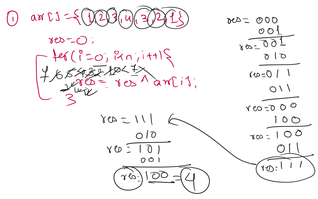
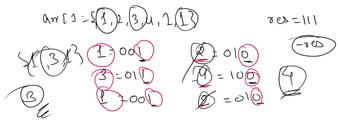
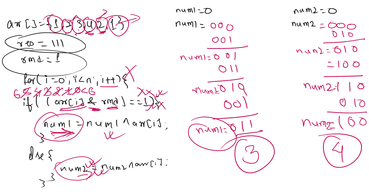






6. Problem Statement

From the given Array of integer N, find the maximum length of subarray that are arranged in either even and odd or odd and even.

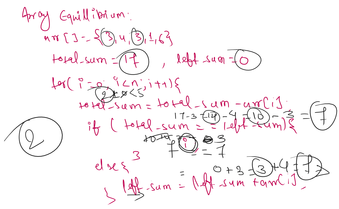
sample input: [10, 12, 14, 7, 8]

ouput: 3

explanation: 14 and 7 and 7 and 8 are arranged in alternate pattern

Expected time complexity as O(n).

Array Equilibrium:



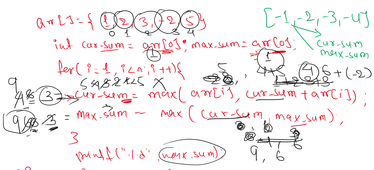
Kadane's Algorithm:

Maximum sum of Sub-Arrays:

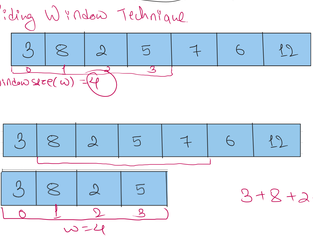
Input1: [1, 2, 3, -2, 5] output: 9

Input2: [-1, -2, -3, -4] output: -1

Problem statement: From the given Arrays of N integers format find the maximum sum of sub-Arrays.



Sliding Window Technique



3+8+2+5 = 18

```
cur_sum=0;
for(i=0; i<w; i++){
    cur_sum = cur_sum + arr[i];
}
```

cur_sum = 18

max_sum = cur_sum;

cur_sum = 18

max_sum = 18

Subtracting 3

Adding 7 to the cursum.

```
for(i=1; i<=n-w ; i++){
    cur_sum = cur_sum - arr[i-1] + arr[n-w+i];
    if(cur_sum > max_sum){
        max_sum = cur_sum;
    }
```