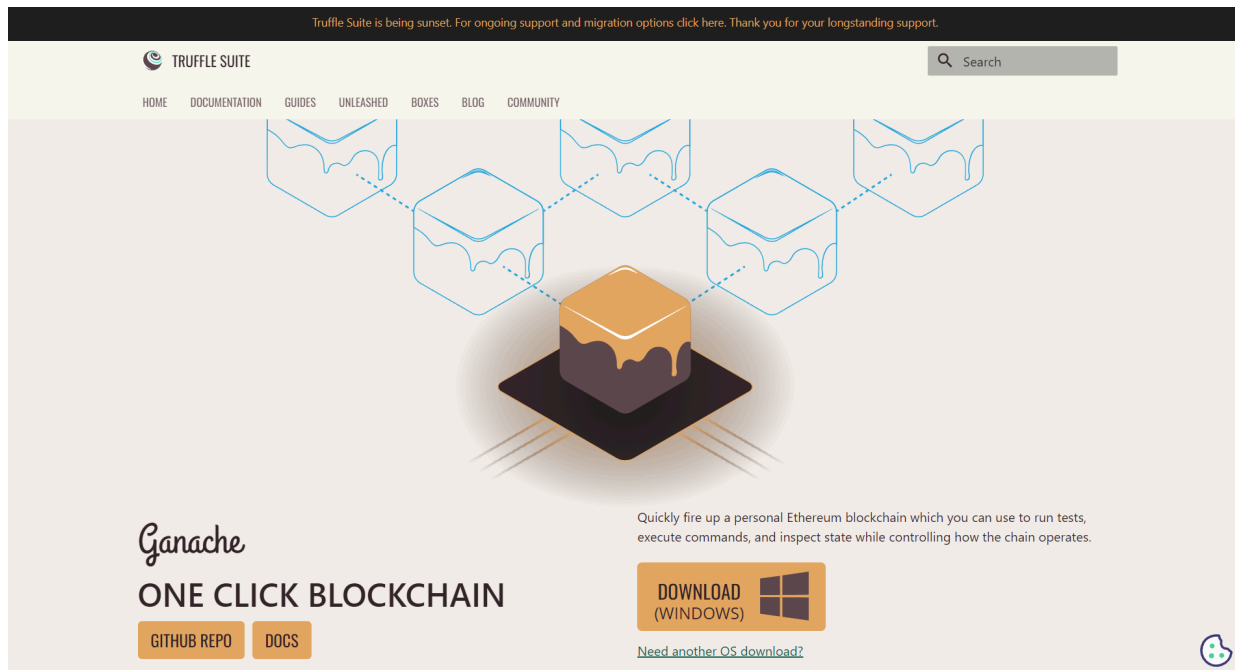
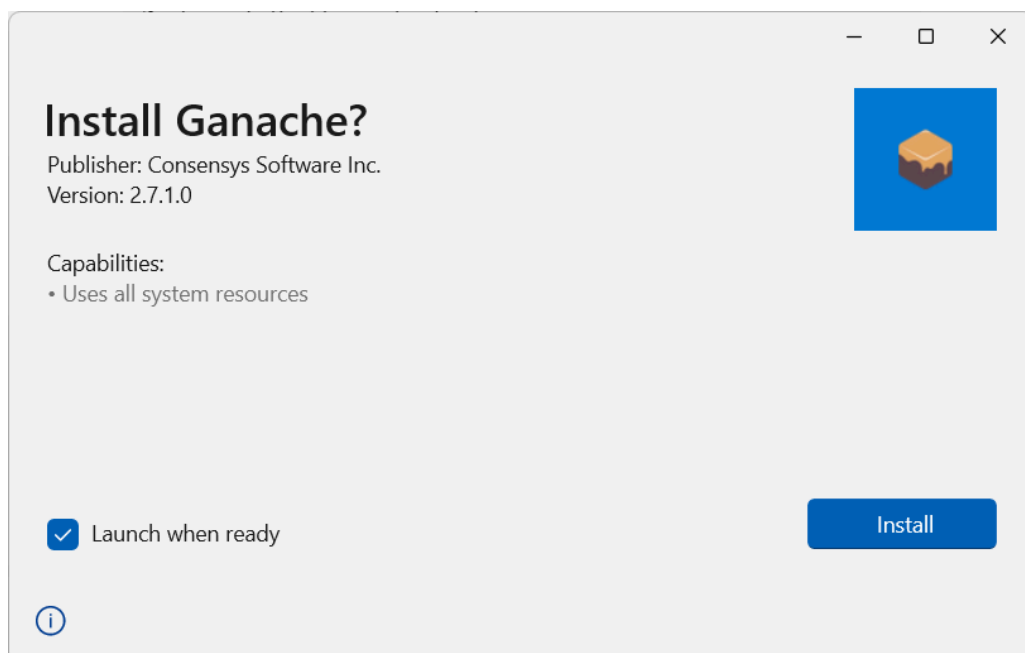


