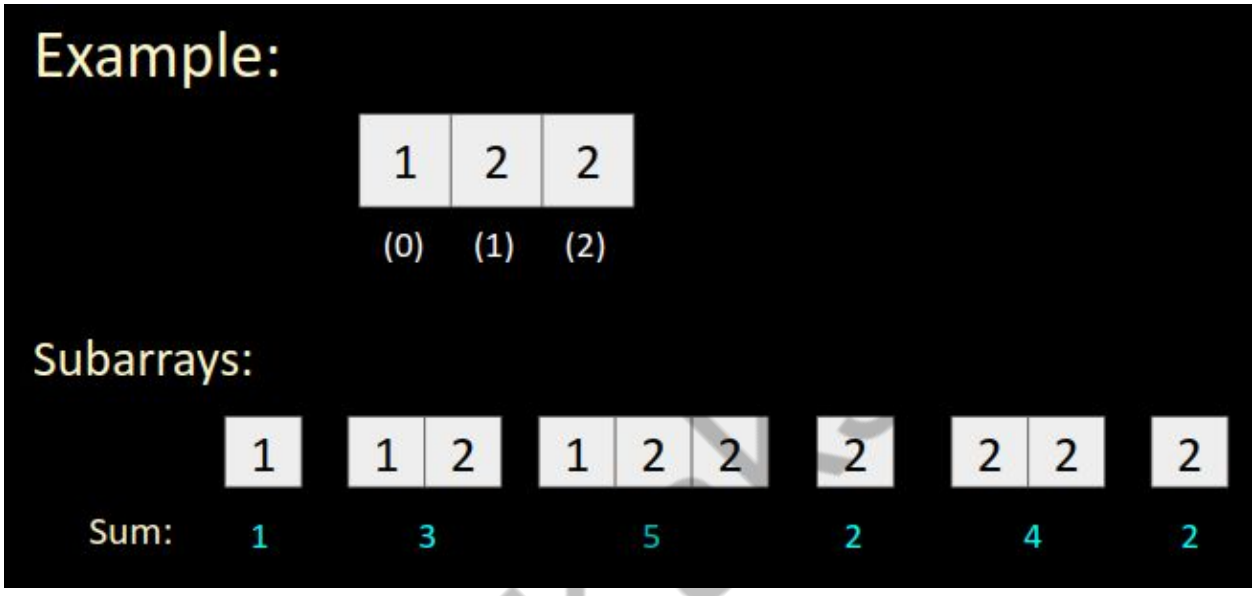
Arrays Challenge-Sum of all Subarrays

Question

Given an array a[] of size n. Output sum of each subarray of the given array.

