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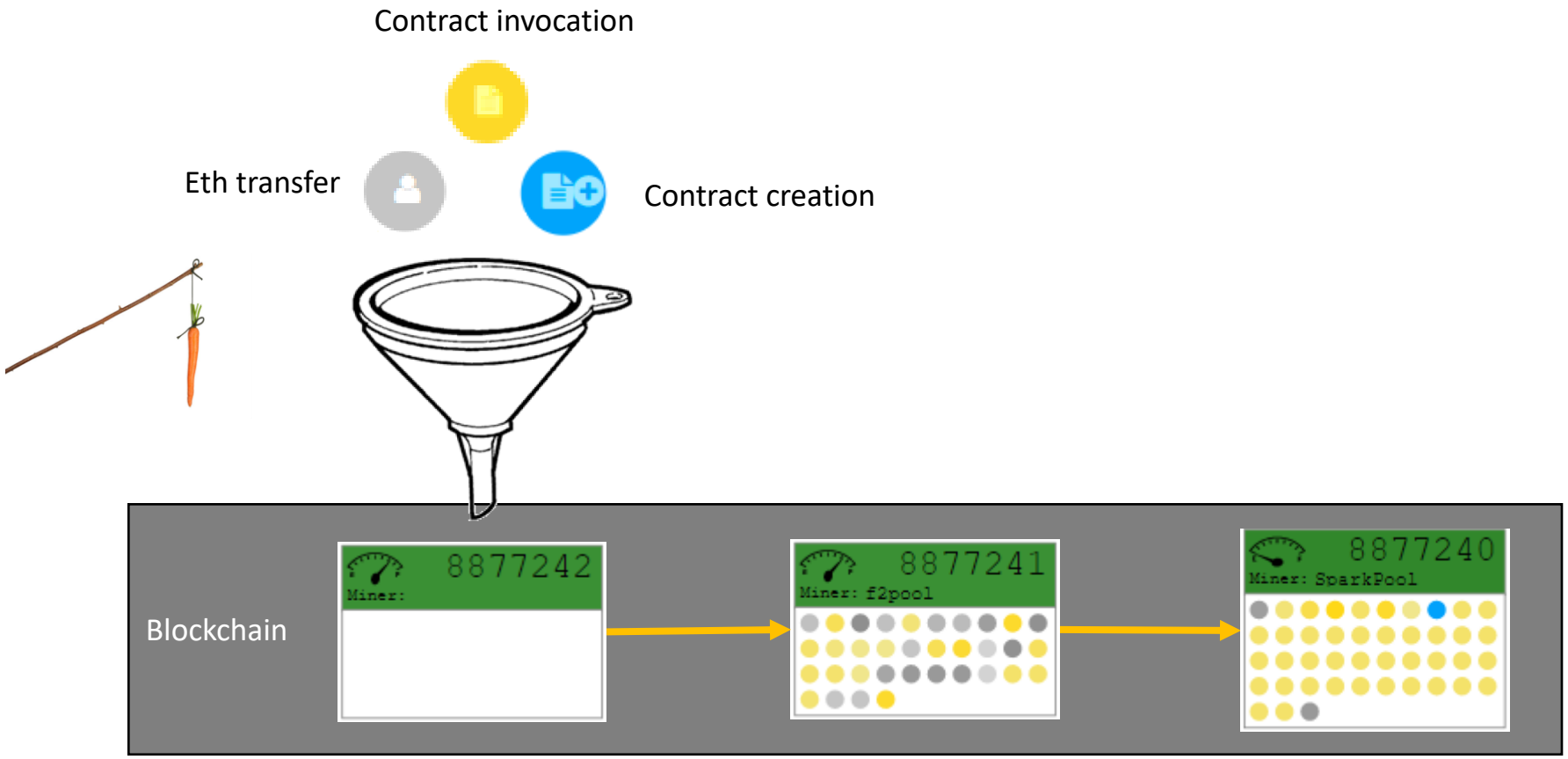
Dapps for beginners

Sheets
https://web3examples.com/dapps_sheets/Dapps.pdf

Principle of a blockchain



http://ethviewer.live/

DAPP architecture (Ethereum like chains)