Experiment 4

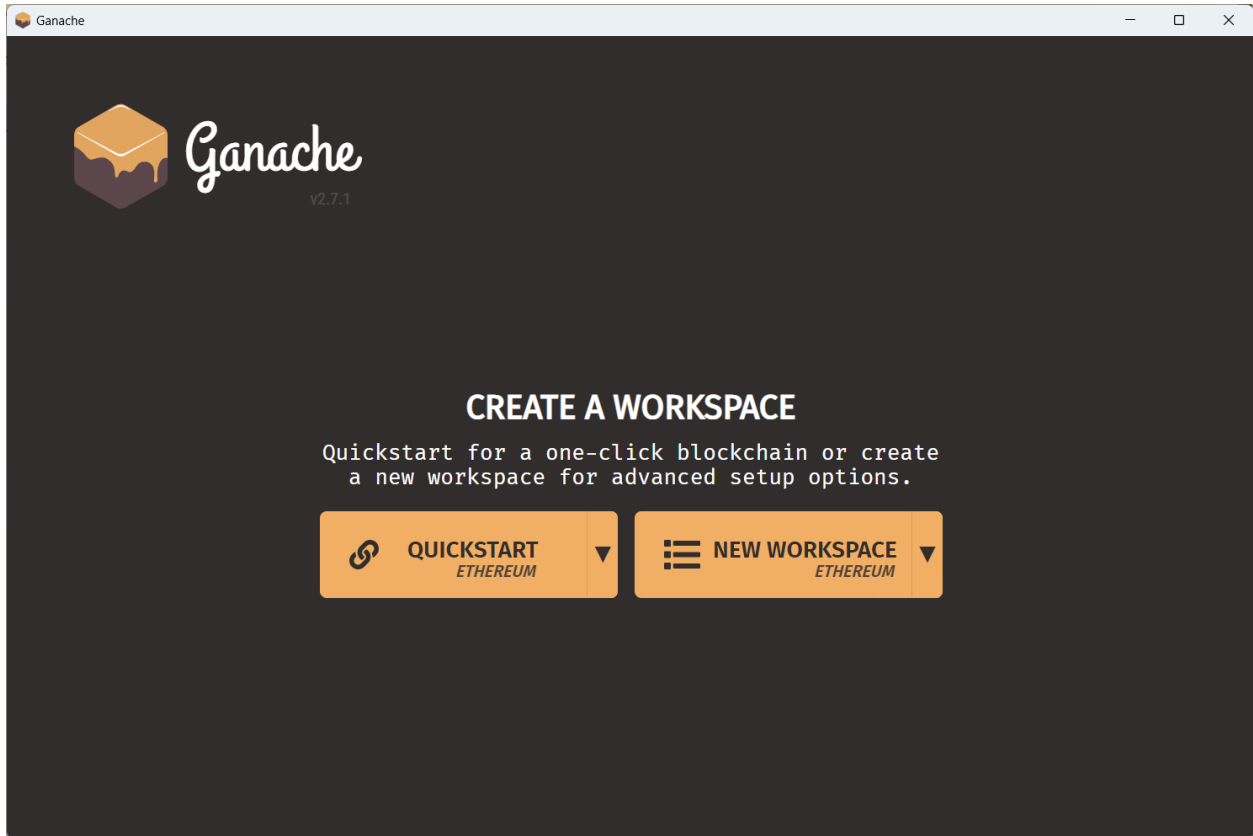
1. Search for Truffle Ganache and Download it.



