

NOUF ALMEKAWED

Part 1. Setting up Ganache and MetaMask.

ACCOUNTS

BLOCKS

TRANSACTIONS

CONTRACTS

EVENTS

LOGS

SEARCH FOR BLOCK NUMBERS OR TX HASHES

CURRENT BLOCK0

GAS PRICE20000000000

GAS LIMIT6721975

HARDFORKMUIRGLACIER

NETWORK ID5777

RPC SERVERHTTP://127.0.0.1:7545

MINING STATUSAUTOMINING

WORKSPACEWAXING-GIBBOUS

SWITCH

MNEMONIC

furnace best news quality stand switch palace desk limit kitten oak consider

HD PATHm/44'/60'/0'/0'/0/account_index

ADDRESS0xf0673e44E1904138f074e4FF54Ba5B0B07EAC829

BALANCE100.00 ETH

TX COUNT0

INDEX0

ADDRESS0xec64Fb355e5cC83603e6712903b160F732809eee

BALANCE100.00 ETH

TX COUNT0

INDEX1

ADDRESS0xBBA2D3A5E6093BCdc021101aA5587807B1817a4b

BALANCE100.00 ETH

TX COUNT0

INDEX2

ADDRESS0x986C2953e8De7A29235D3a0F1B677f3AC2431975

BALANCE100.00 ETH

TX COUNT0

INDEX3

ADDRESS0x27089a4fA8dE29e8339340304C2fC92BcA5ba499

BALANCE100.00 ETH

TX COUNT0

INDEX4

ADDRESS0x3B0e7eDf62fBCD5cce0cf07D4763B2b45ded1BA4

BALANCE100.00 ETH

TX COUNT0

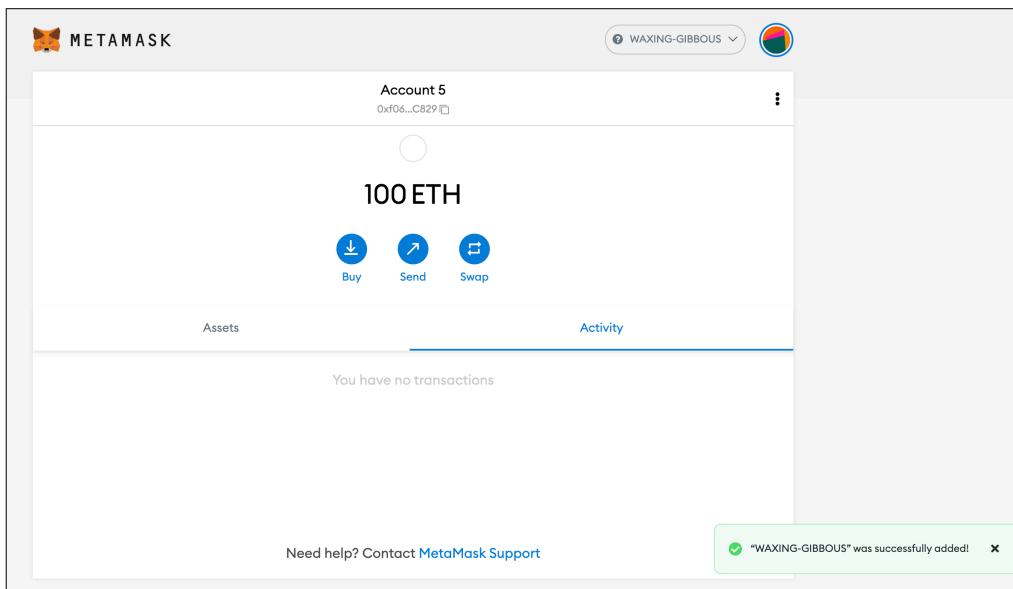
INDEX5

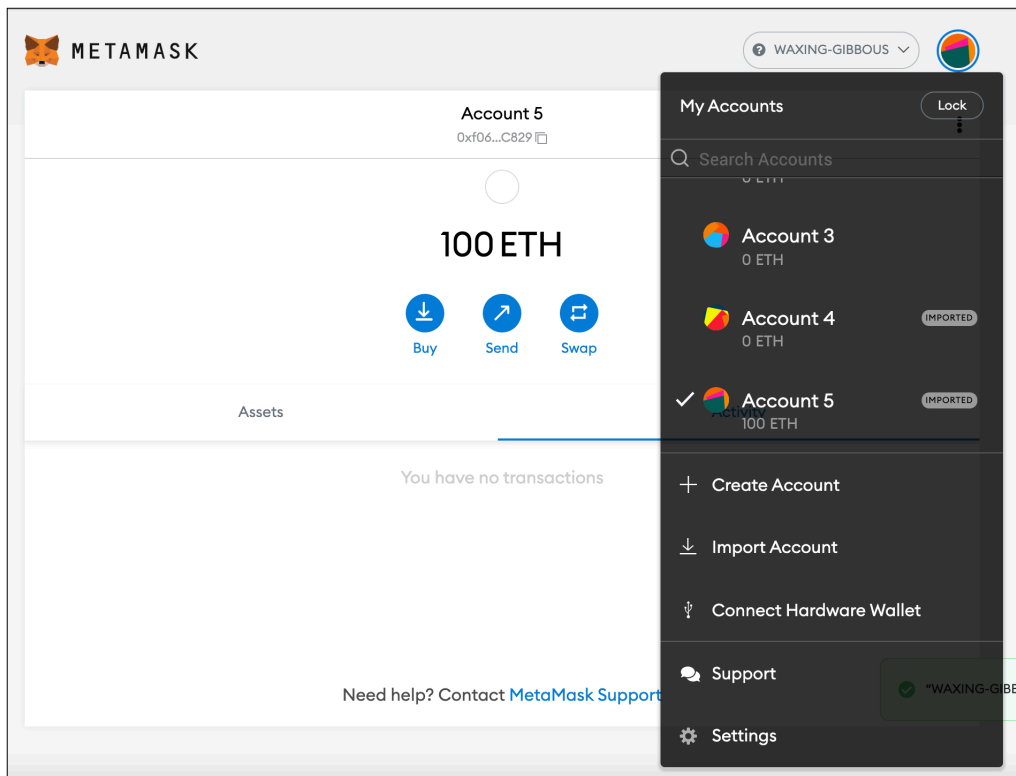
ADDRESS0x2A13BEB5CFf44Ddf368229f74E07441436B685E3

