Design the Largest Aquarium

Difficulty: Easy

Tagline: Boost the amount of water stored between two aquarium glass panels.

Problem Statement:

As a designer, it is your responsibility to create a massive aquarium for an exhibition. You need to choose two of the various vertical glass panels that range in height so that when they are arranged parallel to one another, they can hold the most water.
Note that you may not tilt the glass panels and assume that the distance between adjacent panels is one unit.

Determine the largest amount of water the aquarium can contain between two panels using an array where each element represents the height of a panel.

Input Format:

The input will be given in the following format:

- The first line contains a single integer, n, representing the number of glass panels.

- The second line contains n space-separated integers where each integer represents the height of a glass panel.

Constraints:

- $2 \leq n \leq 100{,}000$

- $0 \leq \text{height[i]} \leq 10{,}000$

Output Format:

- Print a single integer representing the maximum volume of water the aquarium can store between two panels.

Sample Input 0:

9

1 8 6 2 5 4 8 3 7

Sample Output 0:

49

Explanation:

For the given input, the best two panels are located at positions 1 and 8 (with heights 8 and 7). The distance between them is 7, and the water level is restricted by the shorter panel, which is 7. Thus, the maximum water volume is 7 * 7 = 49

Sample Input 1:

2

1 1

Sample Output 1:

1

Explanation:
With just two panels of height 1, the only possible volume of water that can be held is 1 * 1 = 1 unit.