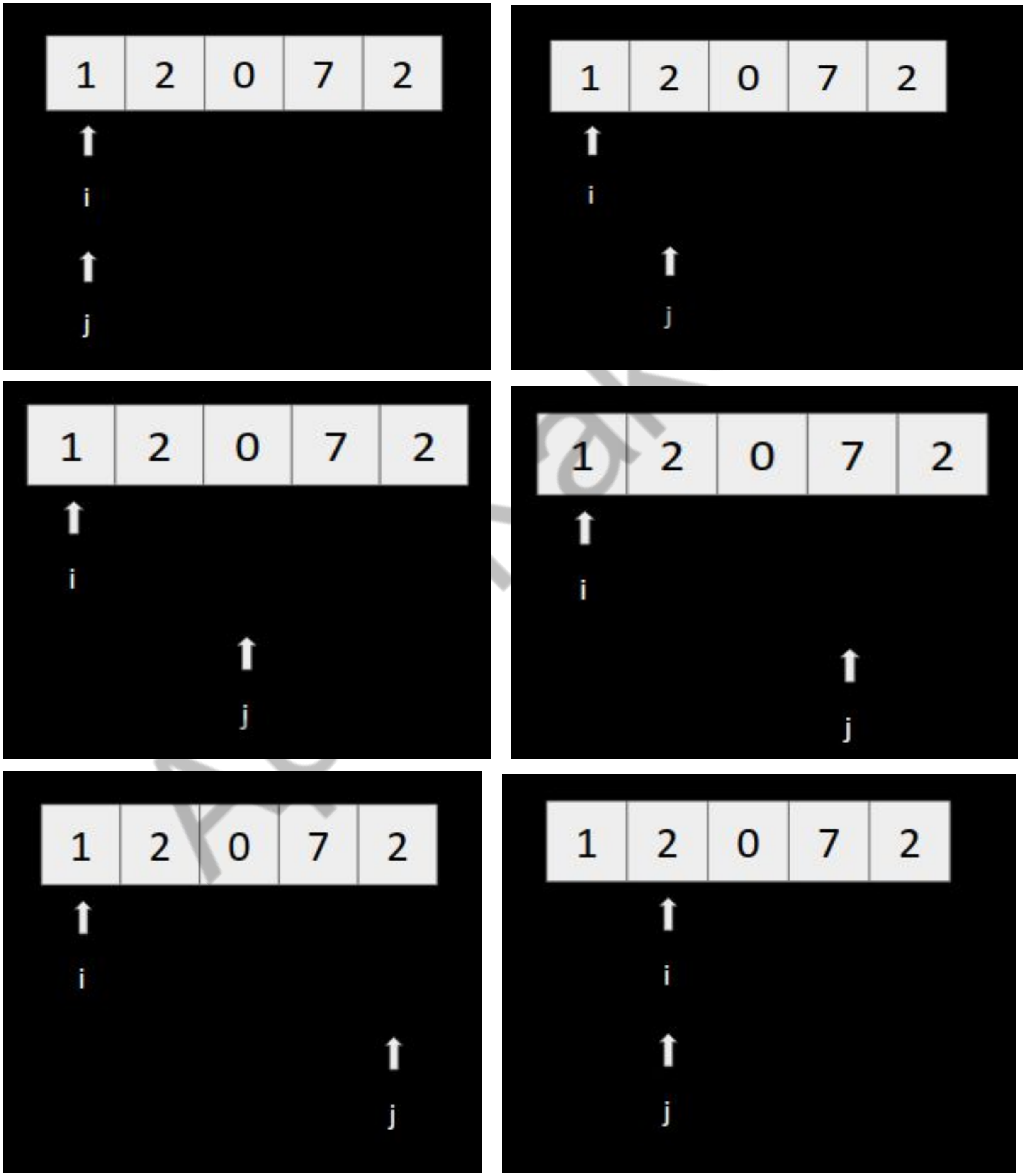


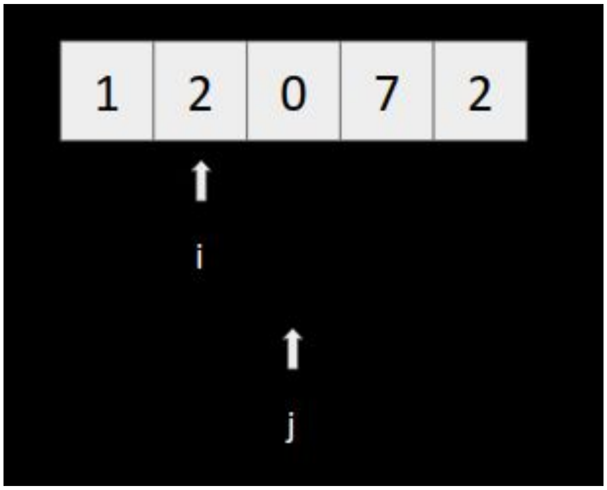
Idea: Iterate over all subarrays and output the sum after each iteration.

