```
import java.util.Random;
import java.util.Scanner;
import java.util.Arrays;
class nullpass extends Exception
{
}
interface cards
{
     String a[]=new String[5]; // string that holds all the suits
     int b[]=new int[13];// string that holds the number of the card
}
class card implements cards
{
     String d[]=new String[10];// string that holds the combination
}
class player extends card
{
     int amount;
     int raise;
     int wins;
     int hand[]=new int[10];
     String c1=new String();
     String c2=new String();
     int pass;
          player()
          {
```

```
amount =1000;
               wins=0;
                raise=0;
          }
}
class gamecard extends card
{
     String g1=new String();
     String g2=new String();
     String g3=new String();
     String g4=new String();
     String g5=new String();
}
public class Main
{
     static int royal(int a,int b,int c,int d,int e,int f,int g)
          {
               int x[]=new int[100];
               x[0]=a;
               x[1]=b;
               x[2]=c;
               x[3]=d;
               x[4]=e;
               x[5]=f;
               x[6]=g;
```

```
int i=0;
               Arrays.sort(x, 0, 7);
          if(x[0]==1 \&\& x[3]==10\&\&x[4]==11\&\&x[5]==12\&\&x[6]==13)
                     return 1;
          return 0;
         }
    static int flush (String a, String b, String c, String d, String e, String f, String g)
{
    String x = new String ();
    x = a + b + c + d + e + f + g;
    int i, j;
    int lol=0;
    char ch;
    int frequency;
    for (i = 0; i < x.length (); i++)
    {
             frequency=0;
          ch = x.charAt(i);
         for (j = 0; j < x.length (); j++)
            {
```

```
if (ch == x.charAt(j))
                  {
                           ++frequency;
                  }
          }
     if(frequency>=5)
     {
          return 1;
     }
     }
     return 0;
}
         static int straight(int a,int b,int c,int d,int e,int f,int g)
          {
               int x[]=new int[100];
               x[0]=a;
               x[1]=b;
               x[2]=c;
               x[3]=d;
               x[4]=e;
               x[5]=f;
```

```
x[6]=g;
           int i=0;
           Arrays.sort(x, 0, 7);
     int n = x.length;
     n = removeDuplicates(x, n);
     int y[]=new int[10];
     // Print updated array
     for (i=0; i<n; i++)
         y[i]=x[i];
    for(i=0;i<=2;i++)
     {
           if(y[i+1] == y[i] + 1 & & y[i+2] == y[i+1] + 1 & & y[i+3] == y[i+2] + 1 & & y[i+4] == y[i+3] + 1)
                 return y[i];
     }
           return 0;
     }
static int removeDuplicates(int arr[], int n)
     if (n == 0 | | n == 1)
           return n;
     int j = 0;
```

{

```
for (int i = 0; i < n-1; i++)
           if (arr[i] != arr[i+1])
                arr[j++] = arr[i];
     arr[j++] = arr[n-1];
     return j;
}
static int twopair(int a,int b,int c,int d,int e,int f,int g,int h,int k) // function for two ,two of a kind
     {
           int x[]=new int[100];
           int y[]=new int[100];
           x[0]=a;
           x[1]=b;
           x[2]=c;
           x[3]=d;
           x[4]=e;
           x[5]=f;
           x[6]=g;
           x[7]=h;
          x[8]=k;
           int I;
           l=countFreq2pair(x,8);
           return I;
     }
```

public static int countFreq2pair(int arr[], int n) // frequency function for 2 2 pairs

```
{
     boolean visited[] = new boolean[n];
     int y[]=new int[30];
     int counter=0;
  int i;
     // Traverse through array elements and
     // count frequencies
     for (i = 0; i < n; i++)
     {
          // Skip this element if already processed
          if (visited[i] == true)
                continue;
          // Count frequency
          int count = 1;
          for (int j = i + 1; j < n; j++) {
                if (arr[i] == arr[j]) {
                     visited[j] = true;
                     count++;
                }
          }
          y[i]=count;
     }
     for(i=0;i<=20;i++)
          if(y[i]==2)
```

```
counter=counter+1;
     }
     if(counter>=2)
          return 1;
     return 0
}
   static int four(int a,int b,int c,int d,int e,int f,int g) // function for four of a kind
          {
               int x[]=new int[100];
               int y[]=new int[100];
               x[0]=a;
               x[1]=b;