2. Install Ganache.

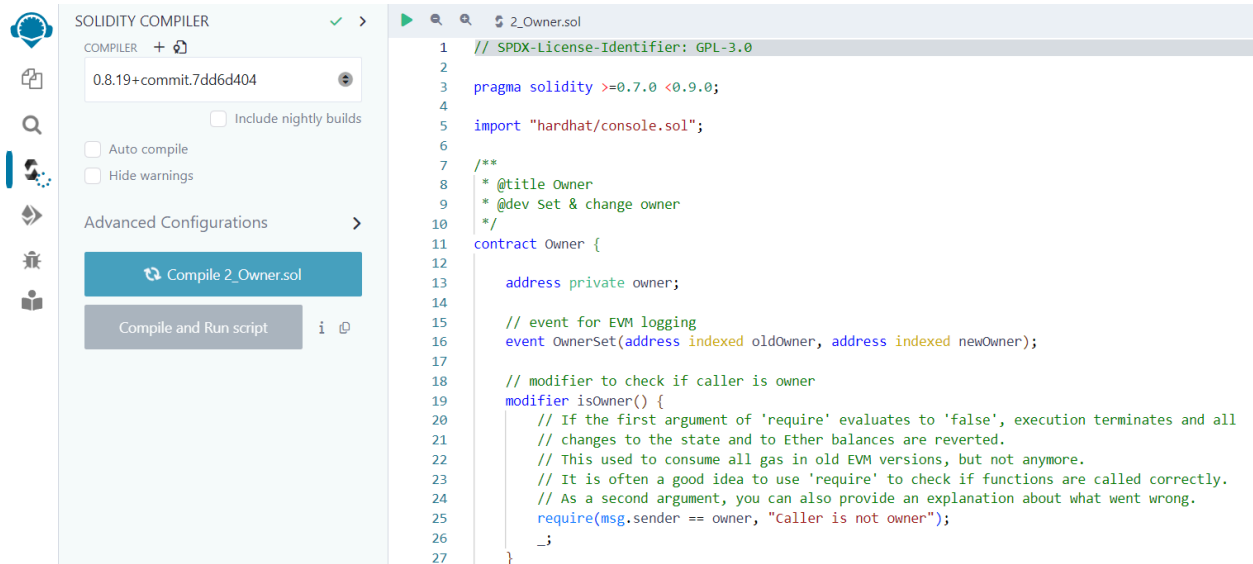


3. Launch Ganache and Select Quickstart.

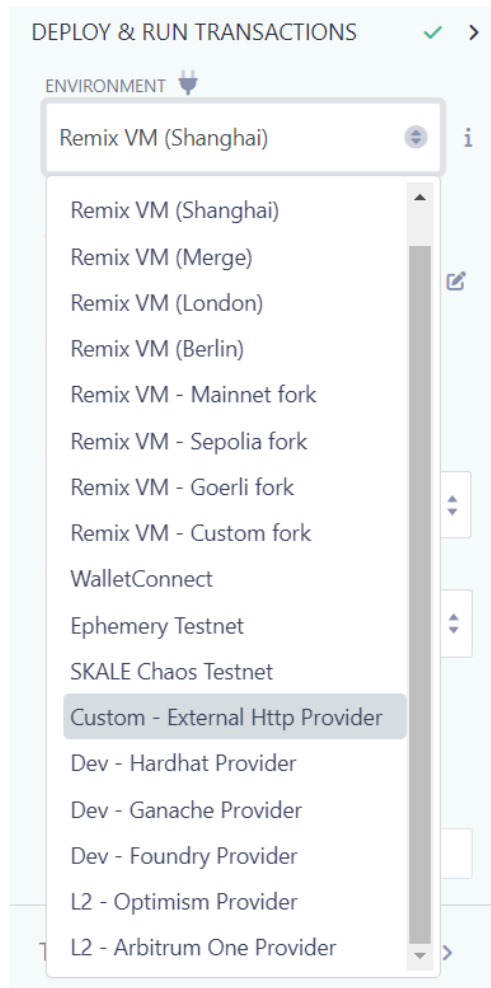
The screenshot shows the Ganache v2.7.1 interface with the "ACCOUNTS" tab selected. The top navigation bar includes icons for ACCOUNTS, BLOCKS, TRANSACTIONS, CONTRACTS, EVENTS, and LOGS. Below the navigation bar, there's a status bar with various metrics: CURRENT BLOCK (0), GAS PRICE (2000000000), GAS LIMIT (6721975), HARDFORK (MERGE), NETWORK ID (5777), RPC SERVER (HTTP://127.0.0.1:7545), MINING STATUS (AUTOMINING), and WORKSPACE (QUICKSTART). There are also "SAVE", "SWITCH", and a settings icon. The main content area shows a list of accounts with columns for ADDRESS, BALANCE, TX COUNT, and INDEX. The mnemonic is displayed at the top: "feel ripple broom lake artefact window trigger angry resist cave tuna hamster".

