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 B0,0
```

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.
```

Submissions: 56
Max Score: 8
Difficulty: Medium

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Current Buffer (saved locally, editable) C++

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

```
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}

```

Line: 1 Col: 1

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