               x[2]=c;
               x[3]=d;
               x[4]=e;
               x[5]=f;
               x[6]=g;
               int I;
               l=countFreq4(x,7);
                return I;
          }
public static int countFreq4(int arr[], int n)
{
     boolean visited[] = new boolean[n];
```

```
// count frequencies
     for (int i = 0; i < n; i++)
     {
          // Skip this element if already processed
          if (visited[i] == true)
                continue;
           // Count frequency
           int count = 1;
           for (int j = i + 1; j < n; j++) {
                if (arr[i] == arr[j]) {
                      visited[j] = true;
                      count++;
                }
          }
          if(count==4)
                return arr[i];
     }
     return 0;
}
      static int three(int a,int b,int c,int d,int e,int f,int g) // function for three of a kind
          {
                int x[]=new int[100];
```

// Traverse through array elements and

```
x[0]=a;
               x[1]=b;
               x[2]=c;
               x[3]=d;
               x[4]=e;
               x[5]=f;
               x[6]=g;
               int I;
               l=countFreq(x,7);
               return I;
          }
public static int countFreq(int arr[], int n) // frequency function for three of a kind
{
     boolean visited[] = new boolean[n];
     // Traverse through array elements and
     // count frequencies
     for (int i = 0; i < n; i++)
     {
          // Skip this element if already processed
          if (visited[i] == true)
                continue;
          // Count frequency
          int count = 1;
```

```
for (int j = i + 1; j < n; j++) {
                if (arr[i] == arr[j]) {
                      visited[j] = true;
                      count++;
                }
          }
          if(count>=3)
                return arr[i];
     }
     return 0;
}
        static int two(int a,int b,int c,int d,int e,int f,int g) // function for two of a kind
          {
                int x[]=new int[100];
                int y[]=new int[100];
                x[1]=a;
                x[2]=b;
                x[3]=c;
                x[4]=d;
                x[5]=e;
                x[6]=f;
                x[7]=g;
                int i=7;
                int j=7;
                for(i=7;i>=0;i--)
                {
                      for(j=7;j>=0;j--)
```

```
{
               if(x[i]==x[j] \&\& i!=j)
                     return x[i];
               }
          }
          return 0;
     }
static int max(int a,int b,int c,int d) // function for high card
     {
          if(a>b&&a>c&&a>d)
               return a;
          else if(b>a&&b>c&&b>d)
               return b;
          else if(c>a&&c>b&&c>d)
               return c;
          else if(d>a&&d>c&&d>b)
               return d;
          else
               return 0;
     }
   public static void main(String[] args)
   {
Scanner in=new Scanner(System.in);
   card c=new card();
  c.a[0]="S";// initialising values for suits
```

```
c.a[1]="H";
        c.a[2]="C";
        c.a[3]="D";
// initialising values for numbers of the card
        c.b[0]=1;// A is 1
        c.b[1]=2;
        c.b[2]=3;
        c.b[3]=4;
        c.b[4]=5;
        c.b[5]=6;
        c.b[6]=7;
        c.b[7]=8;
        c.b[8]=9;
        c.b[9]=10;
        c.b[10]=11;//j is 11
        c.b[11]=12;//q is 12
        c.b[12]=13;//k is 13
     Random rand = new Random();
     int ch;
     player p1=new player();
     player p2=new player();
     gamecard g=new gamecard();
     System.out.println("1)start another game \n2)exit");
     ch=in.nextInt();
     int pot=0;
     String pause=new String();
     String pause1=new String();
     while(ch!=2)
{
```

int r1=rand.nextInt(4);// suit of first player first card int r2=rand.nextInt(13);// number of first player first card int r3=rand.nextInt(4);// suit of first player second card int r4=rand.nextInt(13);// number of first player second card int r5=rand.nextInt(4);// suit of second player first card int r6=rand.nextInt(13);// number second player first card int r7=rand.nextInt(4);// suit of second player second card int r8=rand.nextInt(13);// number of second player second card int r9=rand.nextInt(4);// suit of first card to be revealed int r10=rand.nextInt(13);// number of first card to be revealed int r11=rand.nextInt(4);// suit of second card to be revealed int r12=rand.nextInt(13);// number of second card to be revealed int r13=rand.nextInt(4);// suit of third card to be revealed int r14=rand.nextInt(13);// number of third card to be revealed int r15=rand.nextInt(4);// suit of fourth card to be revealed int r16=rand.nextInt(13);// number of fourth card to be revealed int r17=rand.nextInt(4);// suit of fifth card to be revealed int r18=rand.nextInt(13);// number of fifth card to be revealed

