Looting Byteland

It’s a sunny day in the prosperous city of Byteland. Byteland is a grid city with N rows and N columns with a house in each cell. A[i][j] denotes the value of stuff present in the house at cell (i, j). A group of K thieves is staying at cell(1, 1). They want to make their way to (N, N). Only 1 thieve can move through the grid at a time. From cell(i, j), a thief can move to cell(i + 1, j) or cell(i, j + 1) without moving out of the boundary of Byteland. A thief loots all the houses on his path from (1, 1) to (N, N). Each house can only be looted once. Note that (1, 1) and (N, N) will only be looted by the first thief. The thieves can decide their paths in advance and want to maximize the sum of their loots after everyone of them reaches (N, N). Your task is to tell the maximum value of sum of the loots that they can make.

Input Format:

First line contains two integers denoting N and K.
Next N lines contain N integers. The jth integer on ith line denotes A[i][j].

Constraints:

1 <= **N** <= 100
1 <= **K** <= **N** * **N**
1 <= **A[i][j]** <= 100

Sample Input:

4 2
1 1 1 1
1 0 0 1
1 0 0 1
1 1 1 1

Sample Output:

12

First thief will take the path (1, 1) -> (1, 2) -> (1, 3) -> (1, 4) -> (2, 4) -> (3, 4) -> (4, 4).

Second thief will take the path (1, 1) -> (2, 1) -> (3, 1) -> (4, 1) -> (4, 2) -> (4, 3) -> (4, 4).