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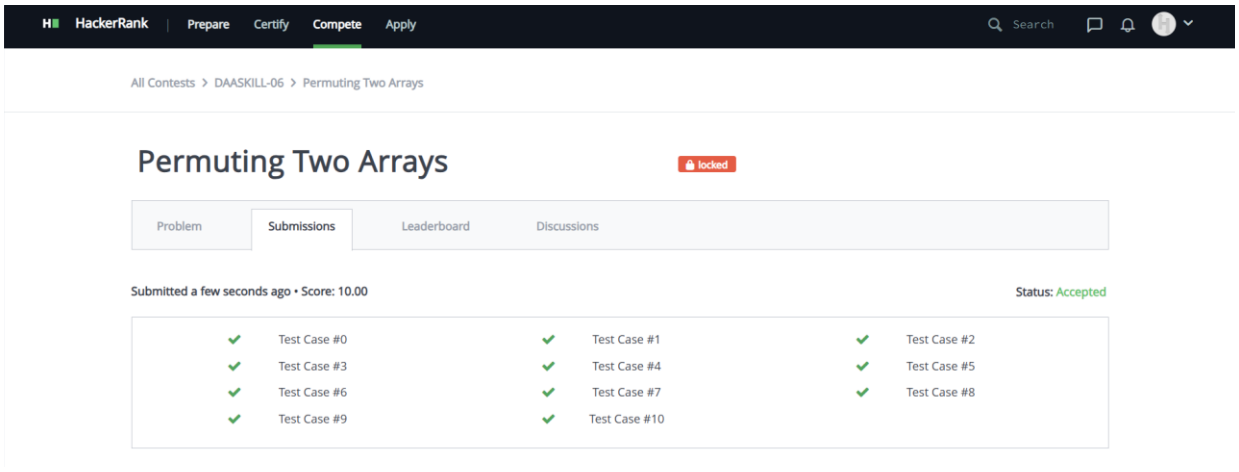
LAB SKILL-WEEK 6

1) Permuting Two Arrays:



Permuting Two Arrays

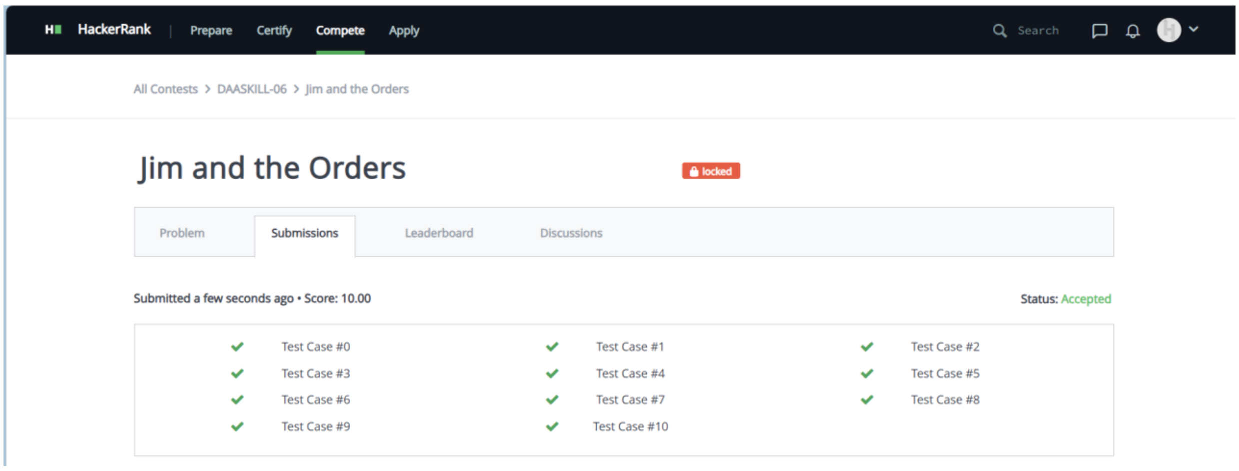
Submitted a few seconds ago • Score: 10.00

