- **HARD**
- **Max Score: 40 Points**

https://course.acciojob.com/idle?question=142ae3a2-073f-4620-b1a2-92b3bbc87710

Trapping Rainwater Problem

Given `n` non-negative integers representing an elevation map where the width of each bar is `1`. Compute how much water it can trap after rain.

Input Format:

The first line contains one integer input `n`, the size of the array.

The second line contains n space-separated integers (arr[i]) that describe the width of each bar.

Output Format:

Prints a single integer value, which represents the amount of water it can hold.

Example 1:

Input:

```
12
0 1 0 2 1 0 1 3 2 1 2 1
```

Output:

```
6
```

Explanation: The above elevation map (black section) is represented by array [0,1,0,2,1,0,1,3,2,1,2,1]. In this case, 6 units of rain water (blue section) are being trapped.

Example 2:

Input:

```
6
4 2 0 3 2 5
```

Output:

```
9
```

Explanation: In this case, 9 units of rainwater will be trapped.

Constraints:

n == height.length

1 <= n <= 2 * 10^4

0 <= arr[i] <= 10^5

Topic Tags

- 2-Pointers
- DP

- Arrays

My code

```
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 arr[]=new int[n];
	    for(int i=0;i<n;i++)
	     arr[i]=s.nextInt();
	    int rp=n-1,lp=0;
	    int lb=arr[0],rb=arr[n-1];
	    int ans=0;
	    while(lp<rp)
		{
		  if(lb<rb)//which is lower move + add capacity.
		  {
		    if(lb<arr[lp])
		    {
		         lb=arr[lp];
		    }
		        else
		    {
		       ans+=(lb-arr[lp]) ;
		          lp++;
		    }

		  }
```

```
                    else
                    {
                          if(rb<arr[rp])
                      {
                           rb=arr[rp];
                      }
                           else
                      {
                          ans+=(rb-arr[rp]) ;
                             rp--;
                      }

                    }

                  }
  System.out.print(ans);

          }
}
```