

01 稳定币

实验目的

- 掌握中心化稳定币的实现原理；

实验环境

- VSCode
- Remix IDE: <https://remix.ethereum.org/> ;

实验内容

1. 根据 USDT 的合约地址
(0xdAC17F958D2ee523a2206206994597C13D831ec7) , 去以太坊区块浏览器
<https://etherscan.io/> 寻找 USDT 合约源码
2. 删除 `Lock.sol` , 新建文件 `CentralizedStableCoin.sol`
3. 把 USDT 合约源码粘贴到文件并保存;
4. 仔细阅读源码, 说明黑名单机制是如何工作的;
5. 仔细阅读源码, 说明 issue 方法和 redeem 方法的作用;

6. 仔细阅读源码，说明 maximumFee 的作用及设置方式；
7. 学习 remixd 的使用方法，在命令行里面启动 remixd；
8. 在浏览器里打开 <https://remix.ethereum.org/>，并通过 remixd 连接到本地文件夹；

https://remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVersion=null&version=soljson-v0.4.26+commit.4563c3fc.js&language=

FILE EXPLORER


WORKSPACES

localhost

- contracts
 - artifacts
 - build-info
 - bbb9d5088835041b8375522a2086f7f7.js
 - BasicToken.json
 - BlackList.json
 - ERC20.json
 - ERC20Basic.json
 - Ownable_metadata.json
 - Pausable_metadata.json
 - SafeMath_metadata.json
 - StandardToken.json
 - TetherToken_metadata.json
 - UpgradedStandardToken.json
 - Ownable.json
 - Pausable.json
 - SafeMath.json
 - TetherToken.json
 - CentralizedStableCoin.sol**
 - node_modules
 - scripts
 - test
 - .gitignore
 - README.md
 - hardhat.config.js
 - package-lock.json
 - package.json

```
1  /**
2   *Submitted for verification at Etherscan.io on 2017-11-28
3   */
4
5  pragma solidity ^0.4.17;
6
7  /**
8   * @title SafeMath
9   * @dev Math operations with safety checks that throw on error
10  */
11  library SafeMath {
12      function mul(uint256 a, uint256 b) internal pure returns (uint256) {
13          if (a == 0) {
14              return 0;
15          }
16          uint256 c = a * b;
17          assert(c / a == b);
18          return c;
19      }
20
21      function div(uint256 a, uint256 b) internal pure returns (uint256) {
22          // assert(b > 0); // Solidity automatically throws when dividing by 0
23          uint256 c = a / b;
24          // assert(a == b * c + a % b); // There is no case in which this doesn't hold
25          return c;
26      }
27
28      function sub(uint256 a, uint256 b) internal pure returns (uint256) {
29          assert(b <= a);
30          return a - b;
31      }
32
33      function add(uint256 a, uint256 b) internal pure returns (uint256) {
34          uint256 c = a + b;
35          assert(c >= a);
36          return c;
```

9. 部署 Tether 合约

CONTRACT (Compiled by Remix) 

TetherToken - contracts/CentralizedSt:↕

DEPLOY ^

_INITIALSUPPLY:

100000000000000000000000000000000

_NAME:


USDT


_SYMBOL:

USDT

_DECIMALS:

18

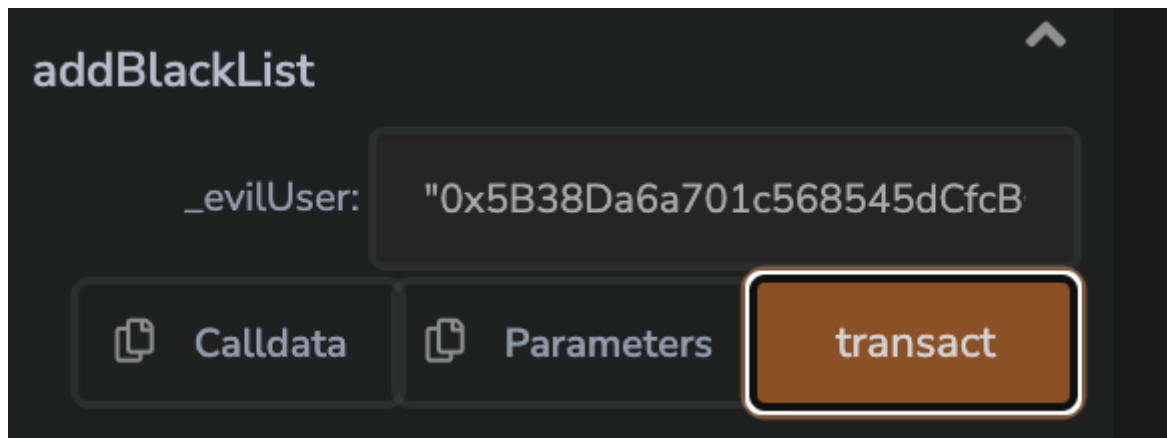
 Calldata

 Parameters

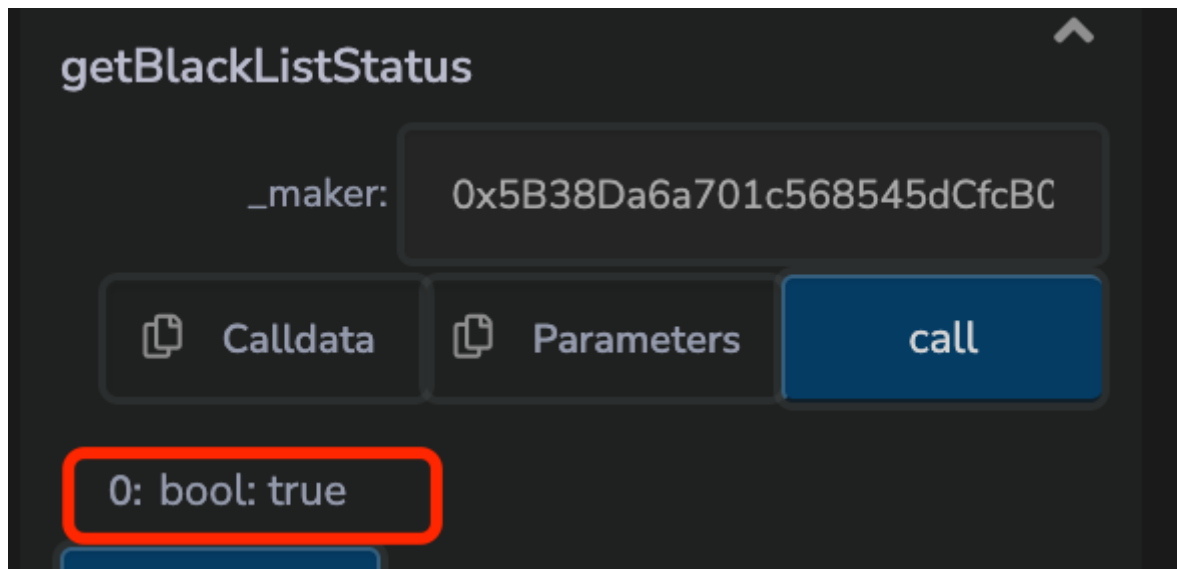
transact

☐ Publish to IPFS

10. 将一个地址加入黑名单



11. 查看该地址的黑名单状态



实验报告内容

实验内容第 4-6 题文字说明，第 8-11 题截图

实验报告提交方式

实验报告完成后发送到邮箱 cbireport@163.com，标题为 学号-班级-姓名-第X次实验报告，实验报告提交截止时间为实验课一星期内。