75 Days of Code

Day12 Problem no: 11

You are given an integer array height of length n. There are n vertical lines drawn such that the two endpoints of the ith line are (i, 0) and (i, height[i]).

Find two lines that together with the x-axis form a container, such that the container contains the most water.

Return the maximum amount of water a container can store.

Notice that you may not slant the container.

Example 1:

Input: height = [1,8,6,2,5,4,8,3,7]
Output: 49
Explanation: The above vertical lines are represented by array [1,8,6,2,5,4,8,3,7]. In this case, the max area of water (blue section) the container can contain is 49.
Example 2:

Input: height = [1,1]
Output: 1

For this problem ,

1. Take two pointers as startIndex , endIndex and loop the array while startIndex< endIndex
2. Calculate the area where height is will be minimum of start and end and width will be from endIndex to startIndex
3. Compare it with maxarea

Shubham Agrahari

4. Decrease the pointer (startIndex, or endIndex) whose height is small

```
21
22  function maxArea(height: number[]): number {
23    let startIndex = 0;
24    let endIndex = height.length - 1;
25    let area = Number.MIN_VALUE;
26    let maxArea = Number.MIN_VALUE;
27    while (startIndex < endIndex) {
28      area =
29        Math.min(height[startIndex], height[endIndex]) * (endIndex - startIndex);
30      if (maxArea < area) {
31        maxArea = area;
32      }
33
34      if (height[startIndex] <= height[endIndex]) {
35        startIndex++;
36      } else {
37        endIndex--;
38      }
39    }
40
41    return maxArea;
42  }
43
```

```
[Running] node "c:\Users\Shubham\Desktop\75daysOfCode\75DaysOfCode\day12.js"
49
```