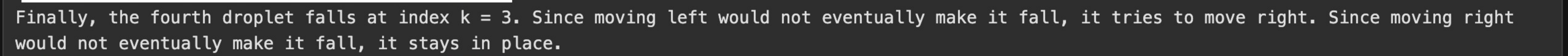
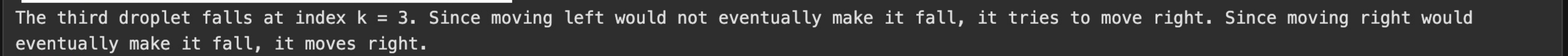
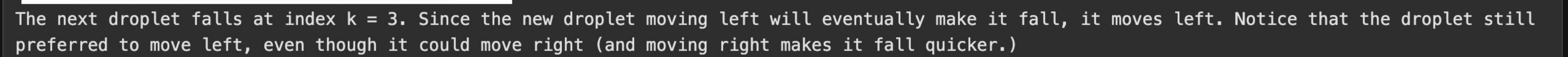
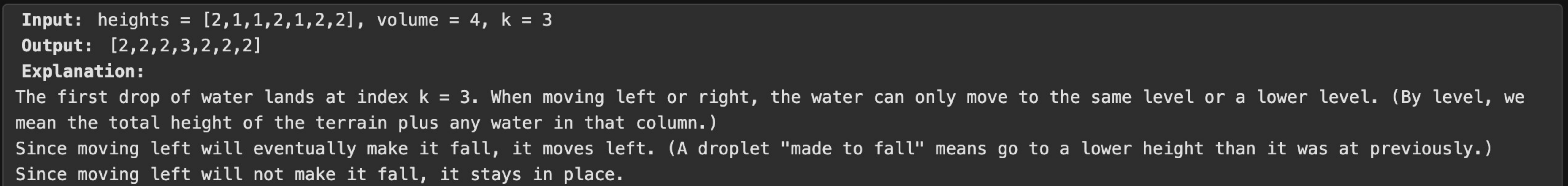


Description

Water first drops at the index `k` and rests on top of the highest terrain or water at that index. Then, it flows according to the following rules:

- Here, **"eventually fall"** means that the droplet will eventually be at a lower level if it moves in that direction. Also, level means the height of the terrain plus any water in that column.

Example 1:



Example 3:

Constraints:

- `1 <= heights.length <= 100`
- `0 <= heights[i] <= 99`
- `0 <= volume <= 2000`
- `0 <= k < heights.length`

