

Problem statement:

Problem: Largest Rectangle in a Histogram

Skyline Real Estate Developers is planning to demolish a number of old, unoccupied buildings and construct a shopping mall in their place. Your task is to find the largest solid area in which the mall can be constructed.

There are a number of buildings in a certain two-dimensional landscape. Each building has a height, given by h_i where $i \in [1, n]$. If you join k adjacent buildings, they will form a solid rectangle of area:

$$\text{area} = k \times \min(h_i, h_{i+1}, \dots, h_{i+k-1})$$

You need to determine the maximum possible area of such a rectangle that can be formed by choosing consecutive buildings.

Function Description

Complete the function `largestRectangle` in the editor below.

```
largestRectangle(h: List[int]) -> int
```

Parameters:

- `h`: a list of integers representing building heights

Returns:

- An integer representing the area of the largest rectangle that can be formed

Input Format

- The first line contains a single integer n — the number of buildings.
- The second line contains n space-separated integers h_1, h_2, \dots, h_n — the heights of the buildings.

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq h_i \leq 10^6$

Sample Input

```
5
1 2 3 4 5
```

Sample Output

```
9
```

Explanation

An illustration of the test case follows.