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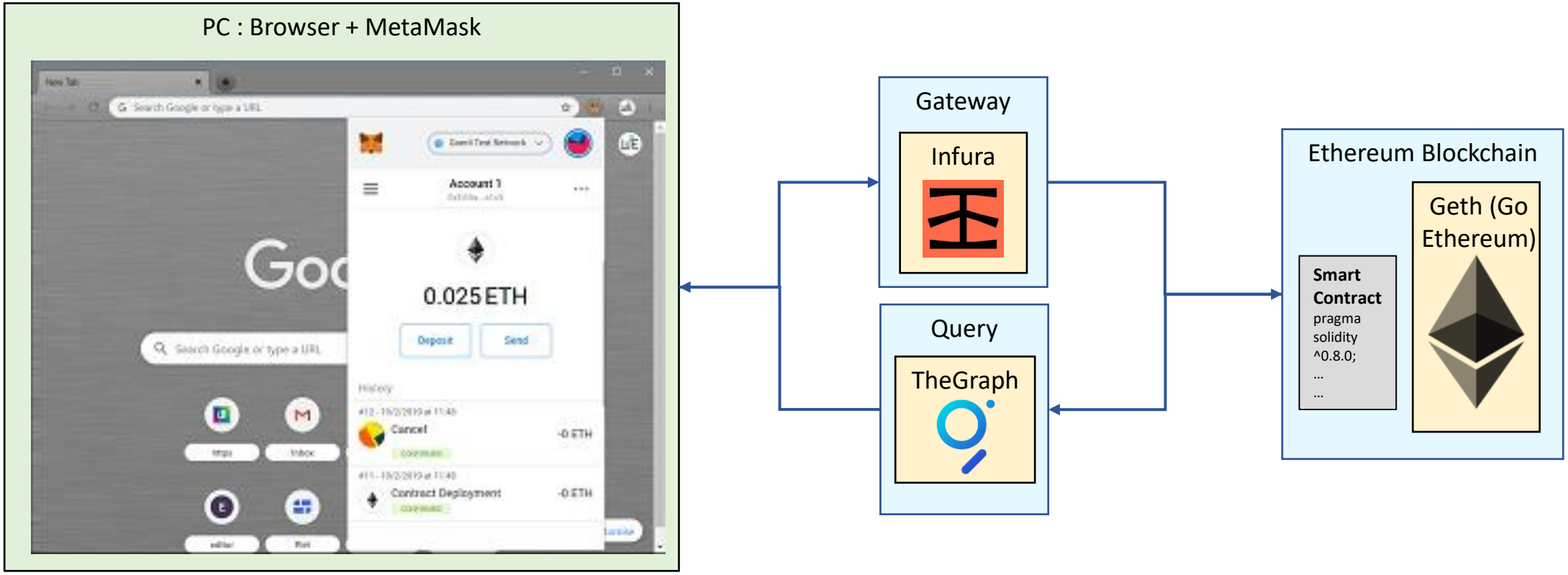