Status: Accepted

Test Case #0 ✓ Test Case #1 ✓ Test Case #2 ✓
Test Case #3 ✓ Test Case #4 ✓ Test Case #5 ✓
Test Case #6 ✓ Test Case #7 ✓ Test Case #8 ✓
Test Case #9 ✓ Test Case #10 ✓

```
import java.io.*;
import java.util.*;

class Result {

    public static String twoArrays(int k, List<Integer> A, List<Integer> B) {
        Collections.sort(A);
        Collections.sort(B, Collections.reverseOrder());
        int len = A.size();
        for (int i = 0; i < len; i++) {
            if (A.get(i) + B.get(i) < k) {
                return "NO";
            }
        }
        return "YES";
    }
}

public class Solution {
    public static void main(String[] args) throws IOException {

        BufferedReader bufferedReader = new BufferedReader(new InputStreamReader(System.in));
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        int q = Integer.parseInt(bufferedReader.readLine().trim());

        for (int qItr = 0; qItr < q; qItr++) {
            String[] firstMultipleInput = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");
            int n = Integer.parseInt(firstMultipleInput[0]);
            int k = Integer.parseInt(firstMultipleInput[1]);

            String[] ATemp = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");
            List<Integer> A = new ArrayList<>();
            for (int i = 0; i < n; i++) {
                int AItem = Integer.parseInt(ATemp[i]);
                A.add(AItem);
            }

            String[] BTemp = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");
            List<Integer> B = new ArrayList<>();
            for (int i = 0; i < n; i++) {
                int BItem = Integer.parseInt(BTemp[i]);
                B.add(BItem);
            }

            String result = Result.twoArrays(k, A, B);

            bufferedWriter.write(result);
            bufferedWriter.newLine();
        }

        bufferedReader.close();

        bufferedWriter.close();
    }
}
```

2) Jim and the Orders:



Jim and the Orders

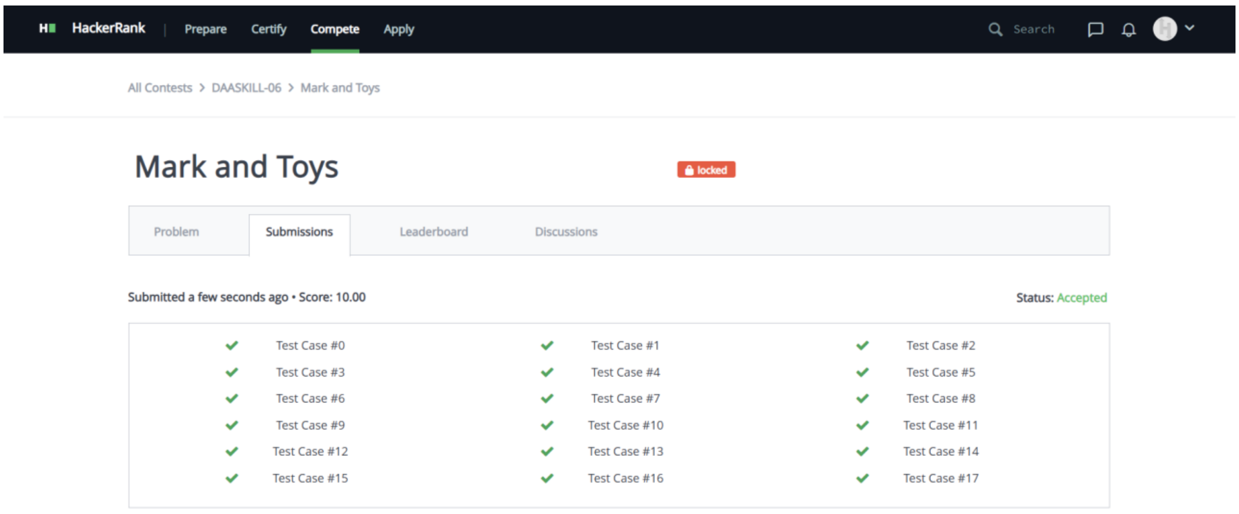
Submitted a few seconds ago • Score: 10.00

Status: Accepted

✓ Test Case #0 ✓ Test Case #1 ✓ Test Case #2
✓ Test Case #3 ✓ Test Case #4 ✓ Test Case #5
✓ Test Case #6 ✓ Test Case #7 ✓ Test Case #8
✓ Test Case #9 ✓ Test Case #10

```
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.regex.*;

class Result {

    public static List<Integer> jimOrders(List<List<Integer>> orders) {
         class Order {
            int index;
            int time;

            Order(int index, int time) {
                this.index = index;
                this.time = time;
            }
        }

        List<Order> orderTimes = new ArrayList<Order>();

        for (int i = 0; i < orders.size(); i++) {
            int time = orders.get(i).get(0) + orders.get(i).get(1);
            orderTimes.add(new Order(i + 1, time));
        }

        Collections.sort(orderTimes, new Comparator<Order>() {
            @Override
            public int compare(Order order1, Order order2) {
                if (order1.time == order2.time) {
                    return order1.index - order2.index;
                } else {
                    return order1.time - order2.time;
                }
            }
        });

        List<Integer> result = new ArrayList<Integer>();
        for (Order order : orderTimes) {
            result.add(order.index);
        }

        return result;
    }

    }


public class Solution {
    public static void main(String[] args) throws IOException {
        BufferedReader bufferedReader = new BufferedReader(new InputStreamReader(System.in));
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        int n = Integer.parseInt(bufferedReader.readLine().trim());
        List<List<Integer>> orders = new ArrayList<>();

        for (int i = 0; i < n; i++) {
            String[] ordersRowTempItems = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");

            List<Integer> ordersRowItems = new ArrayList<>();

            for (int j = 0; j < 2; j++) {
                int ordersItem = Integer.parseInt(ordersRowTempItems[j]);
                ordersRowItems.add(ordersItem);
            }

            orders.add(ordersRowItems);
        }

        List<Integer> result = Result.jimOrders(orders);

        for (int i = 0; i < result.size(); i++) {
            bufferedWriter.write(String.valueOf(result.get(i)));

            if (i != result.size() - 1) {
                bufferedWriter.write(" ");
            }
        }

        bufferedWriter.newLine();

        bufferedReader.close();
        bufferedWriter.close();
    }
}
```

