BlackJack Code

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Blackjack, also known as twenty-one, is the most widely played casino banking game in the world.I am going to write the blackjack code in java.this is a interesting code, we don't even have to play blackjack with people after we build this code.

HERE IS THE WONDERFUL BLACKJACK CODE.

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

public class Cards{

  static int count=52; //the count represents the number
  of cards remaining in the deck

  public static int rand(int high)
  {
      return (int) (high*Math.random()+1);
    }


  public static void shuffle(String[] the_deck,
  int switches){
  //this is a shuffle method to shuffle the cards.

    String temp;//As the name suggests,it is temporary
    space provided to the switching elements when
    shuffling.
    int a; int b;
    for(int i=0; i<switches; i++){
```

Blackjack is a comparing card game between a player and dealer, meaning players compete against the dealer but not against other players. It is played with one or more decks of 52 cards. This game's goal is to get 21 points on the player's first two cards without a dealer blackjack;Reach a final score higher than the dealer without exceeding 21; or Let the dealer draw additional cards until his or her hand exceeds 21.

```
      a = rand(52);
      b = rand(52);
      temp = the_deck[a-1];
      the_deck[a-1] = the_deck[b-1];
      the_deck[b-1] = temp;
    }
  }


  public static String deal(String[] the_deck){
    count=count-1;
    return the_deck[count];}
  //this is a shuffle method to find out the count left.


  public static int aces(String the_card){
   if(the_card.charAt(0)=='A'){
       return 1;}
     else{
       return 0;}
   }
  //this method to find out if the card is Ace.


  public static int aces(String[] the_hand){
   int sum=0;
   for(int i=0; i<the_hand.length;i++){
     sum = sum + aces(the_hand[i]);
   }
   return sum;
 }
  //this method is to overload the aces method and
  it returns an array of numbers of aces.



  public static int aces(ArrayList the_hand){
   int sum=0;
   for(int i=0; i<the_hand.size();i++){
     sum = sum + aces(the_hand.get(i).toString());
   }
   return sum;
```

```
}
 // this method is to overload the aces method and
 it returns an arraylist of numbers of aces.



public static int value(String the_card){
  char first = the_card.charAt(0);
  if (first=='1'|first=='J'|first=='Q'|first=='K')
  {
    return 10;
  }
    else if(first=='A'){
      return 11;}
    else{
      return Character.getNumericValue(first);
    }
  }
  //this method shows if you got 1,J,Q,K
,you would got number"10",if you got A, you
would got number"11".



public static int value(String[] the_hand){
  int sum=0;
  for(int i=0; i<the_hand.length;i++){
    sum = sum + value(the_hand[i]);
  }
  return sum;
}
//this method overload the "value" method and get
the sum of the cards in an array.



public static int value(ArrayList the_hand){
  int sum=0;
  int num_aces=aces(the_hand);
  for(int i=0; i<the_hand.size();i++){
    sum = sum + value(the_hand.get(i).toString());
```

```
   }
   while(num_aces>0 && sum>21){
     sum=sum-10;
     num_aces=num_aces-1;
   }
   return sum;
 }
//this method overload the "value" method and get
the sum of the cards in an arrayList.




  public static void main(String[] args){
  //main method

    Scanner scan = new Scanner(System.in);
    String[] deck = new String[52];
    String[] suit = new String[4];
    int[] card = new int[13];
   //this is how to make the deck of the cards.
    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];
      }
    }
```

```
//this is the forloop.
for(int i=0; i<52; i++){
       System.out.println(deck[i]);
    }

  shuffle(deck, 1000);
  //shuffling the deck 1000 times.


   System.out.println("SHUFFLED");

   for(int i=0; i<52; i++){
       System.out.println(deck[i]);
     }

   System.out.println("DEAL");


   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 !!!!");}
   //this is the rule of this blackjack code.

  }
}
```

```
Welcome to DrJava.  Working directory is /Users/jinhuang/Documents/java
> run Cards
Dealer showing: 3_Hearts
Contents of hand: [8_Clubs, 4_Clubs]
Your score is: 12
hit[H] or stand[S]?
H
Dealer showing: 3_Hearts
Contents of hand: [8_Clubs, 4_Clubs, 4_Hearts]
Your score is: 16
hit[H] or stand[S]?
H
Dealer showing: 3_Hearts
Contents of hand: [8_Clubs, 4_Clubs, 4_Hearts, 5_Spades]
Your score is: 21
hit[H] or stand[S]?
S
Dealer has: [6_Spades, 3_Hearts, 10_Hearts]
Dealer score is: 19
YOU WIN !!!!
>
```

This is the output of the Blackjack code.At beginning,I got 8 and 4 which means my score is 12, it's safe to draw cards, i drew 4,my score is 16 after my second draw. it's safe too, so i choice to draw again, luckily, i got number of 21,it's the biggest number in this game.so i choice not to draw again. That's a funny game.