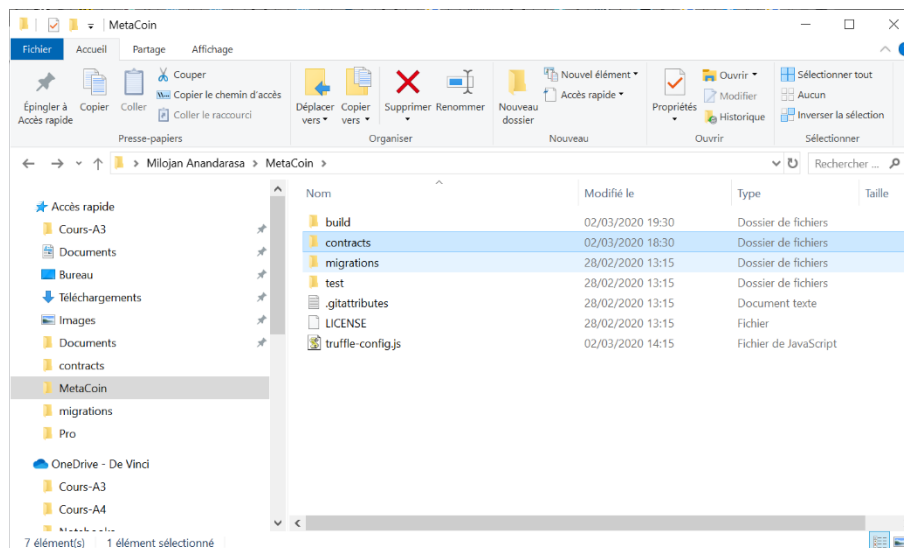ANANDARASA Milojan

BICHAT Guillaume

REPORT

- ## Install Truffle & create a truffle project

- ## Create an ERC20 token contract
  - ### Chose a ticker
  - ### Chose a total supply
  - ### Chose a decimal number

```solidity
pragma solidity >=0.4.25 <0.7.0;

contract ERC20{

    string public constant _name="TD5Token";
    string public constant _symbol="TDT";
    uint8 public constant _decimals=8;
    uint256 _totalSupply=100;
```

- ## Implement all ERC20 functions

  Check the file: ERC20.sol

- ## Create a migration to deploy your contract(s)

  - ### Migrate to Ganache

- ## Implement customer white listing

```solidity
contract WhiteList is Ownable{

    mapping(address => bool) whitelist;
```

Check the file: WhiteList.sol

- ## Implement multi level distribution

```solidity
function HowMany() public returns(uint256){
    if(nb_client<=4)
    {
        amount=10;
    }
    if(4<nb_client && nb_client<=6)
    {
        amount=5;
    }
    if(nb_client>6)
    {
        amount=1;
    }

    return amount;
}
```

Check the file: Distribution.sol

• Implement air drop functions

```solidity
pragma solidity >=0.4.25 <0.7.0;

import "./Ownable.sol";
import "./ERC20.sol";
import "./Distribution.sol";
import "./WhiteList.sol";

contract AirDrop is Ownable, Distribution,ERC20,WhiteList {

    ERC20 token;


    /**
    * We decide to give our token for free :)
    * Just call this function and we check at first if you have already take our token if not
    * we send you some TD5Token.
    * Be quick! :)
    */

    function airdrop(address tokenAddress) public {
        require(balances[own]!=0);
        require(isWhitelisted(msg.sender)==false);
        uint256 amount=HowMany();
        token = ERC20(tokenAddress);
        token.transferFrom(own,msg.sender,amount);
        add(msg.sender);
        Increase();
    }

}
```