RPS

Github

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How to play

1. Click on `addPlayer` to register and pay `PRICE` to contract
2. Think about choice and salt then call `getChoiceHash` push the choice and salt as arguments to function. It will return the bytes hash for next step.
3. Transact `input` with your hash and your idx that you got from first step.
4. Waiting another player commit the hash
5. Reveal your hash, transact `revealRequest` push your salt,choices and idx as arguments to function.
6. Waiting your income ^_^

Security

Front Runner

Fixed with the Commit-Reveal strategy by player must hash his/her choice with salt then commit his/her hash to contract another player can't know about choice that player selected. When two players have selected completely, Two players will reveal his choice and compare their choices.

Timeout

No another player join the contract

In `addPlayer` contract give 5 minutes to waiting another player join but if no player join to contract, player can refund his/her money from the contract to his/her pocket.

Player decision for long time

Contract gives you 5 minutes for decision your choice and commit the hash if another player doesn't commit the hash player can refund money and take another player's money to his/her pocket.

Player not revealed for long time

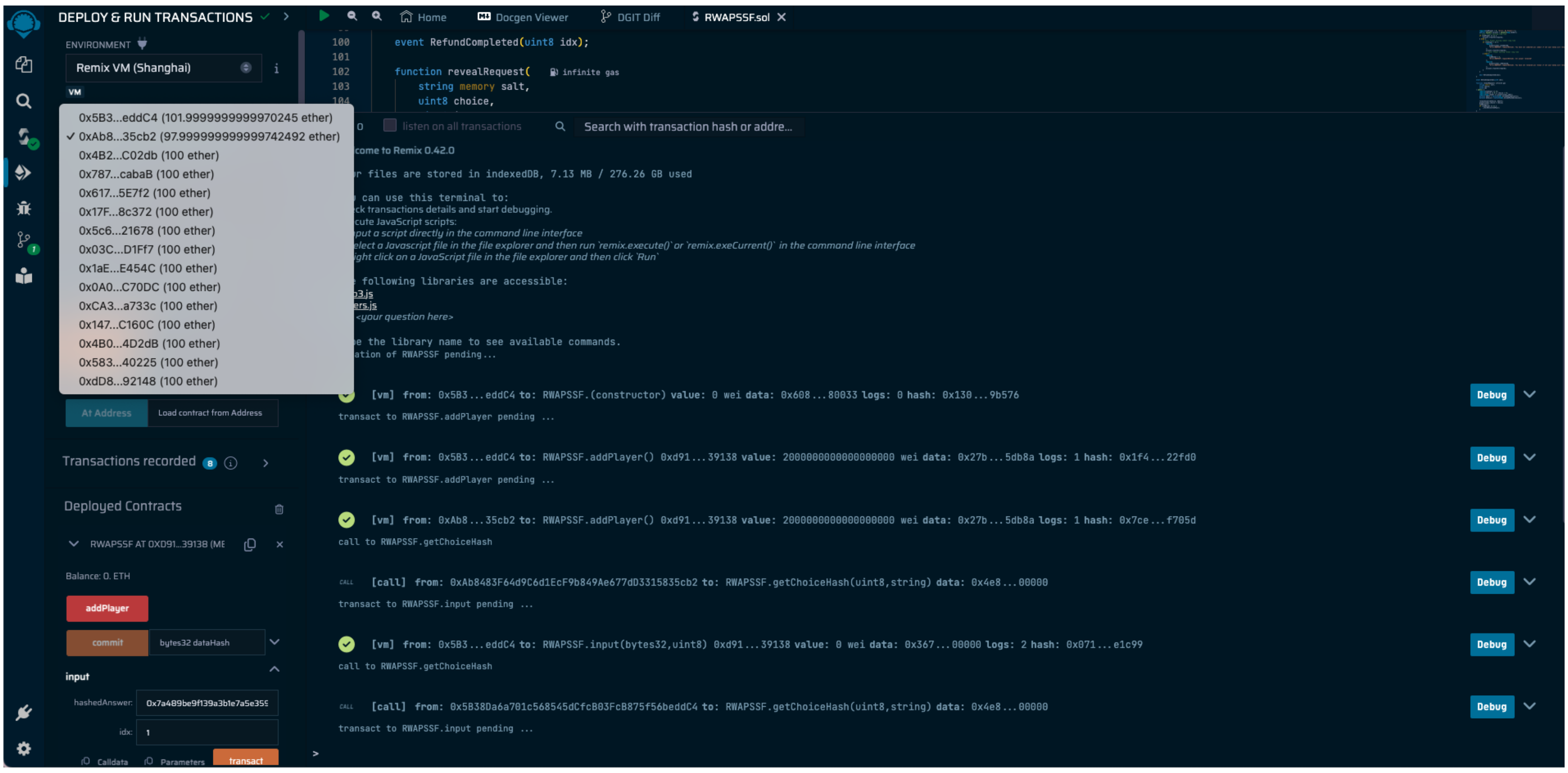
Contract gives you 3 minutes from last player committing for reveal your choice if another player doesn't reveal the choice player can refund money and take another player's money to his/her pocket.

