

Documentation and discussion for assignment 2

Thursday, March 7, 2024 11:00 AM

Contract Location

This DApp is connected to a smart contract on the Ethereum testnet: [0x1e33DaE11dcd8197259673C286C1F56e75A46A18](#)

Contract Description

age allows the storage and retrieval of a string. Users can submit a string to the contract, which is then stored on the blockchain. Anyone can read the latest string submitted.

Submit String

Transaction Hash:
0x81e149bdba44da1a0ea749196544d6de
c8a6e4ca6cc00f4f873bfbf1d1fe4bd2

Below is a live feed. Whenever anyone submits a new string it will show up here. We use events to achieve this!

New string recorded on the blockchain:
Isaac at index 38

Fetch Latest String

My submitted string was "Isaac" with transaction hash
0x81e149bdba44da1a0ea749196544d6dec6a6e4ca6cc00f4f873bfbf1d1fe4bd2

Contract Location

This DApp is connected to a smart contract on the Ethereum testnet: [0x1e33DdE11dc6197259673C286C1F56e75A46A18](#)

Contract Description

This page allows the storage and retrieval of a string. Users can submit a string to the contract, which is then stored on the blockchain. Anyone can read the latest string submitted.

Enter a string...

Submit String

Below is a live feed. Whenever anyone submits a new string it will show up here. We use events to achieve this!

Fetch Latest String

Display All Strings

String 1: testing
String 2: 123
String 3: Hello
String 4: Hello2
String 5: Hello3
String 6: Hello4
String 7: Hello4
String 8: hello1234
String 9: hello12345
String 10: whatever
String 11: Hello world
String 12: <i>Hello world</i>
String 13: Hello World
String 14: hello web3 world
String 15: This is from BU
String 16: Hello, This Erdem Koçak from CS595
String 17: hi
String 18: hello
String 19: hello33
String 20: hey22
String 21: a
String 22:
String 23: Wow!
String 24: Funny Money :)
String 25: proof of work
String 26: string
String 27: test1-RV
String 28: hi
String 29: Patrick2024
String 30: DoYouKnowDaWei
String 31: hey
String 32: Rob says hi!
String 33: test
String 34: Hello
String 35: rob says hi again
String 36: rob says hi for maybe the last time
String 37: gabe's test message
String 38: Hi
String 39: Isaac

Here I modified the website with a button to display all strings, which you can find in my modified code within app.html and app.js

Here are the valid secret codes with their associated sha256 hashes

Plutarch - 006873DFD89C62CF4BD361267FD0BF3F4F8D90EA689941DF0059086F965FF3D5
Graeber - 5BF87176F1F7A1168B0286E21CCD99F2BAE91FAA92B0CD2C550517FE76E2C589
Foucault - 61C8DD88F67B7E4DFEA68A0C80936138D1D77B75D4069214F07FD0BE95A64323
Baudrillard - 7C79FFB347E71EDCD9D0C0511C7F58C1E0C3BCBCF3ED5E8F2842FA27FD947512
Camus - 9DE12DBFB3B61BFF1BCFDC7D319EC887E35AFB24343496BBA6BDE17EB4AB65A1
Hume - 41D8B6B7979B0A5DFE949AF780F0DE97B2A12F24285356B33A4E4F611B84123

Address of deployed smart contract: 0x385f44c5c44a7AeD9993eD33DA7921942329A7B8

Transaction 1: 0x753b8cff2b54e205599f9376460cff23e459ba681e2e4257fb521334c0c08b32
Transaction 2: 0x70cefd563b6ff4a407ff649a3d771de634f63ceb1cde63d2c6d77e6e93bc80de

Discussion: We can save on a lot of gas by storing the hashes off chain, perhaps in a structure like a Merkle tree that provides proof that an element exists in the tree in logarithmic time, rather than the linear time of traversing a list. New code would have to be run setting up this Merkle tree of hashes, by

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some off chain third party, which will provide an oracle for our contract to call.