Remix

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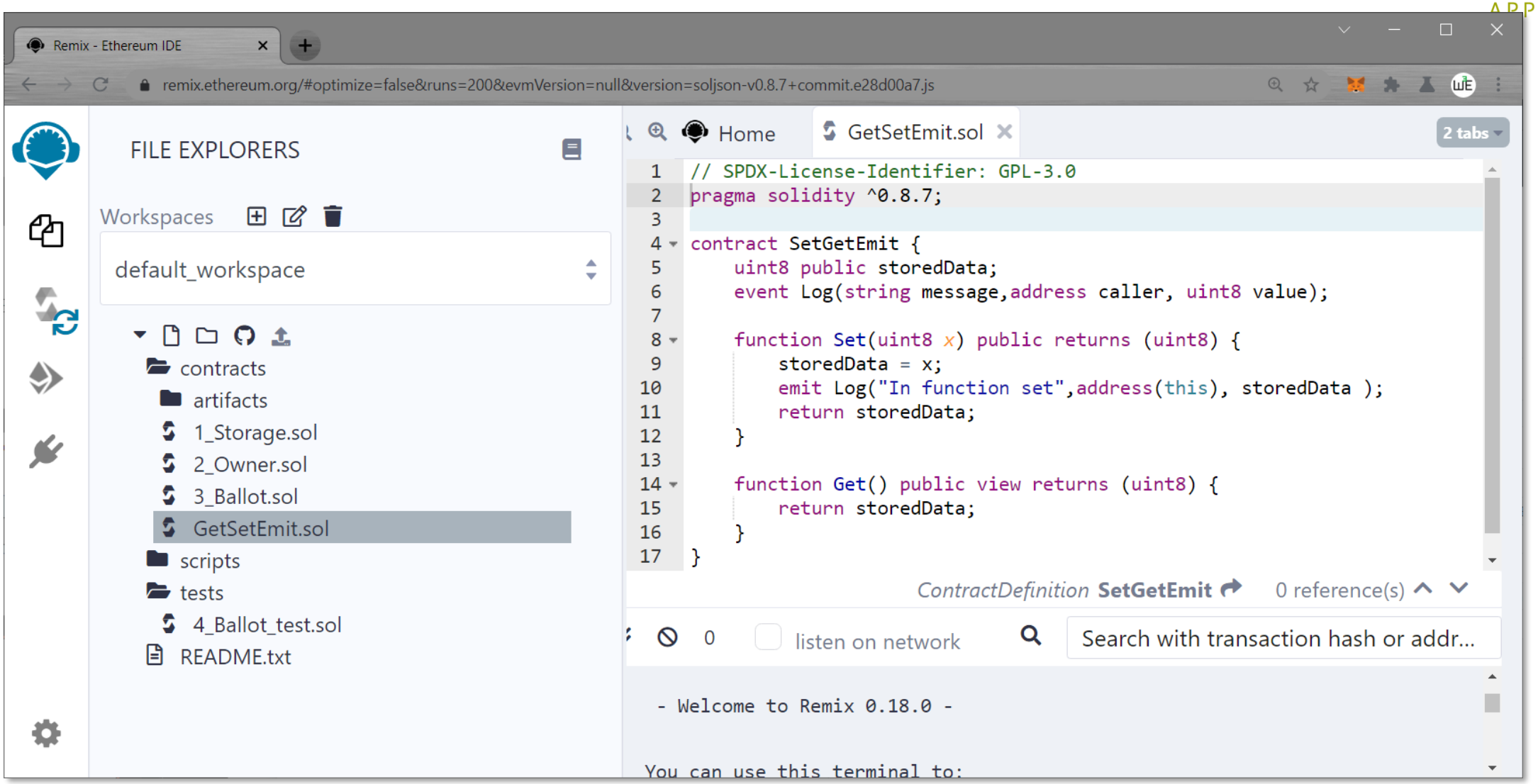

https://remix.ethereum.org

https://github.com/web3examples/ethereum/blob/master/solidity_examples/GetSetEmit.sol

Etherscan

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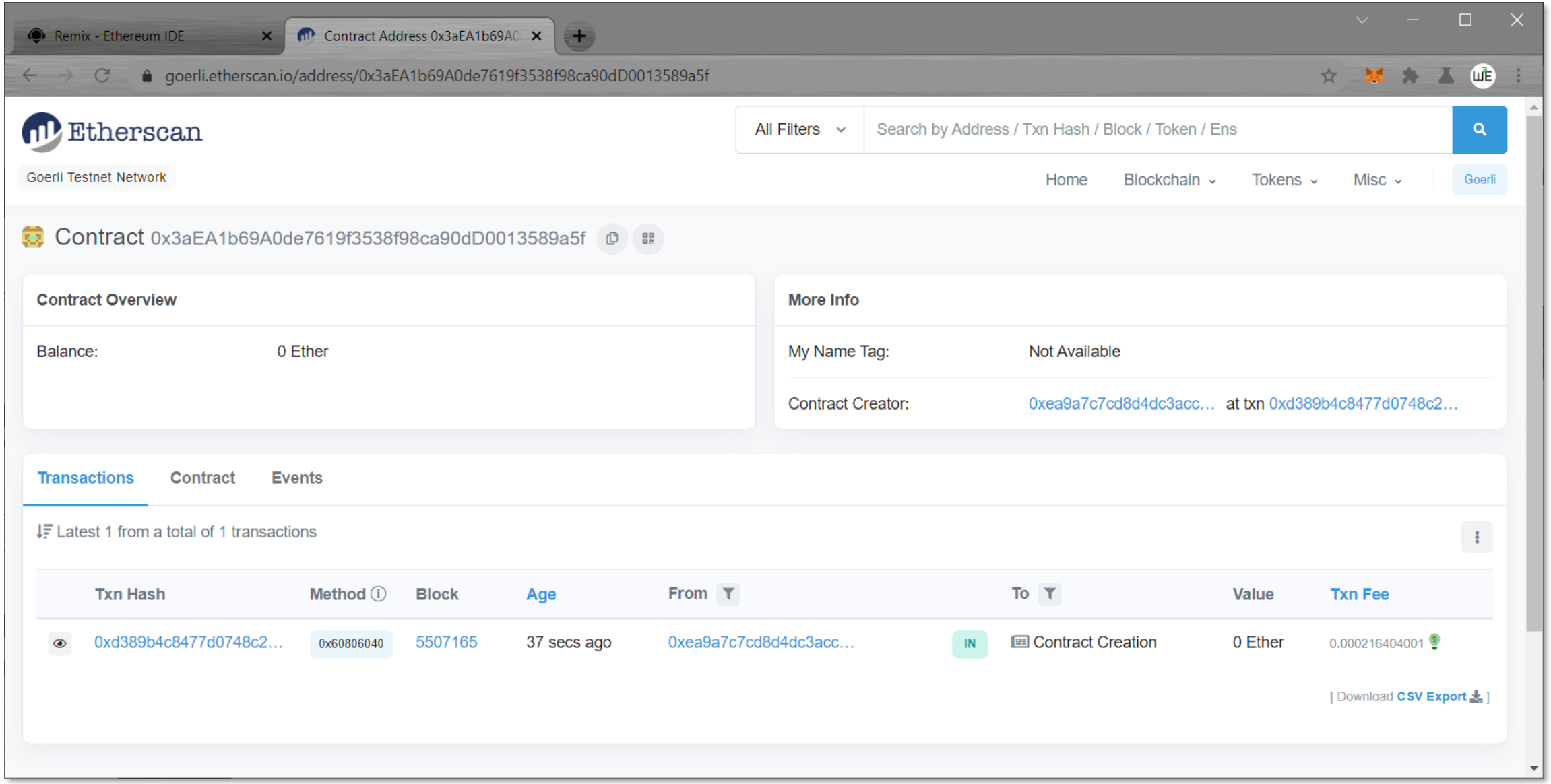

