SUM OF SUBARRAY RANGES

In this problem, we are given an array and our job is to return the sum of range of each subarray (where range is difference between largest and smallest element).

Brute force solution is to just go through all subarrays and add their ranges. Time Complexity is $O(N^2)$.

Optimal Solution is to just calculate subarray maximums, subarray minimums and subtract them.

Pseudocode :
```
sumOfSubarrayRanges (arr, N) {
    int min = sumOfSubarrayMins (arr, N);
    int max = sumOfSubarrayMaxs (arr, N);
    return max - min ;
}
```