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MaxMatrixSum

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Problem

Submissions

Leaderboard

Discussions

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

```
M N
B0,0 B0,1 ... B0,N-1
B1,0 B1,1 ... B1,N-1
...
BM-1,0 BM-1,1 ... BM-1,N-1
```

Constraints

$$1 \leq M, N \leq 1000$$

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

Output Format

Sum of the maximum sum sub-matrix starting at $B_{0,0}$

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.

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Submissions: 56

Max Score: 8

Difficulty: Medium

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Current Buffer (saved locally, editable)

C++



```
1 #include <cmath>
```

```
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1

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