Lucky 38

Project for lecture 52354-01: Smart Contracts and Decentralized Blockchain Applications

Tim Keller, Viktor Gsteiger

The most exciting blackjack experience

Deployed on Rinkeby testnet

Easy to play

With a website

Basic rules

DON‘T GO OVER 21

DON‘T HAVE LESS THAN THE DEALER

DON‘T LOOSE ALL MONEY

Implementation

PAY CONTRACT

PLACE BET

GET DEALT CARDS

EITHER HIT OR STAND

REPEAT

Specialities of our implementation

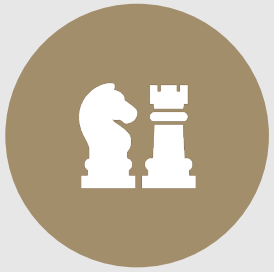
EVERY PLAYER HAS HIS OWN CARD DECK

MANY RESTRICTORS

GAME WORKS FULLY AUTOMATICALLY

Further specialities

EVERY GAME GETS SAVED IN A MAPPING



CASINO KEEPS TRACK OF ALL GAMES

CASINO GETS TO KEEP A LITTLE FEE FOR THE TROUBLE

OWNER CAN COLLECT THIS FEE

```
while (games[msg.sender]._currentHand[currentCard]._value != 0) {
    // Check if currentCard is an Ace with value 11:
    if(games[msg.sender]._currentHand[currentCard]._value == 11) {
        // Check if changing the Ace to 1 would change anything:
        if(getCurrentCardValue() - 10 < 22) {
            games[msg.sender]._currentHand[currentCard]._value = 1;
```

```
if (games[msg.sender]._currentHand[0]._value == 1) {
    games[msg.sender]._hasAce = true;
    games[msg.sender]._currentHand[0]._value = 11;
}
```

INTERESTING CODE BITS

```
function randomCard() private returns (uint, string) {
  uint value = uint(uint256(keccak256(abi.encodePacked(block.timestamp, block.difficulty,_nonce++)))%14);
  if (value == 1) {
      games[msg.sender]._hasAce == true;
      return (value, 'Ace');
  } else if (value == 2) {
      return (value, 'Two');
  } else if (value == 3) {
      return (value, 'Three');
```

INTERESTING CODE BITS

THANK YOU

Check it out now:
lucky38.ch