Week 11

Topic: Interview Prep

875. Koko Eating Bananas

- Difficulty: Medium
- Problem URL: https://leetcode.com/problems/koko-eating-bananas
- Description:

給定一個長度為 n 的正整數陣列 piles 代表 N 堆香蕉,piles[i] 則是第 i 堆香蕉的數量。Koko 需要在 H 小時之內吃完這些香蕉,Koko 吃香蕉的速度為每小時 k 根,而且每小時最多吃一堆香蕉,若吃不下則留到下一小時再吃。如果吃完這堆還有胃口,他也要等到下一小時才吃下一堆。

在以上條件下,回傳 Koko 每小時至少要吃幾根香蕉,才能在 h 小時 之內吃完?

Example1:

Input: piles = [3,6,7,11], h = 8

Output: 4

Example2:

Input: piles = [30,11,23,4,20], h = 5

Output: 30

Example3:

Input: piles = [30,11,23,4,20], h = 6

Output: 23

詳細說明與約束條件請參考Leetcode網站。

855. Exam Room

- Difficulty: Medium
- Problem URL: https://leetcode.com/problems/exam-room
- Description:

假設有一考場,其內有一排共 n 個座位,索引分別是 [0.n-1],考生會陸續進場,並可能隨時離場。

現需安排考生座位,每當一個考生進場時,需要最大化他和最近其他人 的距離,而如果有多個滿足條件的座位,則安排該考生到索引較小的座 位。

Example1:

```
Input: ["ExamRoom", "seat", "seat", "seat", "seat", "leave", "seat"] [ [10], [], [], [], [], [] ]
Output: [null, 0, 9, 4, 2, null, 5]
```

Explanation:

```
ExamRoom examRoom = new ExamRoom(10); examRoom.seat(); // return 0, no one is in the room, then the student sits at seat number 0. examRoom.seat(); // return 9, the student sits at the last seat number 9. examRoom.seat(); // return 4, the student sits at the last seat number 4. examRoom.seat(); // return 2, the student sits at the last seat number 2. examRoom.leave(4); examRoom.seat(); // return 5, the student sits at the last seat number 5.
```

詳細說明與約束條件請參考 Leetcode 網站。

42. Trapping Rain Water

• Difficulty: Hard

• Problem URL: https://leetcode.com/problems/trapping-rain-water

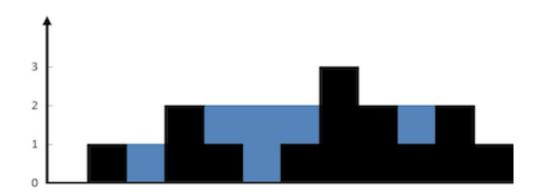
• Description:

給定一個長度為n的nums 非負整數陣列,代表二維平面內一排寬度為1的柱子,nums[i] 表示第i 個柱子的高度,請計算下兩後這些柱子能夠裝下多少雨水。

Example1:

Input: height = [0,1,0,2,1,0,1,3,2,1,2,1]

Output: 6



Explanation: The above elevation map (black section) is represented by array [0,1,0,2,1,0,1,3,2,1,2,1]. In this case, 6 units of rain water (blue section) are being trapped.

Example2:

Input: height = [4,2,0,3,2,5]

Output: 9

詳細說明與約束條件請參考Leetcode 網站。