https://goerli.etherscan.io/address/0x3aEA1b69A0de7619f3538f98ca90dD0013589a5f

GetSetEmit website source

getsetemit.html

```
<!-- https://github.com/web3examples/ethereum/blob/master/solidity_examples/GetSetEmit.sol -->
<!DOCTYPE html>
<html>
    <head>
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <script src="https://unpkg.com/web3@latest/dist/web3.min.js"></script>
    </head>
    <body>
        <h1>GetSetEmit (select Goerli)</h1>
        <pre id="log" style="width:100%;height:200px"></pre>
        <script type="text/javascript">
        function log(logstr) {
            document.getElementById("log").innerHTML +=logstr+"\n";
        }
        const GetSetEmitABI= [
            { // ABI Log       event Log(string message,address caller, uint8 value)
            { // ABI Get       function Get() public view returns (uint8)
            { // ABI Set       function Set(uint8 x) public returns (uint8)
            { // ABI storedData uint8 public storedData
        ];
        async function f() {
            // Prepare
            web3 = new Web3(Web3.givenProvider); // provider from metamask
            log(`Version of web3.js: ${web3.version}`);
            var result=await web3.eth.requestAccounts().catch(x=>log(x.message));
            log(`Value from eth_requestAccounts: ${JSON.stringify(result)}`);
            var acts=await web3.eth.getAccounts().catch(log);
            log(`Here are the accounts: ${JSON.stringify(acts)}`);
            // Connect contract
            var GetSetEmitAddress="0x3aEA1b69A0de7619f3538f98ca90dD0013589a5f"; // Goerli address
            var GetSetEmitContract=new web3.eth.Contract(GetSetEmitABI, GetSetEmitAddress);
            // Get
            result = await GetSetEmitContract.methods.Get().call({from: acts[0]}).catch(console.log);
            log(`Get result: ${result}`);
            // Set
            log(`Wait about 20 seconds for the transaction to process`);
            result = await GetSetEmitContract.methods.Set(6).send({from: acts[0]}).catch(console.log);

            var decoded=result.events.Log.returnValues;
            log(`Event emitted: message=${decoded.message} address=${decoded.caller} value=${decoded.value}`);
        }
        window.addEventListener('DOMContentLoaded', f);
        </script>
    </body>
</html>
```

https://github.com/web3examples/ethereum/blob/master/web3js_browser/getsetemit.html