ADDRESS	BALANCE	TX COUNT	INDEX
0xE6a343658d71d1c4acAC6f0f2310BD3758645c3E	100.00 ETH	0	0
0x25b5c00E8c2Eeb20d64AB02b690644515B2B4956	100.00 ETH	0	1
0xB51cBa44Fb60553a245E1E57e6515d7B77EE7abc	100.00 ETH	0	2
0x4E0Fbfc09228340d090728c43c922019467E3ede	100.00 ETH	0	3
0xEc9B1411dE8Df1AF40FDA3B7cA231EC3DdDC391	100.00 ETH	0	4
0x5B1E1Faf22f4937Ff6e2E0Bf91761edBBF37631a	100.00 ETH	0	5
0xE7e8DD24101919aDbabB3bAd02ce465E41b31886	100.00 ETH	0	6

4. Launch Remix IDE & Compile and Pre-written contract.



5. In deploy tab select Custom - External Http Provider



6. Enter External HTTP Provider Endpoint as - *http://127.0.0.1:7545*

External Http Provider

Note: To use Geth & <https://remix.ethereum.org>, configure it to allow requests from Remix(see [Geth Docs on rpc server](#))

```
geth --http --http.corsdomain https://remix.ethereum.org
```

To run Remix & a local Geth test node, use this command: (see [Geth Docs on Dev mode](#))

```
geth --http --http.corsdomain="https://remix.ethereum.org" --http.api web3,eth,debug,personal,net --vmdebug --datadir <path/to/local/folder/for/test/chain> --dev console
```

WARNING: It is not safe to use the --http.corsdomain flag with a wildcard: --http.corsdomain *

For more info: [Remix Docs on External HTTP Provider](#)

External HTTP Provider Endpoint

http://127.0.0.1:7545

OK

Cancel

7. Click on Deploy

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT

Custom - External Http Provider

Custom (5777) network

ACCOUNT

0x5B3...eddC4 (0. ether)

