

# Problem A. Rana 1

**Time limit** 2000 ms

**Mem limit** 1048576 kB

## Problem Statement

There are  $N$  stones, numbered  $1, 2, \dots, N$ . For each  $i$  ( $1 \leq i \leq N$ ), the height of Stone  $i$  is  $h_i$ .

There is a frog who is initially on Stone 1. He will repeat the following action some number of times to reach Stone  $N$ :

- If the frog is currently on Stone  $i$ , jump to Stone  $i + 1$  or Stone  $i + 2$ . Here, a cost of  $|h_i - h_j|$  is incurred, where  $j$  is the stone to land on.

Find the minimum possible total cost incurred before the frog reaches Stone  $N$ .

## Constraints

- All values in input are integers.
- $2 \leq N \leq 10^5$
- $1 \leq h_i \leq 10^4$

## Input

Input is given from Standard Input in the following format:

```
N
h1 h2 ... hN
```

## Output

Print the minimum possible total cost incurred.

## Sample 1

Input	Output
4 10 30 40 20	30

If we follow the path  $1 \rightarrow 2 \rightarrow 4$ , the total cost incurred would be  $|10 - 30| + |30 - 20| = 30$ .

### Sample 2

Input	Output
2 10 10	0

If we follow the path  $1 \rightarrow 2$ , the total cost incurred would be  $|10 - 10| = 0$ .

### Sample 3

Input	Output
6 30 10 60 10 60 50	40

If we follow the path  $1 \rightarrow 3 \rightarrow 5 \rightarrow 6$ , the total cost incurred would be  $|30 - 60| + |60 - 60| + |60 - 50| = 40$ .