GetSetEmit website

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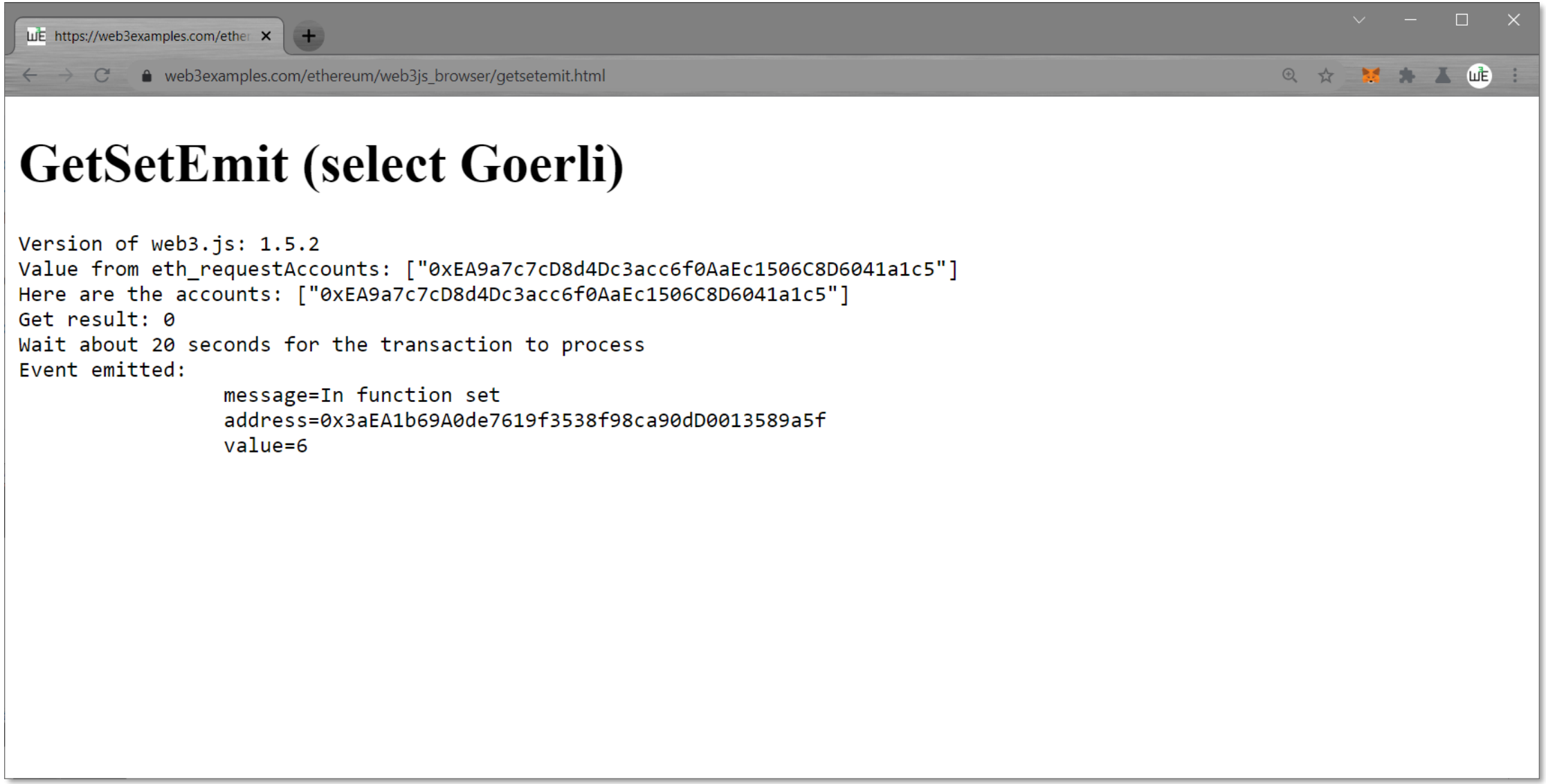

