The King of Gambling – Blackjack

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Blackjack can be said as the most famous and most intense game in the gambling world. The reason for us to develop the code of a blackjack game is that blackjack seems to be an simple game. However, in fact, the mechanism inside the game is relatively complex. Blackjack is a game for several people. The aim of the game is to create a better hand than the bank's. Create a hand with a value that is as close to 21 as possible, without exceeding 21. If your hand exceeds 21 you lose. Have you got a better hand than the bank? Then you win the amount you bet. Have you got blackjack, meaning two cards that add up to 21? Then you will win 1.5 times your bet!

Figure 1: BLACKJACK

——————————*Java Code - Blackjack*——————————

```
import java.util.*;
import java.util.Scanner;

public class Cards{
  static int count=52;
  public static int rand(int high){
      return (int) (high*Math.random()+1);
    }

  public static void shuffle(String[] the_deck, int switches){
    String temp;
    int a; int b;
    for(int i=0; i<switches; i++){
      a = rand(52);
      b = rand(52);
      temp = the_deck[a-1];
      the_deck[a-1] = the_deck[b-1];
      the_deck[b-1] = temp;
    }
  }
```

«PAGE 1»

-Import java utilities that will be used in the code.

-Create a card class and set the lengh 52 in random.

-Create a series of code to shuffle the deck which make the deck in random order.

«PAGE 2»

-Create a method to find out the card name which includes: "Clubs", "Diamonds","Hearts","Spades"

-Construct a for loop to name 11 13 to "Jack", "Queen", "King".

-Shuffle the deck for 1000 times.

-Separate the deck into each dealers hand

-Make the system to print out the showed card from each dealers hand. This process can make counting cards easier.

«PAGE 3»

-Print out the result of the round. If exceed 21, print "BUST!!!!". Create the hit and stand bottom to let the dealer decide whether get more cards or stop. After the process, print out the result of the round. If the dealer win, print "YOU WIN!!!!". If the bank win(dealer lose), print "YOU LOSE. BOO!!!!"

```
public static void main(String[] args){

  Scanner scan = new Scanner(System.in);

  String[] deck = new String[52];
  String[] suit = new String[4];
  int[] card = new int[13];

  for (int i=0; i<card.length; i++){
    card[i]=i+1;}
  String cardName;
  suit[0] = "Clubs";
  suit[1] = "Diamonds";
  suit[2] = "Hearts" ;
  suit[3] = "Spades";


  for(int i=0; i<4; i++){
    for(int j=0; j<13; j++){
      if(j==0){cardName="Ace";}
      else if(j==10){cardName="Jack";}
      else if(j==11){cardName="Queen";}
      else if(j==12){cardName="King";}
      else {cardName=Integer.toString(card[j]);}
      deck[ 13*i+j ]= cardName + "_" +suit[i];
    }
  }

shuffle(deck, 1000);

  String say;
boolean state=true;

  ArrayList hand = new ArrayList();
  ArrayList dealer_hand = new ArrayList();
  dealer_hand.add( deal(deck) );
  dealer_hand.add( deal(deck) );
  hand.add( deal(deck) );

  while(state){

  hand.add( deal(deck) );
```

```
    System.out.println("Dealer showing: "+dealer_hand.get(1));
    System.out.println("Contents of hand: " + hand);
    System.out.println("Your score is: "+value(hand));

    if(value(hand)>21){
      System.out.println("BUST!!!!");
      break;
    }

    System.out.println( "hit[H] or stand[S]?");
         say=scan.nextLine();
         if(say.equals("H")){state=true;}
         else{state=false;}
    }

    while( value(dealer_hand)<17 ){
      dealer_hand.add( deal(deck) );
    }

    System.out.println("Dealer has: " + dealer_hand);
    System.out.println("Dealer score is: "+value(dealer_hand));

    if( (value(hand)>value(dealer_hand) && value(hand)<22) |
    (value(dealer_hand) > 21) ){
      System.out.println( "YOU WIN !!!!");
    }
    else{System.out.println( "YOU LOSE. BOO !!!!");}
  }
}
```