Modified Code

- Change `uint256` to `uint8` for `numPlayer`, `numInput`
- Add `numReveal` for counting reveal players
- Add Error Message
- Add event for function

Example

Win and Lose



ENVIRONMENT: Remix VM (Shanghai) VM

```
  0x5B3...eddC4 (101.99999999999970245 ether)
✓ 0xAb8...35cb2 (97.999999999999742492 ether)
  0x4B2...C02db (100 ether)
  0x787...cabaB (100 ether)
  0x617...5E7f2 (100 ether)
  0x17F...8c372 (100 ether)
  0x5c6...21678 (100 ether)
  0x03C...D1Ff7 (100 ether)
  0x1aE...E454C (100 ether)
  0x0A0...C70DC (100 ether)
  0xCA3...a733c (100 ether)
  0x147...C160C (100 ether)
  0x4B0...4D2dB (100 ether)
  0x583...40225 (100 ether)
  0xdD8...92148 (100 ether)
```

RWAPSSF AT 0XD91...39138 (ME

Balance: 0. ETH

commit: bytes32 dataHash

input

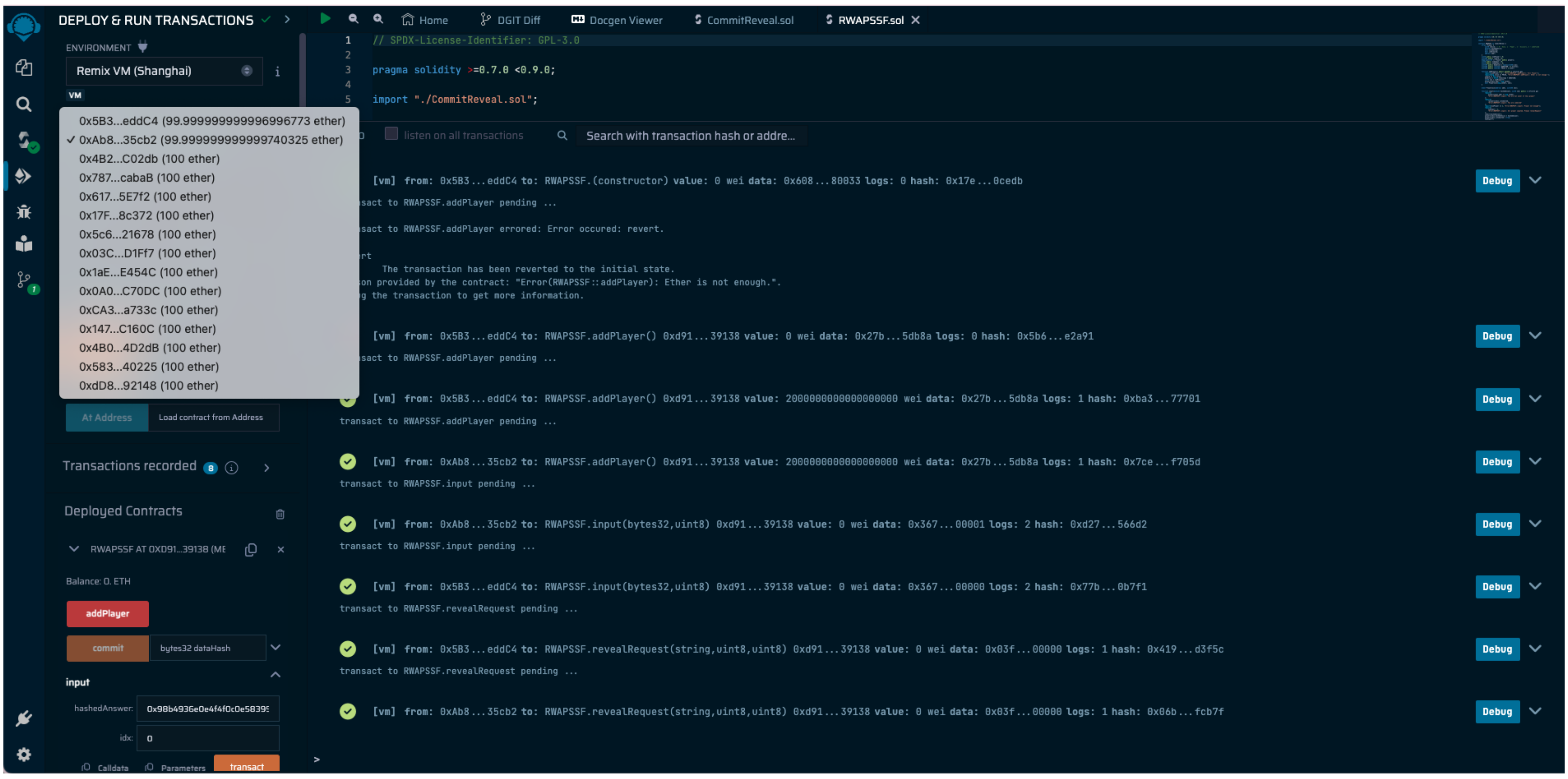
hashedAnswer: 0x7a489be9f139a3b1e7a5e35

idx: 1

```
    event RefundCompleted(uint8 idx);

    function revealRequest(    infinite gas
        string memory salt,
        uint8 choice,
```

```
0   listen on all transactions   Search with transaction hash or addre...
come to Remix 0.42.0
r files are stored in indexedDB, 7.13 MB / 276.26 GB used
 can use this terminal to:
ck transactions details and start debugging.
cute JavaScript scripts:
put a script directly in the command line interface
elect a Javascript file in the file explorer and then run `remix.execute()` or `remix.exeCurrent()` in the command line interface
ight click on a JavaScript file in the file explorer and then click `Run`

 following libraries are accessible:
3.js
ers.js
 <your question here>

e the library name to see available commands.
ation of RWAPSSF pending...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.(constructor) value: 0 wei data: 0x608...80033 logs: 0 hash: 0x130...9b576
transact to RWAPSSF.addPlayer pending ...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.addPlayer() 0xd91...39138 value: 2000000000000000000 wei data: 0x27b...5db8a logs: 1 hash: 0x1f4...22fd0
transact to RWAPSSF.addPlayer pending ...

[vm] from: 0xAb8...35cb2 to: RWAPSSF.addPlayer() 0xd91...39138 value: 2000000000000000000 wei data: 0x27b...5db8a logs: 1 hash: 0x7ce...f705d
call to RWAPSSF.getChoiceHash

CALL [call] from: 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2 to: RWAPSSF.getChoiceHash(uint8,string) data: 0x4e8...00000
transact to RWAPSSF.input pending ...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.input(bytes32,uint8) 0xd91...39138 value: 0 wei data: 0x367...00000 logs: 2 hash: 0x071...e1c99
call to RWAPSSF.getChoiceHash

