```
import java.util.ArrayList;
import java.util.Random;
import java.util.Scanner;

public class BulgarianSolitaire
{

      public static void main(String[] args)
      {

            System.out.println("Welcome to Bulgarian Solitaire! Enter
the number of cards you want to play with.");
            Scanner reader =  new Scanner (System.in);

            int cardtotal = reader.nextInt();
            ArrayList <Integer> piles = new ArrayList <Integer> ();
            ArrayList <Integer> array2 = new ArrayList <Integer> ();
            reader.close();

            int triangle = 0;
            int sum = 0;

            while (triangle < cardtotal)
            {
                  sum = sum + 1;
                  triangle = sum + triangle;
            }


            boolean tri = false;
             if (triangle==cardtotal)
             {
                   tri = true;
             }


            if (tri == true)
            {
            otherArray (cardtotal, array2);
            makePiles (cardtotal, piles);
            round(piles, array2);
            }
            else
            {
                  System.out.println("You did not enter a triangular
number.");
            }

      }
      public static void otherArray (int cardtotal, ArrayList <Integer> 
array2)
      {

            int sum = cardtotal;
            int eger = 1;
            while (sum > 0)
            {
                  array2.add(eger);
                  sum = sum - eger;
                  eger++;
            }

      }


      public static void makePiles (int cardtotal, ArrayList <Integer> 
piles)
      {
            Random randy = new Random ();

                  //generate random piles of random sizes

            while (cardtotal > 0)
                  {
                        int pilesize = randy.nextInt(cardtotal) + 1;
                        cardtotal = cardtotal - pilesize;
                        piles.add(pilesize);
                  }

                  System.out.println(piles);

      }

      public static void round (ArrayList <Integer> piles, ArrayList 
<Integer> array2)

      {
            int iteration = 0;
            while (!piles.containsAll(array2))
            {
                  for (int i  = 0; i <= piles.size()-1; i++)
                  {
                        piles.set(i, piles.get(i)-1);

                  }

                  piles.add(piles.size());


                  for (int i = (piles.size()-1); i >= 0; i--)
                  {
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                if (piles.get(i)==0)
                {
                    piles.remove(i);
                }
            }

            iteration++;

            System.out.println("Iteration " + iteration + ": " +
piles);
        }

    }


}
```