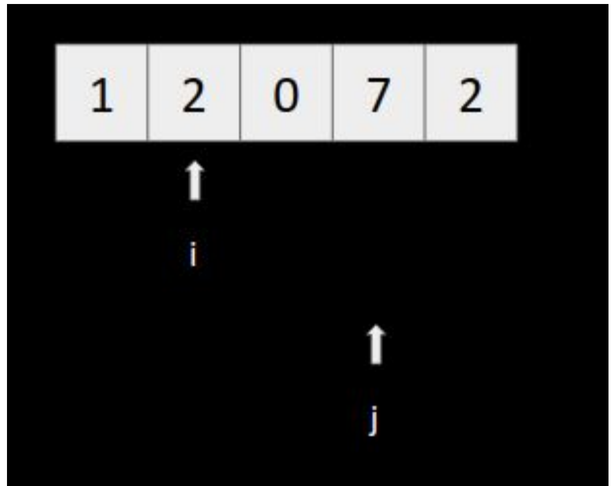
Approach

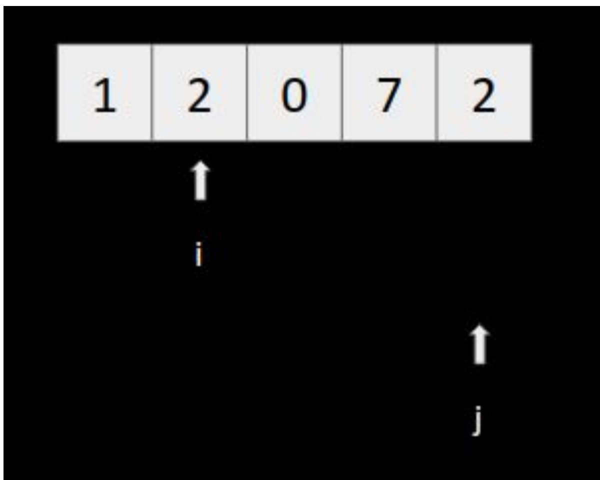
1. Write a nested loop, where outer loop runs from i=0 to i=n-1 and inner loop runs from j=i to j=n-1.
2. Keep a curr variable which stores the sum from i to j.
3. Output curr after each iteration of inner loop. After inner loop ends, update curr = 0.