p1.c1=c.a[r1]+c.b[r2];// player one card one p1.c2=c.a[r3]+c.b[r4];// player one card two p2.c1=c.a[r5]+c.b[r6];// player two card one p2.c2=c.a[r7]+c.b[r8];// player two card two g.g1=c.a[r9]+c.b[r10];// game card 1 g.g2=c.a[r11]+c.b[r12];// game card 2 g.g3=c.a[r13]+c.b[r14];// game card 3 g.g4=c.a[r15]+c.b[r16];// game card 4 g.g5=c.a[r17]+c.b[r18];// game card 5

```
System.out.println("\t\t\t\t reveal player ones cardds\n");
System.out.println("\nplayer one card one\t"+p1.c1);
System.out.println("\nplayer one card two\t"+p1.c2);
System.out.println("press any key to continue");
pause1=in.next();
System.out.println("\t\t\t reveal player two's cards\n");
System.out.println("\nplayer two card one\t"+p2.c1);
System.out.println("\nplayer two card two\t"+p2.c2);
System.out.println("press any key to continue");
pause=in.next();
System.out.println("\t\treveal game cards one two and three");
System.out.println("\n\t\t\tone\t"+g.g1);
System.out.println("\n\t\two\t"+g.g2);
System.out.println("\n\t\tthree\t"+g.g3);
System.out.println("press any key to continue");
pause=in.next();
System.out.println("\n\t\t\place minimum bets\t\t\t");
p1.amount=p1.amount-5;
p2.amount=p2.amount-5;
pot=10;
System.out.println("\n \t\tplayer one's turn");
```

```
System.out.println("1)raise \n2)pass\n3)fold");
int ch1;
p1.pass=0;
p2.pass=0;
ch1=in.nextInt();
if(ch1==1)
{
     System.out.println("enter the amount of money to raise by");
     p1.raise=in.nextInt();
     p1.amount=p1.amount-p1.raise;
     pot=pot+p1.raise;
}
else if(ch1==2)
    p1.raise=0;
     System.out.println("player one has passed this round\n");
     p1.pass=1;
}
else if(ch1==3)
{
     p2.wins++;
     continue;
}
System.out.println("\n \t\t\player two's turn");
System.out.println("1)raise \n2)call\n3)pass\n4)fold");
int ch2;
ch2=in.nextInt();
if(ch2==1)
{
```

```
System.out.println("enter the amount of money to raise by");
     p2.raise=in.nextInt();
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==2)
{
     p2.raise=p1.raise-p2.raise;
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==3)
{
     try
     {
          if(p1.pass==1)
          {
               System.out.println("player two has passed this round");
               p2.raise=0;
          }
          else
               throw new nullpass();
     }
     catch(nullpass e)
     {
          System.out.println("cant pass");
          System.out.println("\n \t\t\player two's turn");
```

```
System.out.println("1)raise \n2)call");
          ch2=in.nextInt();
          if(ch2==1)
          {
               System.out.println("enter the amount of money to raise by");
               p2.raise=in.nextInt();
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
          else if(ch2==2)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
         }
     }
}
else if(ch2==4)
{
     p1.wins++;
     continue;
}
if(p1.raise!=p2.raise)
{
     if(p1.raise>p2.raise)
    {
```

```
System.out.println("\n\t\t\t player two's move");
          System.out.println("\n \t 1)call\n \t 1);
          ch2=in.nextInt();
          if(ch2==1)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
     }
      else if(p1.raise<p2.raise)
     {
          System.out.println("\n\t\t\t player one's move");
          System.out.println("\n \times 1)call\n \times 1);
          ch1=in.nextInt();
          if(ch1==1)
          {
               p1.raise=p2.raise-p1.raise;
               p1.amount=p1.amount-p1.raise;
               pot=pot+p1.raise;
          }
     }
}
p1.raise=0;
p2.raise=0;
p1.pass=0;
System.out.println("\n\t\tamount left after round for player one\t"+p1.amount);
```

```
System.out.println("\n\t\tamount left after round for player two\t"+p2.amount);
System.out.println("the pot has"+pot);
 System.out.println("\n\n\n\t\t\t four\t"+g.g4);