https://web3examples.com/ethereum/web3js_browser/getsetemit.html

Casino

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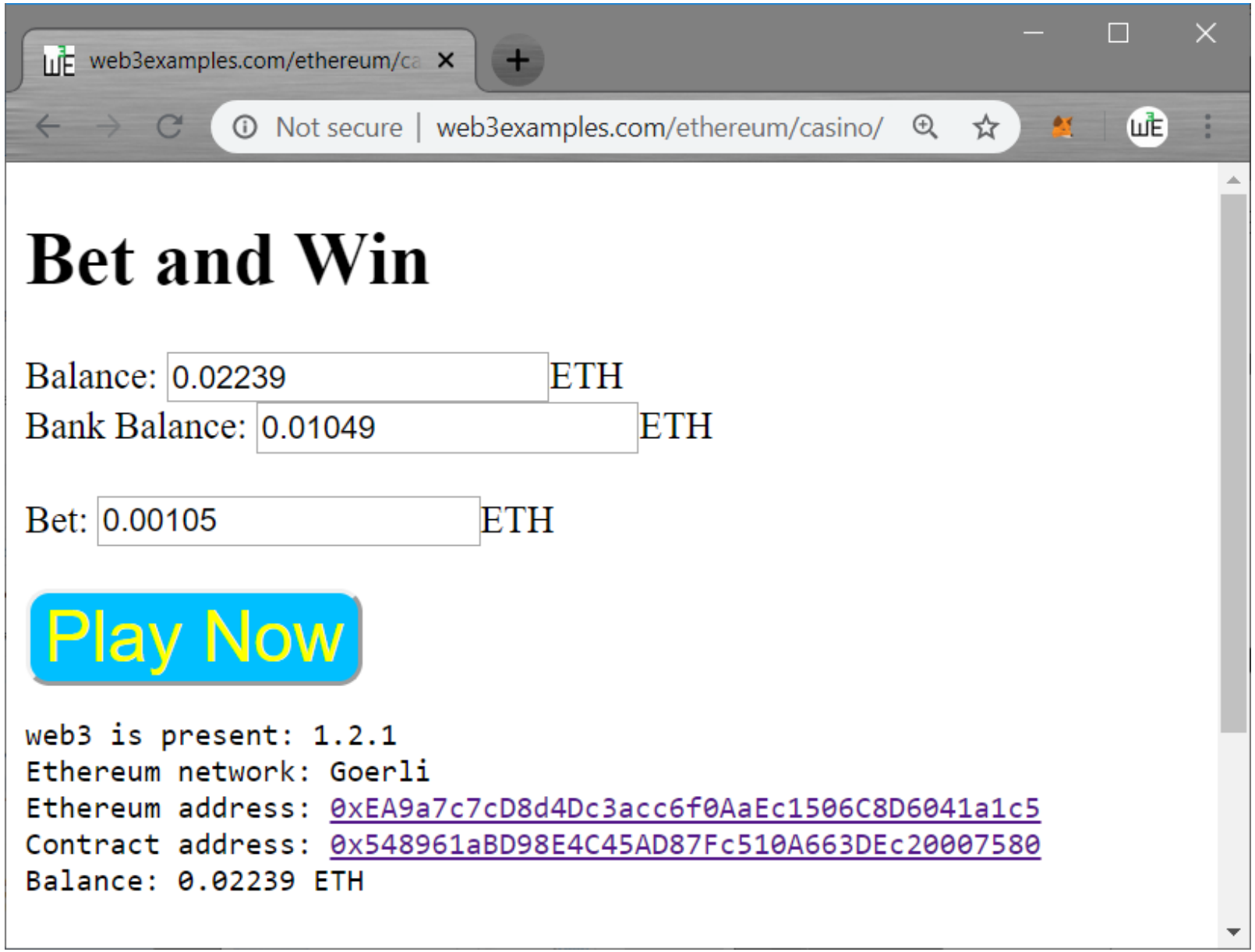

https://web3examples.com/ethereum/casino

Casino Solidity

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```
pragma solidity >=0.5.0 <0.7.0;
contract Casino {
    event Won(bool win)  ;
    constructor() public payable {  }
    function betAndWin() public payable  {
        address payable betPlacer = address(msg.sender);
        uint bet = msg.value;
        uint payout = bet * 2;
        uint balance = getBankBalance();
        require(bet > 0, "No money added to bet.");
        require(payout <= balance, "Not enough money in bank for this bet.");
        bool win = bool (getRandom()%2 == 0);
        if (win)
            betPlacer.transfer(payout);
        emit Won(win);
    }
    function getBankBalance() public view returns(uint256 ret) {
        return address(this).balance;
    }
    function getRandom() public view returns(uint256) {
        return uint256(keccak256(abi.encodePacked(block.difficulty, block.coinbase, block.timestamp)));
    }
}
```

https://github.com/web3examples/ethereum/blob/master/solidity_examples/Casino.sol

More info

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https://web3examples.com