

Exercise 03

Creation of a Truffle Project

```
npm init
npm i @openzeppelin/contracts
npm i truffle
npx truffle init
```

Contract & Migration

Token

```
// SPDX-License-Identifier: AFL-3.0
pragma solidity ^0.8.0;

import "@openzeppelin/contracts/token/ERC20/ERC20.sol";
import "@openzeppelin/contracts/utils/math/SafeMath.sol";

contract Floken is ERC20 {
    using SafeMath for uint256;
    uint public INITIAL_SUPPLY = 12000;

    constructor () ERC20("Floken", "Flo") {
        _mint( msg.sender, INITIAL_SUPPLY );
    }

    function decimals() pure public override returns (uint8) {
        return 2;
    }
}
```

truffle-config.js

```
module.exports = {
  networks: {
    development: {
      host: "127.0.0.1",
      port: 7545,
      network_id: "*" // Match any network id
    }
  },
  compilers: {
```

```
solc: {  
  version: "0.8.19",  
}  
};
```

Running on a Local Chain

The screenshot displays the Ganache desktop application interface, which is used for running a local Ethereum blockchain. The interface is divided into two main sections: the top section shows the 'Accounts' tab, and the bottom section shows the 'Blocks' tab.

Accounts Tab:

- Navigation:** ACCOUNTS (selected), BLOCKS, TRANSACTIONS, CONTRACTS, EVENTS, LOGS.
- Search:** SEARCH FOR BLOCK NUMBERS OR TX HASHES.
- Current Block:** 6.
- Gas Price:** 20000000000.
- Gas Limit:** 6721975.
- Hardfork:** MERGE.
- Network ID:** 5777.
- RPC Server:** HTTP://127.0.0.1:7545.
- Mining Status:** AUTOMINING.
- Workspace:** QUICKSTART.
- Buttons:** SAVE, SWITCH, and a settings gear icon.
- Accounts Table:**

ADDRESS	BALANCE	TX COUNT	INDEX
0xAACD5E178202B184c98B355530a0Ec65a674150	99.99 ETH	6	0
0xF2E4462fe26C2ffc3B39B8e77Ab8Ac7A5CE7536D	100.00 ETH	0	1
0x932C7E6af9d04FB620104a25D156F66115B43704	100.00 ETH	0	2
0xe9915690FB7068Ddc8F912BFc1430e40aB68B06d	100.00 ETH	0	3
0xe3E991EE7D5B0ebcaaCbd8bF9E35c5BBE1baD24F	100.00 ETH	0	4
0xC87DF91Dd9757Df5085bC1bAaf64c5b8Db2EdFAD	100.00 ETH	0	5
0x9dc355925eF5E8fC425D46Dd98CC64F8ba94B56F	100.00 ETH	0	6
0xC2c9Bef78Ae0eB3E25e21593D8DC7723fd6D9E21	100.00 ETH	0	7
0x5A850f151a0a196D947e714aD90b48f150D6227B	100.00 ETH	0	8
0x44eE259BE74C6bE46551Ca3688622Ea298234A86	100.00 ETH	0	9

Blocks Tab:

- Navigation:** ACCOUNTS, BLOCKS (selected), TRANSACTIONS, CONTRACTS, EVENTS, LOGS.
- Search:** SEARCH FOR BLOCK NUMBERS OR TX HASHES.
- Current Block:** 6.
- Gas Price:** 20000000000.
- Gas Limit:** 6721975.
- Hardfork:** MERGE.
- Network ID:** 5777.
- RPC Server:** HTTP://127.0.0.1:7545.
- Mining Status:** AUTOMINING.
- Workspace:** QUICKSTART.
- Buttons:** SAVE, SWITCH, and a settings gear icon.
- Blocks Table:**

BLOCK	MINED ON	GAS USED	TRANSACTIONS
6	2023-05-10 15:40:48	1201410	1 TRANSACTION
5	2023-05-10 15:38:12	1201410	1 TRANSACTION
4	2023-05-10 15:22:33	173459	1 TRANSACTION
3	2023-05-10 15:21:30	173459	1 TRANSACTION
2	2023-05-10 15:18:13	173459	1 TRANSACTION
1	2023-05-10 15:13:08	1200135	1 TRANSACTION
0	2023-05-10 14:13:51	0	NO TRANSACTIONS

e03 /home/florian/projects/fh/mc/semester2/bc/e03			
NAME Context	ADDRESS Not Deployed	TX COUNT 0	
NAME ERC20	ADDRESS Not Deployed	TX COUNT 0	
NAME Floken	ADDRESS 0x10764E49f92a9987dE5867E3073E4e73955eC3C2	TX COUNT 0	DEPLOYED
NAME IERC20	ADDRESS Not Deployed	TX COUNT 0	
NAME IERC20Metadata	ADDRESS Not Deployed	TX COUNT 0	
NAME SafeMath	ADDRESS Not Deployed	TX COUNT 0	