

# *Lucky 38*

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

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# *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

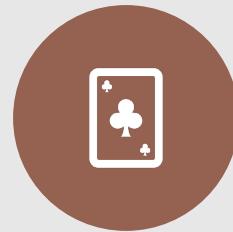
# *Implementation*



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

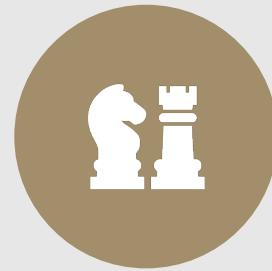


INSURANCE

## *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](http://lucky38.ch)