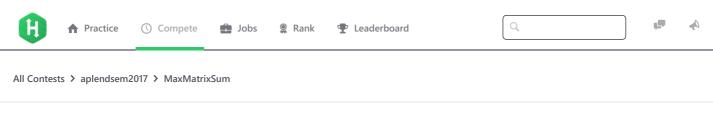
■ locked



# MaxMatrixSum





We are given an  $M \times N$  matrix B of integers. The row and the column indices of the matrix start at 0. The goal is to find a non-empty sub-matrix of B which starts at  $B_{0,0}$  and has maximum sum. Implement an  $O(M \times N)$  time algorithm for the problem.

### **Input Format**

#### **Constraints**

$$1 \le M, N \le 1000$$

$$-100 \leq B_{i,j} \leq 100$$

#### **Output Format**

Sum of the maximum sum sub-matrix starting at  $B_{\theta,\theta}$ 

#### Sample Input

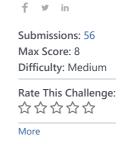
```
2 3
5 -21 110
-18 22 -10
```

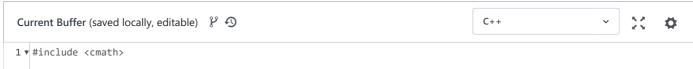
## **Sample Output**

94

# Explanation

The maximum sum sub-matrix is row 0,  $[5 \ -21 \ 110]$  which sums to 94.





```
2 #include <cstdio>
 3 #include <vector>
 4 #include <iostream>
 5 #include <algorithm>
 6 using namespace std;
 8
 9 ▼ int main() {
      10 ▼
11
      return 0;
12
   }
13
                                                                                   Line: 1 Col: 1
                Test against custom input
                                                                          Run Code
                                                                                    Submit Code
1 Upload Code as File
```

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