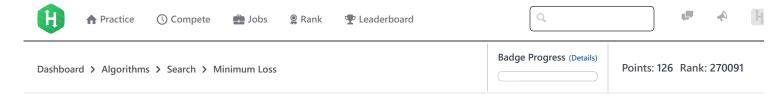
15/11/2017 HackerRank



Minimum Loss



|--|

Lauren has a chart of distinct projected prices for a house over the next n years, where the price of the house in the ith year is p_i . She wants to purchase and resell the house at a minimal *loss* according to the following rules:

- The house cannot be sold at a price greater than or equal to the price it was purchased at (i.e., it must be resold at a loss).
- The house cannot be resold within the same year it was purchased.

Find and print the minimum amount of money Lauren must lose if she buys the house and resells it within the next n years.

Note: It's guaranteed that a valid answer exists.

Input Format

The first line contains an integer, n, denoting the number of years of house data.

The second line contains n space-separated long integers describing the respective values of p_1, p_2, \ldots, p_n .

Constraints

- $2 \le n \le 2 \times 10^5$
- $1 \le p_i \le 10^{16}$
- All the prices are distinct.
- It's guaranteed that a valid answer exists.

Subtasks

• $2 \le n \le 1000$ for 50% of the maximum score.

Output Format

Print a single integer denoting the minimum amount of money Lauren must lose if she buys and resells the house within the next n years.

Sample Input 0

3 5 10 3

Sample Output 0

2

Explanation 0

Lauren buys the house in year 1 at price $p_1=5$ and sells it in year 3 at $p_3=3$ for a minimal loss of 5-3=2.

Sample Input 1

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```
5
20 7 8 2 5
```

Sample Output 1

2

Explanation 1

Lauren buys the house in year 2 at price $p_2=7$ and sells it in year 5 at $p_5=5$ for a minimal loss of 7-5=2.

```
f in
Submissions:4761
Max Score:35
Difficulty: Medium
Rate This Challenge:
☆☆☆☆☆
```



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