GAS LIMIT

3000000

VALUE

0

Wei

CONTRACT

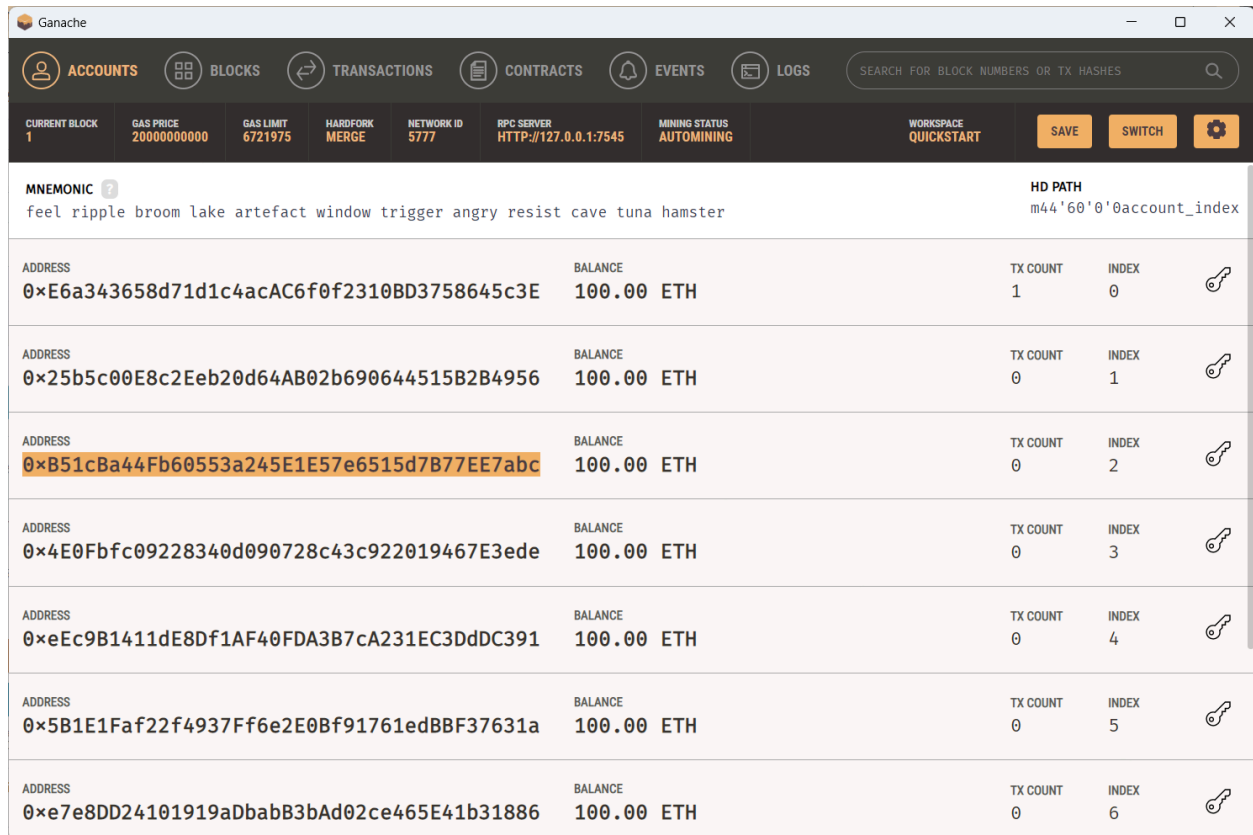
Owner - contracts/2_Owner.sol

evm version: paris

Deploy

☐ Publish to IPFS

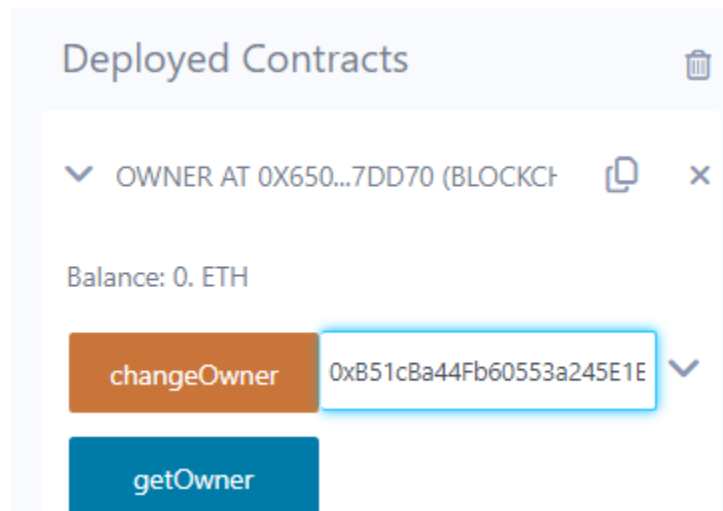
8. Open Ganache and Copy any user Address.



The screenshot shows the Ganache desktop application interface. At the top, there's a navigation bar with icons for ACCOUNTS, BLOCKS, TRANSACTIONS, CONTRACTS, EVENTS, and LOGS. Below this is a status bar with various metrics like CURRENT BLOCK, GAS PRICE, GAS LIMIT, HARDFORK, NETWORK ID, RPC SERVER, MINING STATUS, and WORKSPACE. The main area displays a list of accounts with columns for ADDRESS, BALANCE, TX COUNT, and INDEX. The third account's address, 0xB51cBa44Fb60553a245E1E57e6515d7B77EE7abc, is highlighted in orange.