BALANCE100.00 ETH

TX COUNT0

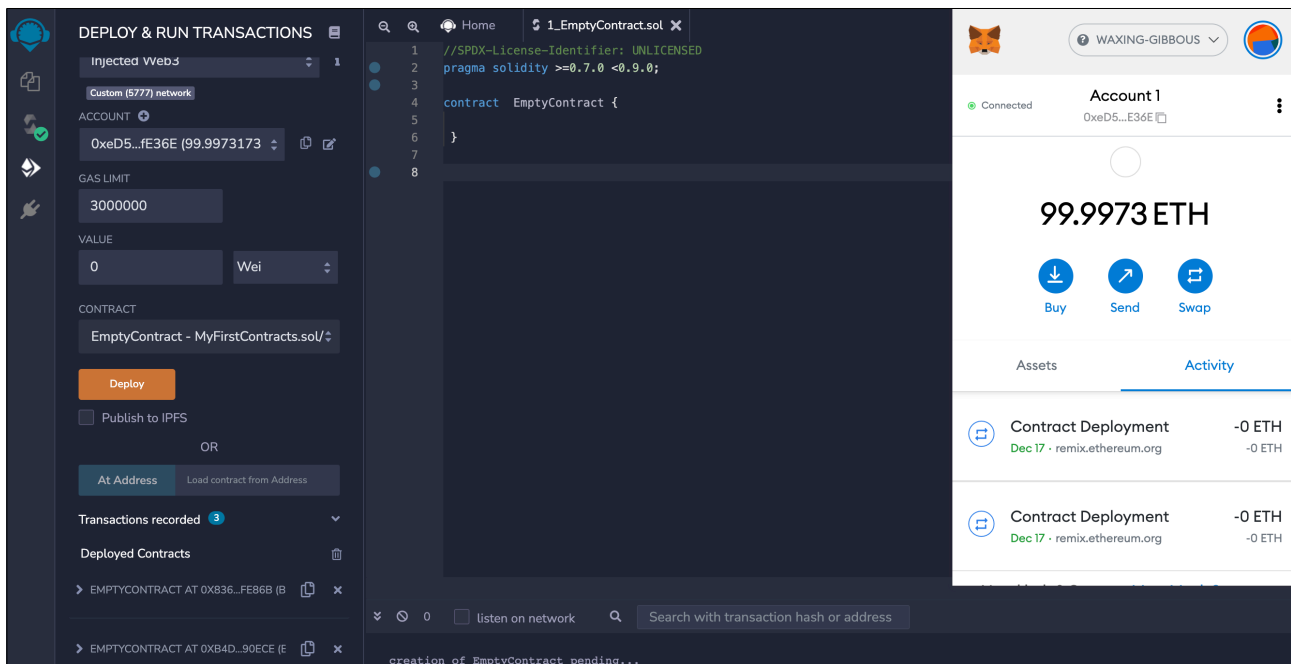
INDEX6





Part 2. Working with Solidity in Remix.

1. An empty contract, give it a creatively empty name, compile it, deploy it.



2. A contract with one string public property and one parameterized constructor. Deploy this contract, interact with it, retrieve your string from the property and take a screenshot.

The screenshot displays the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' sidebar shows the 'PublicProperty - MyFirstContracts.sol' contract selected. The 'VALUE' field is set to '0' and the unit is 'Wei'. The 'Deploy' button is highlighted. Below it, the 'Transactions recorded' section shows a single transaction for the deployment of 'PUBLICPROPERTY AT 0XD91...39138'. The 'Deployed Contracts' section shows the 'PublicProperty' contract with a 'set' button and a 'RetrieveValue' button. The 'Low level interactions' section shows the 'CALLDATA' field and a 'Transact' button.

The main editor shows the Solidity code for '2_PublicPropertyContract.sol':`1 //SPDX-License-Identifier: UNLICENSED
2
3
4 pragma solidity 0.5.1;
5 contract PublicProperty {
6 string public owner= "RetrieveValue";
7
8
9
10
11 function set(string memory Cowner) public {
12 owner = Cowner;
13
14 | | | | }
15
16 }`

The bottom panel shows the transaction logs. The first log is a green checkmark indicating the successful deployment of 'PublicProperty'. The second log is a green checkmark indicating the successful call to 'PublicProperty.owner', returning the value '0 string: RetrieveValue'.

3. A simple 'Bank' contract that has an account_balances mapping between address=>uint, a receive function, a transfer method and a withdraw method.

The screenshot displays the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' sidebar shows the 'SimpleBank - MyFirstContracts.sol/3' contract selected. The 'Deploy' button is highlighted. Below it, the 'Transactions recorded' section shows a single transaction for the deployment of 'SIMPLEBANK AT 0XD91...39138 (MEMC)'. The 'Deployed Contracts' section shows the 'SimpleBank' contract with a 'deposit' button, a 'withdraw' button, a 'balance' button, and an 'owner' button. The 'Low level interactions' section shows the 'CALLDATA' field and a 'Transact' button.

The main editor shows the Solidity code for '3_BankContract.sol':`1 //SPDX-License-Identifier: UNLICENSED
2
3
4 // Declare the source file compiler version
5 pragma solidity 0.6.6;
6
7
8 contract SimpleBank {
9 mapping (address => uint) private balances;
10 address public owner;
11
12 event LogDepositMade(address accountAddress, uint amount);
13
14
15 constructor() public {
16 owner = msg.sender;
17
18 | | | | }
19 }`

The bottom panel shows the transaction logs. The first log is a green checkmark indicating the successful deployment of 'SimpleBank'. The second log is a green checkmark indicating the successful call to 'SimpleBank.(constructor)', returning the value '0 wei data: 0x608...60033 logs: 0 hash: 0x3f3...bbfb6'.