System.out.println("\n \t\t\player one's turn");
System.out.println("1)raise \n2)pass \n3)fold");
ch1=in.nextInt();
if(ch1==1)
{
     System.out.println("enter the amount of money to raise by");
     p1.raise=in.nextInt();
     p1.amount=p1.amount-p1.raise;
     pot=pot+p1.raise;
}
else if(ch1==2)
{
     p1.raise=0;
     System.out.println("player one has passed this round\n");
     p1.pass=1;
}
else if(ch1==3)
{
     p2.wins++;
     continue;
}
System.out.println("\n \t\tplayer two's turn");
System.out.println("1)raise \n2)call\n3)pass\n4)fold");
```

```
ch2=in.nextInt();
if(ch2==1)
{
     System.out.println("enter the amount of money to raise by");
     p2.raise=in.nextInt();
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==2)
{
     p2.raise=p1.raise-p2.raise;
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==3)
{
     try
     {
          if(p1.pass==1)
          {
               System.out.println("player two has passed this round");
               p2.raise=0;
          }
          else
               throw new nullpass();
     }
     catch(nullpass e)
```

```
{
          System.out.println("cant pass");
          System.out.println("\n \t\t\player two's turn");
          System.out.println("1)raise \n2)call");
          ch2=in.nextInt();
          if(ch2==1)
          {
               System.out.println("enter the amount of money to raise by");
               p2.raise=in.nextInt();
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
          else if(ch2==2)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
     }
}
else if(ch2==4)
{
     p1.wins++;
     continue;
}
if(p1.raise!=p2.raise)
```

```
{
     if(p1.raise>p2.raise)
     {
          System.out.println("\n\t\t\t player two's move");
          System.out.println("\n \t\t 1)call\n \t\t\t 2)fold");
          ch2=in.nextInt();
          if(ch2==1)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
     }
      else if(p1.raise<p2.raise)
     {
          System.out.println("\n\t\t\t player one's move");
          System.out.println("\n \times 1)call\n \times 1);
          ch1=in.nextInt();
          if(ch1==1)
          {
               p1.raise=p2.raise-p1.raise;
               p1.amount=p1.amount-p1.raise;
               pot=pot+p1.raise;
          }
     }
}
p1.raise=0;
```

```
p2.raise=0;
p1.pass=0;
System.out.println("\n\t\tamount left after round for player one"+p1.amount);
System.out.println("\n\t\tamount left after round for player two"+p2.amount);
System.out.println("the pot has"+pot);
  System.out.println("\n\n\ \t\t five\t"+g.g5);
System.out.println("\n \t\t\player one's turn");
System.out.println("1)raise \n2)pass \n3)fold");
ch1=in.nextInt();
if(ch1==1)
{
     System.out.println("enter the amount of money to raise by");
     p1.raise=in.nextInt();
     p1.amount=p1.amount-p1.raise;
     pot=pot+p1.raise;
}
else if(ch1==2)
{
     p1.raise=0;
     System.out.println("player one has passed this round\n");
     p1.pass=1;
}
else if(ch1==3)
{
     p2.wins++;
     continue;
```

```
}
System.out.println("\n \t\t\tplayer two's turn");
System.out.println("1)raise \n2)call\n3)pass\n4)fold");
ch2=in.nextInt();
if(ch2==1)
{
     System.out.println("enter the amount of money to raise by");
     p2.raise=in.nextInt();
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==2)
{
     p2.raise=p1.raise-p2.raise;
     p2.amount=p2.amount-p2.raise;
     pot=pot+p2.raise;
}
else if(ch2==3)
{
try
     {
          if(p1.pass==1)
          {
               System.out.println("player two has passed this round");
               p2.raise=0;
         }
```

```
else
               throw new nullpass();
     }
     catch(nullpass e)
     {
          System.out.println("cant pass");
          System.out.println("\n \t\tplayer two's turn");
          System.out.println("1)raise \n2)call\n");
          ch2=in.nextInt();
          if(ch2==1)
          {
               System.out.println("enter the amount of money to raise by");
               p2.raise=in.nextInt();
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
          else if(ch2==2)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
     }
else if(ch2==4)
```

}

{

```
p1.wins++;
     continue;
}
if(p1.raise!=p2.raise)
{
     if(p1.raise>p2.raise)
    {
          System.out.println("\n\t\t player two's move");
