

Land Robot

locked

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A robot working as a gold collector was put on a **grid-shaped** piece of land of size NxM. The robot is only allowed to move **down, right, and down-right** in this grid. At each cell in the grid there is an integer indicating the number of gold pieces at this cell. The robot is required to move from cell (0,0) to cell (N-1, M-1) while collecting the maximum number of gold pieces. Help the robot find this maximum number (**using dynamic programming**). A manual grade penalty will be applied if you did not use a dp solution.

Input Format

- The first line will contain the grid dimensions N and M space-separated.
- The following N lines will contain M space-separated values each; representing the values for all grid locations.

Constraints

- $1 \leq N \leq 10^3$
- $1 \leq M \leq 10^3$
- For each grid location, the value $v_{i,j}$: $-10^{10} \leq v_{i,j} \leq 10^{10}$

Output Format

One integer indicating the maximum sum of values in the path.

Sample Input 0

```
4 3
1 6 15
4 -7 -5
-2 5 -7
2 7 9
```

Sample Output 0

```
26
```

C++20

```
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