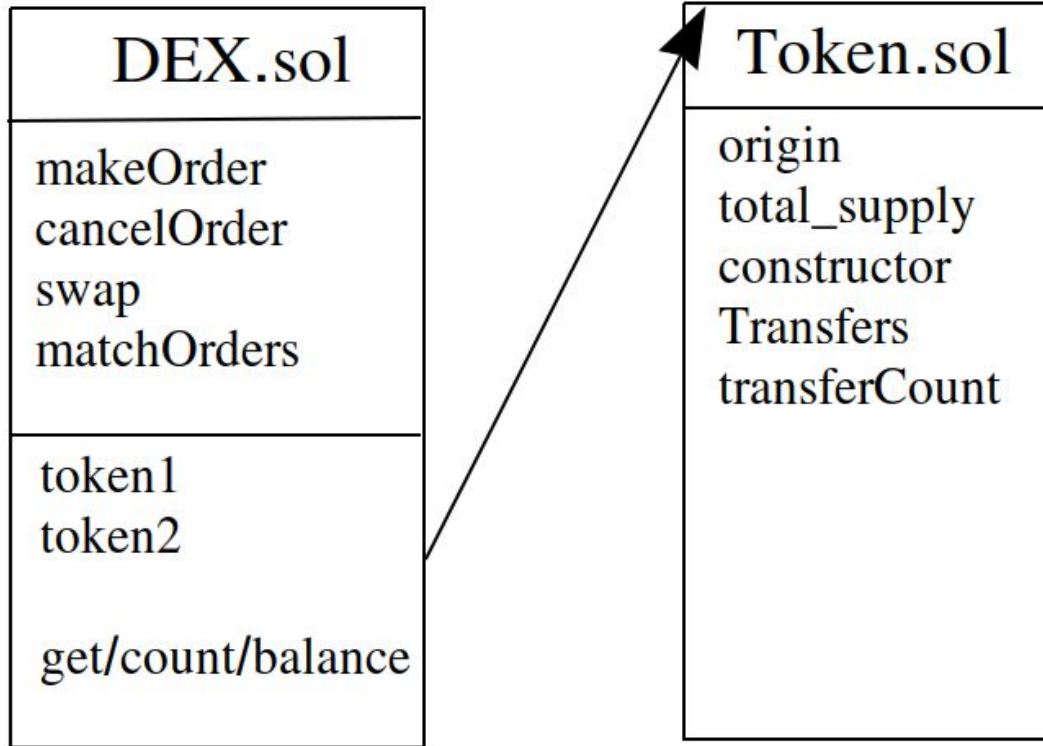
How to run

Dependencies:

1. Solidity (0.8.1)
2. OpenZepplin (latest)
3. Truffle (5.3.5)
4. Web3py (latest)

How to run

1. Run test network on localhost with truffle and deploy there DEX contract:

    ```
    truffle develop
    ```

2. Run client to check that network connection works fine:

    ```
    python3 ./client/main.py
    ```

3. Run tests in truffle:

    ```
    truffle(develop)> test
    ```

truffle develop

```
sergey@ThinkPad-13:/arh/inno/dex/innodex$ truffle develop
Truffle Develop started at http://127.0.0.1:9545/

Accounts:
(0) 0xef347f567b72838dbe518c445999e4c3a2057e2f
(1) 0x2d8fa31e628b7495e14030b0e6089b2255c9e785
(2) 0xba1d1a66a0ea13edbd4522e85274132a609aaf23
(3) 0x8b7937707913f5d8b91f832676123c346028c172
(4) 0x78534aa23491b0ddb1dec4d21ce5a4b2e24d74da
(5) 0xa57e4abd7bcfe390330282bb8fed5c4d9b6f1b28
(6) 0xf73040291ff2734bc4c3393346efddfe78e9bb85
(7) 0x10ff47a52a0d057c90baf3c2e657860bbd0c2db9
(8) 0xa5e14780d4573333fba0f2973e32c6dd6a43becf
(9) 0xa18a5a995c98a9cb915f89d5573a2e885a741ac8

Private Keys:
(0) a6b76c3d44e34da8fcba78d36845f4f3cc2044f7824a21f7be87c1dfafa030cd
(1) 23148e6927e8a202ea08e03d27bf0776d0b33cc31f0aac68cf2a77065fd6b138
(2) 904cc37675521af41d210a8f34f62e2f462914a4c8e16835a3d6dc425d93afa5
(3) f6049acba3b8f0293ea6eab66acd541c2942cbddd7fbabfcdf9d0cb29f1f6582
(4) 73b46ef85630e75b9f49f5428bea8e2eb8a928590af93ca67c8fc2e843439212
(5) 72bc9fc0a55e11b80e42ccb101583caf159672f0ead5d1c7668638f876933ae7
(6) 1c922ffb23504b20624a698f0bcd932957c69e05c679b2eb61ca2bfaa2105cf3
(7) 0ba2bb41f3d8694a94f21191afeb0254ee1b920ee16fc8e03ad84d704bb7f55d
(8) 978c34924439226fa6e067c28c5d9909808b41fcf2a4ac4d112a078a725e0e1c
(9) 60ba6d0144750f34659e04b5129389d7ba4bb25a41399d4296678a72a0092970

Mnemonic: nut cereal patrol expire blur dentist level cloth pave loop project flat

⚠ Important ⚠ : This mnemonic was created for you by Truffle. It is not secure.
Ensure you do not use it on production blockchains, or else you risk losing funds.

truffle(develop)> |
```

client (before and after turning network on)

```
sergey@ThinkPad-13:/arh/inno/dex/innodex$ python3 ./client/main.py
Is connected: False
Origin account: None
Origin balance: 0
Number of blocks: None
sergey@ThinkPad-13:/arh/inno/dex/innodex$ python3 ./client/main.py
Is connected: True
Origin account: 0xEF347f567B72838DbE518c445999E4c3A2057e2F
Origin balance: 10000000000000000000000
Number of blocks: 0
```

truffle test

```
truffle(develop)> test

Compiling your contracts...
===========================
> Compiling ./contracts/DEX.sol
> Compiling ./contracts/Migrations.sol
> Compiling ./contracts/Token.sol
> Compiling openzeppelin-solidity/contracts/token/ERC20/ERC20.sol
> Compiling openzeppelin-solidity/contracts/token/ERC20/IERC20.sol
> Compiling openzeppelin-solidity/contracts/token/ERC20/extensions/IERC20Metadata.sol
> Compiling openzeppelin-solidity/contracts/utils/Context.sol
> Artifacts written to /tmp/test--5084-LM6sQo0RRblV
> Compiled successfully using:
   - solc: 0.8.1+commit.df193b15.Emscripten.clang



  Contract: DEX
    initialization
      ✓ check tokens names (350ms)
      ✓ check tokens initial supply (259ms)
      ✓ check accounts balance (658ms)
    transfer
      ✓ check correct swap (532ms)
      ✓ check incorrect swap (1010ms)
      ✓ check transfer counts (517ms)
    orders
      ✓ check ask orders count (78ms)
      ✓ check bid orders count (70ms)
      ✓ check cancel ask order (129ms)
      ✓ check cancel bid order (119ms)
    matching
      ✓ check match orders correct (190ms)
      ✓ check match orders incorrect (122ms)


  12 passing (8s)
```

End

Thank you for attention