input [0,1,0,2,1,0,1,3,2,1,2,1] output: 6

n = 12, water = 0.

i = 0,

temp_height = 0,

S: [0, 0]

i=1,

temp_height = 0, S:[0,0]

bar = 0, pos = 0

water += (min(0, 1) − 0) × (1 − 0 − 1); → water = 0

temp_height = 0

height[1] = 1 > bar → S.pop(), S:[ ]

S: [1, 1]

i = 2:

temp_height = 0, S = [1, 1]

bar = 1, pos = 1

water += (min(1, 0) − 0) × (2 − 1 − 1) → water = 0

temp_height = 1

height[2] = 0 < bar → break

S : $\begin{bmatrix} 0, & 2 \\ 1, & 1 \end{bmatrix}$

i = 3

temp_height = 0

bar = 0, pos = 2

water += (min(0, 2) − 0) × (3 − 2 − 1) → water = 0

temp_height = 0

height[i] = 2 > bar → S : [1, 1]

bar = 1, pos = 1

(min(1, 2) − 0) × (3 − 1 − 1) = 1

water = 0 + 1 = 1

temp_height = 1

height[i] = 2 > 1 → S: [ ]

S: [2, 3]

i = 4

temp_height = 0

bar = 2, pos = 3

(min(2, 1) − 0) × (4 − 3 − 1) = 0

water = 1

temp_height = 2

height[i] = 1 < bar → break

S: [1, 4
    2, 3]

i = 5

temp_height = 0

bar = 1, pos = 4

(min(1, 0) − 0) × (5 − 4 − 1) = 0

water = 1

temp_height = 1

height[i] = 0 < bar → break

S: $\begin{bmatrix} 0,5 \\ 1,4 \\ 2,3 \end{bmatrix}$

i = 6

temp_height = 0

bar = 0, pos = 5

(min(0, 1) − 0) × (6 − 5 − 1) = 0

water = 1

temp_height = 0

height[i] = 1 > bar → S = $\begin{bmatrix} 1,4 \end{bmatrix}$

[2,3]

bar=1, pos=4

(min(1,1) − 0) × (6 − 4 − 1) = 1

water = 2

temp_height = 1

height[i] = 1 = bar → s = [2, 3]

bar = 2, pos = 3

(min(2, 1) − 1) × (6 − 3 − 1) = 0

water = 2

temp_height = 2

height[i] = 1 < bar → break

s: [1,6 / 2,3]

i = 7

temp_height = 0

bar = 1, pos = 6

(min(1, 3) − 0) × (7 − 6 − 1) = 0

water = 2

temp_height = 1

3 > 1 → S : [2, 3]

bar = 2, pos = 3

(min(2, 3) − 1) × (7 − 3 − 1) = 3

water = 5

3 > 2 → S : [ ]

S : [3, 7]

i = 8

temp_height = 0

bar = 3, pos = 7

(min(3, 2) − 0) × (8 − 7 − 1) = 0

water = 5

temp_height = 3

2 < 3 → break

S: [2, 8]
[3, 7]

i = 9

temp_height = 0

bar = 2, pos = 8

(min(2, 1) − 0) × (9 − 8 − 1) = 0

water = 5

temp_height = 2

1 < 2 → break

S: [1, 9]
[2, 8]
[3, 7]

i = 10

temp_height = 0

bar = 1, pos = 9

$(\min(1,2) - 0) \times (10-9-1) = 0$

water = 5

temp_height = 1

$2 > 1 \rightarrow$ S: $\begin{bmatrix} 2,8 \\ 3,7 \end{bmatrix}$

bar = 2, pos = 8

$(\min(2,2) - 1) \times (10-8-1) = 1$

water = 6

temp_height = 2

$2 = 2 \rightarrow$ S: $\begin{bmatrix} 3,7 \end{bmatrix}$

bar = 3, pos = 7

$(\min(3,2) - 2) \times (10-7-1) = 0$

water = 6

temp_height = 3

$2 < 3 \rightarrow$ break

S: [2,8,7]

S: [2, 10
3, 7]

i = 11

temp_height = 0

bar = 2, pos = 10

(min(2, 1) − 0) × (11 − 10 − 1) = 0

water = 6

temp_height = 2

1 < 2 → break

S: [1, 11
2, 10
3, 7]