Application 1 :

An array is said to be special, if the maximum of its cumulative sums appears in the array. The cumulative sums of the array (A) are stored in another array (S) such that:

$S[i] = \Sigma\ A[j]$ $j = 1$ to i.

Example 1.

If A = 2 -1 1 4 -3

Then S = 2 1 2 **6** 3

The maximum is then 6 and it does not appear in the array A . So the Array is NOT special .

Example 2.

If A = 2 -1 1 0 -1 Then S = 2 1 2 2 1

The maximum is then 2 and it appears in the array A. So the Array is special .

1. Write the function CumSum that takes two arrays A and S of size N, and computes S to be the cumulative sums of A.

2. Write the function MaxArray that takes an array of size N, and returns the maximum of its elements.

3. Write the function CheckElem that takes an array of size N and a value v, and checks if v appears in the array

4. Write the function ReadArray that allows to read the value of the elements of an array in the range [-10,10].

5. Write the main program that declares and reads an array of your choice. The programs should print whether the array is special or not special, using the previous functions!