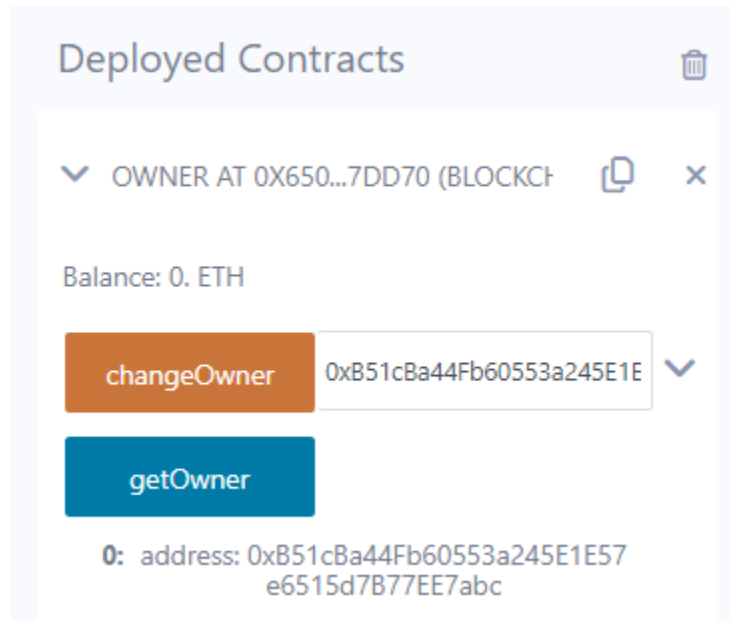
ADDRESS	BALANCE	TX COUNT	INDEX
0xE6a343658d71d1c4acAC6f0f2310BD3758645c3E	100.00 ETH	1	0
0x25b5c00E8c2Eeb20d64AB02b690644515B2B4956	100.00 ETH	0	1
0xB51cBa44Fb60553a245E1E57e6515d7B77EE7abc	100.00 ETH	0	2
0x4E0Fbfc09228340d090728c43c922019467E3ede	100.00 ETH	0	3
0xeEc9B1411dE8Df1AF40FDA3B7cA231EC3DdDC391	100.00 ETH	0	4
0x5B1E1Faf22f4937Ff6e2E0Bf91761edBBF37631a	100.00 ETH	0	5
0xe7e8DD24101919aDbabB3bAd02ce465E41b31886	100.00 ETH	0	6

9. Enter User Address copied and Click on Change Owner.



The screenshot shows a 'Deployed Contracts' window. It lists a contract 'OWNER AT 0X650...7DD70 (BLOCKC...' with a balance of 0. ETH. Below the contract name, there are two buttons: 'changeOwner' and 'getOwner'. The 'changeOwner' button is highlighted with a blue border, and a dropdown menu is open next to it, showing the address '0xB51cBa44Fb60553a245E1E'.

10. Click on Get Owner and we can see the output.



11. Open Ganache and Select Blocks, Here we can see the blocks that are created.

Ganache

ACCOUNTS BLOCKS TRANSACTIONS CONTRACTS EVENTS LOGS

SEARCH FOR BLOCK NUMBERS OR TX HASHES

CURRENT BLOCK	GAS PRICE	GAS LIMIT	HARDFORK	NETWORK ID	RPC SERVER	MINING STATUS	WORKSPACE	SWITCH	Settings
2	20000000000	6721975	MERGE	5777	HTTP://127.0.0.1:7545	AUTOMINING	KUSHAL_612020		
BLOCK 2	MINED ON 2024-02-05 14:52:28		GAS USED 1768863		1 TRANSACTION				
BLOCK 1	MINED ON 2024-02-05 14:51:48		GAS USED 1768863		1 TRANSACTION				
BLOCK 0	MINED ON 2024-02-05 14:49:06		GAS USED 0		NO TRANSACTIONS				

12. By clicking on Block we can see all details of the transaction.

[← BACK](#)

BLOCK 2

GAS USED	GAS LIMIT	MINED ON	BLOCK HASH
28799	6721975	2024-02-06 22:10:01	0x10a0b08ae0927f746532b79160c693647265fdb53e4e21dea971aa42737e32e

TX HASH

0xe0fa4ebfd522fd445bfd410920f3b557ce74011e68eebee5846063408bb3850d

CONTRACT CALL

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0xE6a343658d71d1c4acAC6f0f23108D3758645c3E	0x650b7f6F2643097e7777512C08C1b1353467Dd70	28799	0

Conclusion: In this experiment, we utilized Truffle Ganache to simulate a local blockchain environment, interacted with Remix IDE to deploy contracts, changed contract ownership, and explored transaction details within Ganache's block explorer.