https://course.acciojob.com/idle?question=f0d49daa-27f2-4be8-9571-65c7b029cdd9

- EASY
- Max Score: 30 Points
-

Chocolate Distribution Problem

Given an array A of positive integers of size N, where each value represents the number of chocolates in a packet. Each packet can have a variable number of chocolates. There are M students, the task is to distribute chocolate packets among M students such that :

1. Each student gets exactly one packet.
2. The difference between maximum number of chocolates given to a student and minimum number of chocolates given to a student is minimum.

Input Format

The first line of the input contains the integers N and M, the size of the array of the packets of chocolates, and the number of students.

The second line contains N space separated integers, denoting the number of chocolates in each packet.

Output Format

Return the minimum possible difference between the student getting the maximum and the student getting the minimum number of chocolates.

Example 1

Input

```
8 5
3 4 1 9 56 7 9 12
```

Output

```
6
```

Explanation

The minimum difference between maximum chocolates and minimum chocolates is 9 - 3 = 6 by choosing following M packets :

```
{3, 4, 9, 7, 9}
```

Example 2

Input

```
7 3
7 3 2 4 9 12 56
```

Output

```
2
```

Explanation The minimum difference between maximum chocolates and minimum chocolates is 4 - 2 = 2 by choosing following M packets :

```
{3, 2, 4}
```

Expected Time Complexity: O(N*Log(N))

Expected Auxiliary Space: O(1)

Constraints

1 ≤ T ≤ 100

1 ≤ N ≤ 10^5

1 ≤ Ai ≤ 10^9

1 ≤ M ≤ N

Topic Tags

- Greedy
- Sorting
- Arrays

My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
        public static void main (String[] args) throws
java.lang.Exception
        {
                //your code here
      Scanner s=new Scanner(System.in);
      int n=s.nextInt();
      int m=s.nextInt();
      int arr[]=new int [n];
      for(int i=0;i<n;i++)
        arr[i]=s.nextInt();
      Arrays.sort(arr);
      int min=arr[m-1]-arr[0];
       for(int i=0;i<n-m;i++)
         {
```

```
            int mi=arr[m-1+i]-arr[i];
            if(mi<min){min=mi;}
          }
        System.out.print(min);









        }
}
```