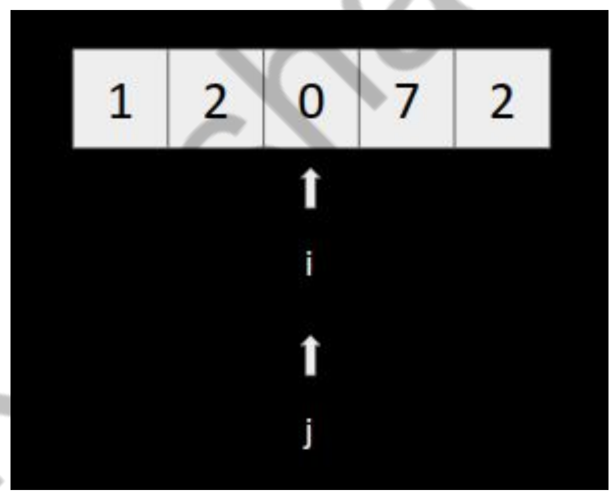
Dry Run

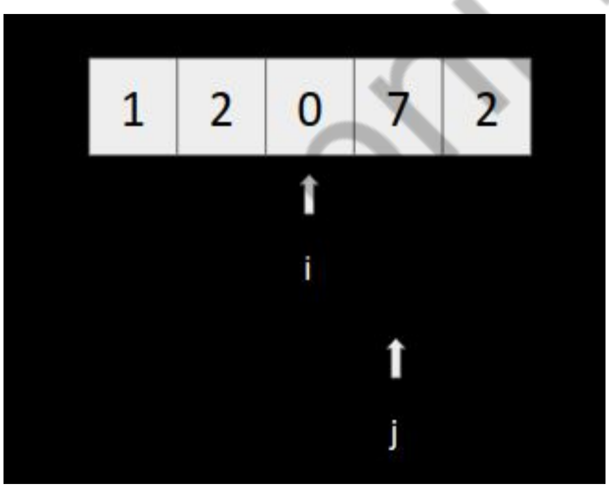


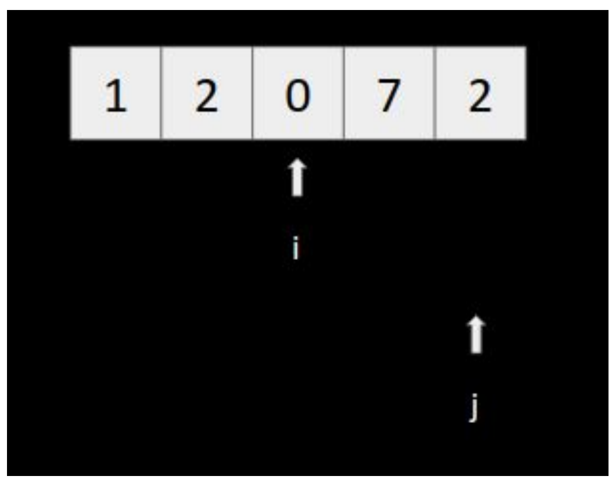


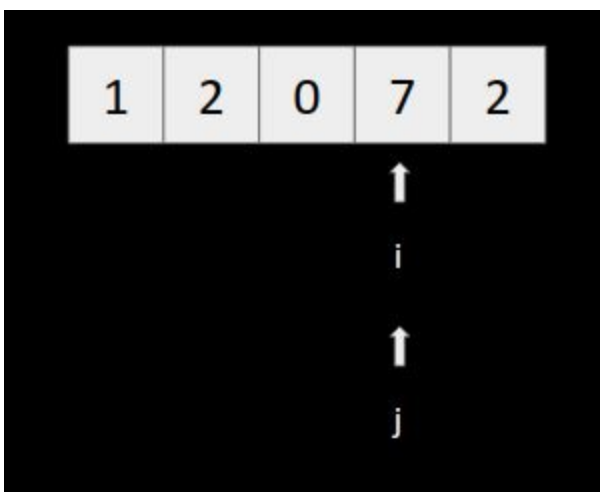


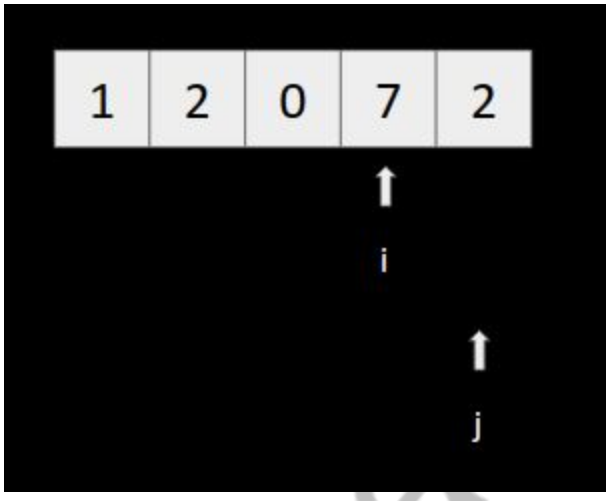


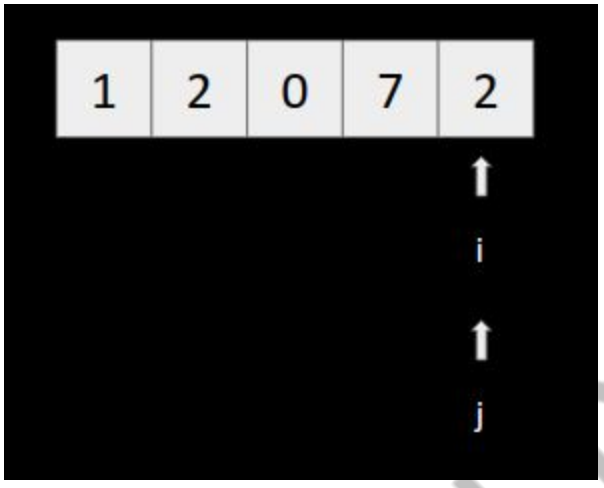












This question tells us how to iterate over all the subarrays. This idea is very useful in many questions which deals with operations on subarrays.

Code

```
void sumOfAllSubarrays()
{
    int n;
    cin >> n;

    int a[n];

    for(int i=0; i<n; i++)
        cin >> a[i];

    int curr=0;
    for(int i=0; i<n; i++){
        curr = 0;
        for(int j=i; j<n; j++){
            curr += a[j];
            cout << curr << endl;
        }
    }
}
```