Homework Turnin

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Section:	6G
Course:	TJHSST APCS 2016-17
Assignment:	01-01
Receipt ID:	a6fd31fe6b93becc2f4446ee4c0a889f

Turnin Successful!

The following file(s) were received:

Modes.java (1975 bytes)

```
   //Name: Kazuya Chue
   //Date: 9/9/16
import java.util.ArrayList;

public class Modes
{
   public static void main(String[] args)
   {
      int[] tally = {0,0,10,5,10,0,7,1,0,6,0,10,3,0,0,1};
      display(tally);
      int[] modes = calculateModes(tally);
      display(modes);
      int sum = 0;
      for(int k = 0; k < tally.length; k++)
         sum += tally[k];
      System.out.println("kth \tindex");
      for(int k = 1; k <= sum; k++)
         System.out.println(k + "\t\t" + kthDataValue(tally, k));
   }
   public static int[] calculateModes(int[] tally)
   {
      int max = findMax(tally);
      ArrayList<Integer> theModes = new ArrayList<Integer>();

      for(int i=0;i<tally.length;i++)
      {
         if(tally[i]==max)
         {
            theModes.add(i);
         }
      }
      int s = theModes.size();
      int[] intArray = new int[s];
      for (int i = 0; i < s; i++)
      {
         intArray[i] = theModes.get(i).intValue();
      }

      return intArray;

     // return new int[] {-1,-1,-1};
   }

   public static int kthDataValue(int[] tally, int k)
   {

      ArrayList<Integer> sortedValues = new ArrayList<Integer>();
      int count = 0;
      sortedValues.add(0);

      for(int i=0;i<tally.length;i++)
```

```
      {
         count = tally[i];
         if (count>0)
         {
            for(int a=0;a<count;a++)
            {
               sortedValues.add(i);
            }
         }
      }


      return sortedValues.get(k).intValue();
   }
   public static int findMax(int[] nums)
   {
      int pos = 0;
      for(int k = 1; k < nums.length; k++)
         if(nums[k] > nums[pos])
            pos = k;
      return nums[pos];
   }
   public static void display(int[] args)
   {
      for(int k = 0; k < args.length; k++)
         System.out.print(args[k] + " ");
      System.out.println();
      System.out.println();
   }
}
```