Max Array Sum ★

Problem

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Given an array of integers, find the subset of non-adjacent elements with the maximum sum. Calculate the sum of that subset. It is possible that the maximum sum is **0**, the case when all elements are negative.

Example

$$arr = [-2, 1, 3, -4, 5]$$

The following subsets with more than f 1 element exist. These exclude the empty subset and single element subsets which are also valid.

Subset	Sum
[-2, 3, 5]	6
[-2, 3]	1
[-2, -4]	-6
[-2, 5]	3
[1, -4]	-3
[1, 5]	6
[3, 5]	8

The maximum subset sum is **8**. Note that any individual element is a subset as well.

$$arr = [-2, -3, -1]$$

In this case, it is best to choose no element: return **0**.

Function Description

Complete the *maxSubsetSum* function in the editor below.

maxSubsetSum has the following parameter(s):

• int arr[n]: an array of integers

Returns

- int: the maximum subset sum

Input Format

The first line contains an integer, n.

The second line contains n space-separated integers arr[i].

Constraints

•
$$1 \le n \le 10^5$$

•
$$-10^4 \leq arr[i] \leq 10^4$$

Sample Input 0

Sample Output 0

```
Explanation 0
```

Our possible subsets are [3, 4, 5], [3, 4], [3, 6], [3, 5], [7, 6], [7, 5] and [4, 5]. The largest subset sum is 13 from subset [7, 6]

Sample Input 1

```
5
2 1 5 8 4
```

Sample Output 1

11

Explanation 1

Our subsets are [2,5,4], [2,5], [2,8], [2,4], [1,8], [1,4] and [5,4]. The maximum subset sum is 11 from the first subset listed.

Sample Input 2

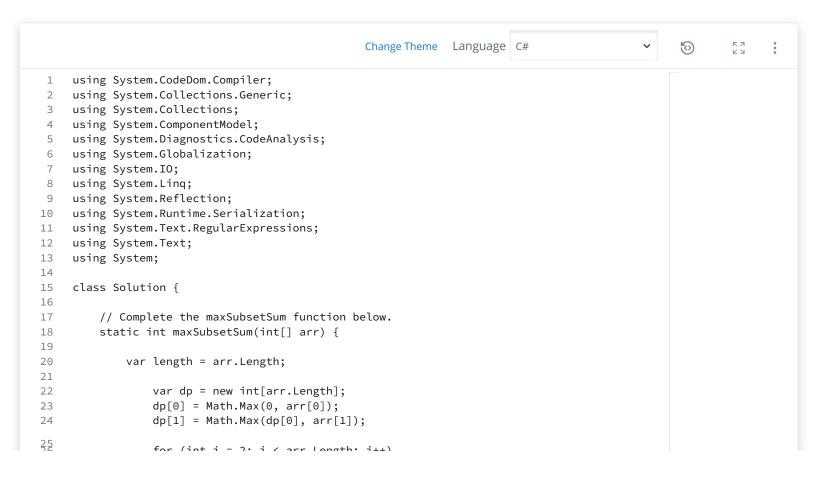
```
5
3 5 -7 8 10
```

Sample Output 2

15

Explanation 2

Our subsets are [3, -7, 10], [3, 8], [3, 10], [5, 8], [5, 10] and [-7, 10]. The maximum subset sum is 15 from the fifth subset listed.



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