CALL [call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: RWAPSSF.getChoiceHash(uint8,string) data: 0x4e8...00000
transact to RWAPSSF.input pending ...
>
```

Deal



ENVIRONMENT: Remix VM (Shanghai) VM

```
  0x5B3...eddC4 (99.999999999996996773 ether)
✓ 0xAb8...35cb2 (99.999999999999740325 ether)
  0x4B2...C02db (100 ether)
  0x787...cabaB (100 ether)
  0x617...5E7f2 (100 ether)
  0x17F...8c372 (100 ether)
  0x5c6...21678 (100 ether)
  0x03C...D1Ff7 (100 ether)
  0x1aE...E454C (100 ether)
  0x0A0...C70DC (100 ether)
  0xCA3...a733c (100 ether)
  0x147...C160C (100 ether)
  0x4B0...4D2dB (100 ether)
  0x583...40225 (100 ether)
  0xdD8...92148 (100 ether)
```

RWAPSSF AT 0XD91...39138 (ME

Balance: 0. ETH

commit: bytes32 dataHash

input

hashedAnswer: 0x98b4936e0e4f4f0c0e58395

idx: 0

```
// SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.7.0 <0.9.0;

import "./CommitReveal.sol";
```

```
listen on all transactions   Search with transaction hash or addre...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.(constructor) value: 0 wei data: 0x608...80033 logs: 0 hash: 0x17e...0cedb
sact to RWAPSSF.addPlayer pending ...

sact to RWAPSSF.addPlayer errored: Error occured: revert.

rt
    The transaction has been reverted to the initial state.
on provided by the contract: "Error(RWAPSSF::addPlayer): Ether is not enough.".
g the transaction to get more information.

[vm] from: 0x5B3...eddC4 to: RWAPSSF.addPlayer() 0xd91...39138 value: 0 wei data: 0x27b...5db8a logs: 0 hash: 0x5b6...e2a91
sact to RWAPSSF.addPlayer pending ...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.addPlayer() 0xd91...39138 value: 2000000000000000000 wei data: 0x27b...5db8a logs: 1 hash: 0xba3...77701
transact to RWAPSSF.addPlayer pending ...

[vm] from: 0xAb8...35cb2 to: RWAPSSF.addPlayer() 0xd91...39138 value: 2000000000000000000 wei data: 0x27b...5db8a logs: 1 hash: 0x7ce...f705d
transact to RWAPSSF.input pending ...

[vm] from: 0xAb8...35cb2 to: RWAPSSF.input(bytes32,uint8) 0xd91...39138 value: 0 wei data: 0x367...00001 logs: 2 hash: 0xd27...566d2
transact to RWAPSSF.input pending ...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.input(bytes32,uint8) 0xd91...39138 value: 0 wei data: 0x367...00000 logs: 2 hash: 0x77b...0b7f1
transact to RWAPSSF.revealRequest pending ...

[vm] from: 0x5B3...eddC4 to: RWAPSSF.revealRequest(string,uint8,uint8) 0xd91...39138 value: 0 wei data: 0x03f...00000 logs: 1 hash: 0x419...d3f5c
transact to RWAPSSF.revealRequest pending ...

[vm] from: 0xAb8...35cb2 to: RWAPSSF.revealRequest(string,uint8,uint8) 0xd91...39138 value: 0 wei data: 0x03f...00000 logs: 1 hash: 0x06b...fcb7f
>
```