42. Trapping Rain Water

APPROACH=>SUFFIC PREFIX

->calculate the left and right max of each elemrent;

->now take min from left right becouse if we fill water more than min it will flow towrds minius It will not be stored

->now we minus the height of buliding from min becouse the area left after the bulding hegiht there only the water can store;

-> return the sum of all the water;

```
class Solution {
public:
    int trap(vector<int>& height) {
        vector<int> left(height.size());
        vector<int> right(height.size());
        int lmaxi = height[0];
        for (int i = 0; i < height.size(); i++) {
            left[i] = lmaxi;
            lmaxi = max(lmaxi, height[i]);
        }
        int rmaxi = height[height.size() - 1];
        for (int i = height.size() - 1; i >= 0; i--) {
            right[i] = rmaxi;
            rmaxi = max(rmaxi, height[i]);
        }

        int water = 0;
        for (int i = 0; i < height.size(); i++) {
            int store = min(left[i], right[i]);
            if (height[i] < store) {
                store -= height[i];
                water += store;
            }
        }
        return water;
    }
};
```