

```

1  import java.util.*;
2  import java.util.Scanner;
3
4  public class Cards
5  {
6
7
8      static int count=52; //the count represents the number of cards remaining in the
        deck
9
10     public static int rand(int high)
11     {
12         { return (int) (high*Math.random()+1);
13         }
14     }
15
16     public static void shuffle(String[] the_deck, int switches)
17     {
18         String temp; //As the name suggests, it is temporary space provided to the
19         switching elements when shuffling.
20         int a; int b;
21         for(int i=0; i<switches; i++)
22         {
23             a = rand(52);
24             b = rand(52);
25             temp = the_deck[a-1];
26             the_deck[a-1] = the_deck[b-1];
27             the_deck[b-1] = temp;
28         }
29     }
30
31     public static String deal(String[] the_deck){
32         count=count-1;
33         return the_deck[count];}
34
35     public static int aces(String the_card){
36         if(the_card.charAt(0)=='A'){
37             return 1;}
38         else{
39             return 0;}
40     }
41
42     public static int aces(String[] the_hand)
43     {
44         int sum=0;
45         for(int i=0; i<the_hand.length;i++)
46         {
47             sum = sum + aces(the_hand[i]);
48         }
49         return sum;
50     }
51
52     public static int aces(ArrayList the_hand)
53     {
54         int sum=0;
55         for(int i=0; i<the_hand.size();i++)
56         {
57             sum = sum + aces(the_hand.get(i).toString());
58         }
59         return sum;
60     }
61
62     public static int value(String the_card)
63     {
64         char first = the_card.charAt(0);
65         if (first=='1'|first=='J'|first=='Q'|first=='K')
66         {
67             return 10;
68         }
69         else if(first=='A')
70         {
71             return 11;
72         }
73         else
74         {
75             return Character.getNumericValue(first);
76         }
77     }
78
79     public static int value(String[] the_hand)
80     {
81         int sum=0;
82         for(int i=0; i<the_hand.length;i++)
83         {
84             sum = sum + value(the_hand[i]);
85         }
86         return sum;
87     }
88
89     public static int value(ArrayList the_hand)
90     {
91         int sum=0;
92

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93     int num_aces=aces(the_hand);
94     for(int i=0; i<the_hand.size();i++)
95     {
96         sum = sum + value(the_hand.get(i).toString());
97     }
98     while(num_aces>0 && sum>21)
99     {
100         sum=sum-10;
101         num_aces=num_aces-1;
102     }
103     return sum;
104 }
105
106
107 public static void main(String[] args)
108 {
109     Scanner scan = new Scanner(System.in);
110
111     String[] deck = new String[52];
112     String[] suit = new String[4];
113     int[] card = new int[13];
114
115     for (int i=0; i<card.length; i++)
116     {
117         card[i]=i+1;
118     }
119
120     String cardName;
121     suit[0] = "Clubs";
122     suit[1] = "Diamonds";
123     suit[2] = "Hearts";
124     suit[3] = "Spades";
125
126     for(int i=0; i<4; i++)
127     {
128         for(int j=0; j<13; j++)
129         {
130             if(j==0){cardName="Ace";}
131             else if(j==10){cardName="Jack";}
132             else if(j==11){cardName="Queen";}
133             else if(j==12){cardName="King";}
134             else {cardName=Integer.toString(card[j]);}
135             deck[ 13*i+j ]= cardName + " " + suit[i];
136         }
137     }
138
139     /*
140     for(int i=0; i<52; i++){
141         System.out.println(deck[i]);
142     }
143
144     shuffle(deck, 1000);
145
146     System.out.println("SHUFFLED");
147
148     for(int i=0; i<52; i++){
149         System.out.println(deck[i]);
150     }
151
152     System.out.println("DEAL");
153 */
154 //String[] delt = new String[2];
155 //delt[0]=deal(deck);
156 //delt[1]=deal(deck);
157
158 // System.out.println(delt[0] + " and " + delt[1] + " and " + count + " cards
159 remaining.");
160 shuffle(deck, 1000);
161
162 String say;
163 boolean state=true;
164
165 ArrayList hand = new ArrayList();
166 ArrayList dealer_hand = new ArrayList();
167 dealer_hand.add( deal(deck) );
168 dealer_hand.add( deal(deck) );
169 hand.add( deal(deck) );
170
171 while(state)
172 {
173     hand.add( deal(deck) );
174
175     System.out.println("Dealer showing: " + dealer_hand.get(1));
176     System.out.println("Contents of hand: " + hand);
177     System.out.println("Your score is: " + value(hand));
178
179     if(value(hand)>21)
180     {
181         System.out.println("BUST!!!!");
182     }
183 }

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186         break;
187     }
188
189     System.out.println( "hit[H] or stand[S]?" );
190     say=scan.nextLine();
191     if(say.equals("H")){state=true;}
192     else{state=false;}
193 }
194
195 while( value(dealer_hand)<17 )
196 {
197     dealer_hand.add( deal(deck) );
198 }
199
200
201 System.out.println("Dealer has: " + dealer_hand);
202 System.out.println("Dealer score is: " + value(dealer_hand));
203
204 21) if( (value(hand)>value(dealer_hand) && value(hand)<22) | (value(dealer_hand) >
205     {
206         System.out.println( "YOU WIN !!!!");
207     }
208     else
209     {System.out.println( "YOU LOSE. BOO !!!!");}
210
211
212
213
214 // System.out.println(hand.get(0) + " and " + hand.get(1) + " and " + count + "
cards remaining.");
215
216 // hand.add( deal(deck) );
217
218
219 // System.out.println(value(hand));
220 }
221 }

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