

### Offline: Maximum Sub Array (only for Section A2)

Write a C program to find the sum of contiguous sub array within an array (containing at least one number) which has the largest sum. For bonus marks, also print where in the array the largest sum occurred.

For example, given the array  $[-2, 1, -3, 4, -1, 2, 1, -5, 4]$ , the contiguous sub array  $[4, -1, 2, 1]$  has the largest sum of 6 and it occurred in  $[3:6]$ .

To understand contiguous sub array, given the array  $[1, 2, 3]$  the contiguous sub arrays are  $[1]$ ,  $[2]$ ,  $[3]$ ,  $[1, 2]$ ,  $[2, 3]$ ,  $[1, 2, 3]$ , but  $[1, 3]$  is not a contiguous sub array.

Sample Input	Sample Output	Occurred in (for bonus)	Explanation
$[1, 2, 3, 4]$	10	$[0:3]$	$1+2+3+4 = 10$
$[-2, 1, -3, 4, -1, 2, 1, -5, 4]$	6	$[3:6]$	$4-1+2+1 = 6$
$[-2, -1]$	-1	$[1:1]$	-1
$[10, -2, 15, 9, -8, 12, 20, -5]$	56	$[0:6]$	$10-2+15+9-8+12+20=56$