

A - Frog 1

Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 100 points

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 Input 1

Copy

```
4
10 30 40 20
```

Copy

Sample Output 1

Copy

```
30
```

Copy

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

Sample Input 2

Copy

```
2
10 10
```

Copy

Sample Output 2

Copy

```
0
```

Copy

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

Sample Input 3

Copy

```
6
30 10 60 10 60 50
```

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Sample Output 3

Copy

```
40
```

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