Given a list of number, we plot this number in terms of histogram, and assume two bar in the histogram form the wall of a bucket, and we are pouring water into the graph, return the largest amount of water (in area) that this graph could contain.

Example, list = [1,8,6,2,5,4,8,3,7]



Return 7 \* 7 = 49

思路

逐個對比area, keep the higher bar in the next loop

代碼

In initialization, let the max area = 0

P1 represent the first bar, and p2 represent the last bar

When P1 < P2,

Area between 2 bar p1 and p2 = min of p1 or p2 \* the width (which is p2 – p1)

Then compare this area with the maximum area, if let the larger area be the maximum area.

Then we compare the height of p1 and p2, keep the higher one, and the shorter one move to next bar (is we keep the shorter bar, the area would only decrease as the area always depend on shorter bar and we have a decreasing width, replacing the shorter bar with new bar may achieve a larger area)