          System.out.println("\n \t\t1)call\n\t\t2)fold");
          ch2=in.nextInt();
          if(ch2==1)
          {
               p2.raise=p1.raise-p2.raise;
               p2.amount=p2.amount-p2.raise;
               pot=pot+p2.raise;
          }
     }
      else if(p1.raise<p2.raise)
     {
          System.out.println("\n\t\t player one's move");
          System.out.println("\n\t\t1)call\n \t\t2)fold");
          ch1=in.nextInt();
          if(ch1==1)
          {
               p1.raise=p2.raise-p1.raise;
               p1.amount=p1.amount-p1.raise;
               pot=pot+p1.raise;
         }
```

```
}
 }
 p1.raise=0;
 p2.raise=0;
 System.out.println("\n\t\tamount left after round for player one"+p1.amount);
 System.out.println("\n\t\tamount left after round for player two"+p2.amount);
 System.out.println("the pot has"+pot);
 int i;
 for(i=0;i<=9;i++)
 {
      p1.hand[i]=0;
      p2.hand[i]=0;
 }
 int h;
 int m;
 int o,p,q;
 //1) high card conditions
 h=Main.max(c.b[r2],c.b[r4],c.b[r6],c.b[r8]);// h has the max value
 if(h==c.b[r2]||h==c.b[r3])
      p1.hand[0]=1;
 else
      p2.hand[0]=1;
// pair
      h=Main.two(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
     m=Main.two(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
     if(h>m)
```

```
p1.hand[1]=1;
     if(m>h)
           p2.hand[1]=1;
// 3 of a kind
h=Main.three(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
m=Main.three(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
     if(h>m)
           p1.hand[2]=1;
     else if(m>h)
           p2.hand[2]=1;
  // straight
      h=Main.straight(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
 m=Main.straight(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
     if(h>m)
           p1.hand[3]=1;
     else if(m>h)
           p2.hand[3]=1;
//flush
     h =Main.flush (c.a[r1], c.a[r3], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
     m =Main.flush (c.a[r3], c.a[r5], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
p1.hand[7]=0;
p2.hand[7]=0;
```

```
if (h==1)
            p1.hand[4] = 1;
  if (m==1)
            p2.hand[4] = 1;
   // full house
   //pair
  h=Main.two(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
  m=Main.two(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
  // 3 of a kind
  q=Main.three(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
  o=Main.three(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
        if(h!=q &&h!=0 && q!=0)
             p1.hand[5]=1;
        if(m!=0 && m!=0 && 0!=0)
             p2.hand[5]=1;
// 4 of a kind
    h=Main.four(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
    m=Main.four(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
        if(h>m)
             p1.hand[6]=1;
        else if(m>h)
             p2.hand[6]=1;
```

```
// straight flush
    //straight
           h=Main.straight(c.b[r2],c.b[r6],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
           m=Main.straight(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
 //flush
          q =Main.flush (c.a[r1], c.a[r3], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
          o =Main.flush (c.a[r5], c.a[r7], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
         if(h!=0 && q==1)
               p1.hand[7]=1;
         if(m!=1 && o==1)
               p2.hand[7]=1;
            //royal flush
          // royal
         h=Main.royal(c.b[r2],c.b[r4],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
         m=Main.royal(c.b[r6],c.b[r8],c.b[r10],c.b[r12],c.b[r14],c.b[r16],c.b[r18]);
         // flush
         q =Main.flush (c.a[r1], c.a[r3], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
```

```
o =Main.flush (c.a[r5], c.a[r7], c.a[r9], c.a[r11], c.a[r13], c.a[r15],c.a[r17]);
if(h==1&&q==1)
     p1.hand[8]=1;
if(m==1&&o==1)
     p2.hand[8]=1;
for(i=8;i>=0;i--)
{
     if(p1.hand[i]>p2.hand[i])
     {
          System.out.println("winner is p1");
          p1.wins++;
          p1.amount=p1.amount+pot;
          p1.raise=0;
          break;
     }
      else if(p1.hand[i]<p2.hand[i])
     {
          System.out.println("winner is p2");
          p2.wins++;
          p2.amount=p2.amount+pot;
          p2.raise=0;
          break;
    }
```

```
}
     System.out.println("1)start another game \n2)exit");
     ch=in.nextInt();
}
      }
```

}