3) Mark and Toys:



Mark and Toys

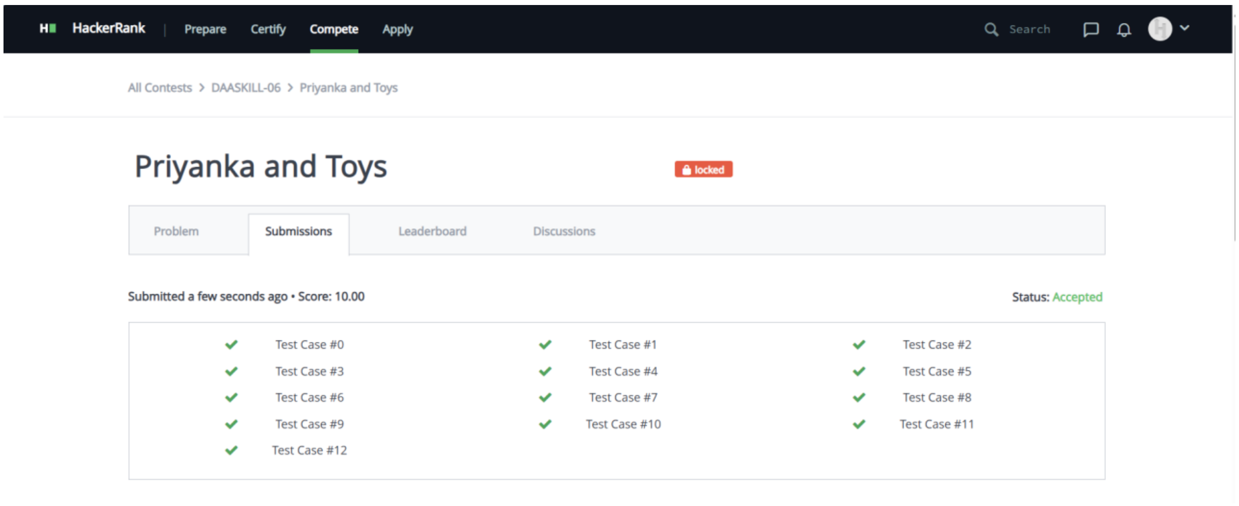
Submitted a few seconds ago • Score: 10.00

Status: Accepted

✓ Test Case #0	✓ Test Case #1	✓ Test Case #2
✓ Test Case #3	✓ Test Case #4	✓ Test Case #5
✓ Test Case #6	✓ Test Case #7	✓ Test Case #8
✓ Test Case #9	✓ Test Case #10	✓ Test Case #11
✓ Test Case #12	✓ Test Case #13	✓ Test Case #14
✓ Test Case #15	✓ Test Case #16	✓ Test Case #17

```
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.regex.*;

class Result {

    public static int maximumToys(List<Integer> prices, int k) {
        Collections.sort(prices);
        int i = 0;
        while (k > -1){
            k = k - prices.get(i);
            i += 1;
        }
     return i - 1;

    }

}



public class Solution {
    public static void main(String[] args) throws IOException {
        BufferedReader bufferedReader = new BufferedReader(new
InputStreamReader(System.in));
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        String[] firstMultipleInput = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");

        int n = Integer.parseInt(firstMultipleInput[0]);
        int k = Integer.parseInt(firstMultipleInput[1]);

        String[] pricesTemp = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");

        List<Integer> prices = new ArrayList<>();

        for (int i = 0; i < n; i++) {
            int pricesItem = Integer.parseInt(pricesTemp[i]);
            prices.add(pricesItem);
        }

        int result = Result.maximumToys(prices, k);

        bufferedWriter.write(String.valueOf(result));
        bufferedWriter.newLine();

        bufferedReader.close();
        bufferedWriter.close();
    }
}
```

4) Priyanka and Toys:



Submitted a few seconds ago • Score: 10.00

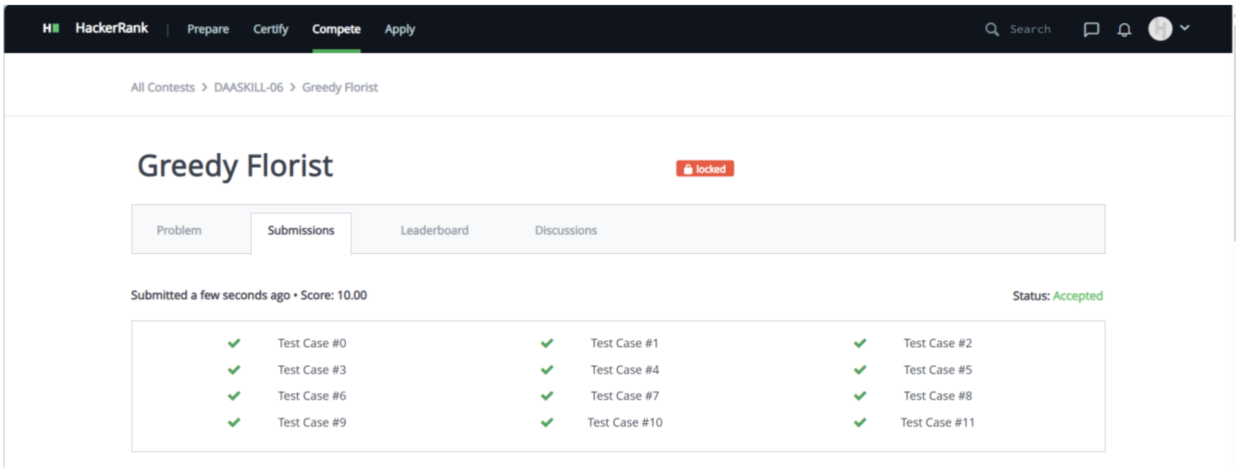
Status: Accepted

✓ Test Case #0 ✓ Test Case #1 ✓ Test Case #2
✓ Test Case #3 ✓ Test Case #4 ✓ Test Case #5
✓ Test Case #6 ✓ Test Case #7 ✓ Test Case #8
✓ Test Case #9 ✓ Test Case #10 ✓ Test Case #11
✓ Test Case #12

```
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.regex.*;

class Result {

    public static int toys(List<Integer> w) {
```

```
    System.out.println(w);
        Collections.sort(w);
        int containers = 1;
        int tempLimit = w.get(0);
        for (int i = 1; i < w.size(); i++) {
            if (w.get(i) > tempLimit+4) {
                tempLimit = w.get(i);
                containers++;
            }

        }
        return containers;
    }

}


public class Solution {
    public static void main(String[] args) throws IOException {
        BufferedReader bufferedReader = new BufferedReader(new
InputStreamReader(System.in));
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        int n = Integer.parseInt(bufferedReader.readLine().trim());

        String[] wTemp = bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");

        List<Integer> w = new ArrayList<>();

        for (int i = 0; i < n; i++) {
            int wItem = Integer.parseInt(wTemp[i]);
            w.add(wItem);
        }

        int result = Result.toys(w);

        bufferedWriter.write(String.valueOf(result));
        bufferedWriter.newLine();

        bufferedReader.close();
        bufferedWriter.close();
    }
}
```

5) Greedy Florist:



Greedy Florist

Submitted a few seconds ago • Score: 10.00

Status: Accepted

✓ Test Case #0 ✓ Test Case #1 ✓ Test Case #2
✓ Test Case #3 ✓ Test Case #4 ✓ Test Case #5
✓ Test Case #6 ✓ Test Case #7 ✓ Test Case #8
✓ Test Case #9 ✓ Test Case #10 ✓ Test Case #11

```
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.regex.*;

public class Solution {

    static int getMinimumCost(int k, int[] c) {
        int price=0,pre=0,j=k-1,n=c.length;
        Arrays.sort(c);
        for(int i=0;i<n;i++)
        {
            price+=c[n-i-1]*(pre+1);
            if(i==j)
            {
                pre++;
                j+=k;
            }
        }
        return price;
    }

    private static final Scanner scanner = new Scanner(System.in);

    public static void main(String[] args) throws IOException {
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        String[] nk = scanner.nextLine().split(" ");

        int n = Integer.parseInt(nk[0]);

        int k = Integer.parseInt(nk[1]);

        int[] c = new int[n];
        String[] cItems = scanner.nextLine().split(" ");
        scanner.skip("(\r\n|[\n\r\u2028\u2029\u0085])?");

        for (int i = 0; i < n; i++) {
            int cItem = Integer.parseInt(cItems[i]);
            c[i] = cItem;
        }

        int minimumCost = getMinimumCost(k, c);

        bufferedWriter.write(String.valueOf(minimumCost));
        bufferedWriter.newLine();

        bufferedWriter.close();

        scanner.close();
    }
}
```