

## Maximum path sum in matrix

**Medium** Accuracy: 50.83% Submissions: 11396 Points: 4

Given a  $N \times N$  matrix of positive integers. There are only three possible moves from a cell **Matrix[r][c]**.

1. Matrix [r+1] [c]
2. Matrix [r+1] [c-1]
3. Matrix [r+1] [c+1]

Starting from any column in row 0 return the largest sum of any of the paths up to row  $N-1$ .

### Example 1:

**Input:**  $N = 2$

Matrix =  $\{\{348, 391\},$   
           $\{618, 193\}\}$

**Output:** 1009

**Explanation:** The best path is 391 -> 618.

It gives the sum = 1009.

### Example 2:

**Input:**  $N = 2$

Matrix =  $\{\{2, 2\},$   
           $\{2, 2\}\}$

**Output:** 4

**Explanation:** No matter which path is chosen, the output is 4.

### Your Task:

You do not need to read input or print anything. Your task is to complete the function **maximumPath()** which takes the size  $N$  and the Matrix as input parameters and returns the highest maximum path sum.

**Expected Time Complexity:**  $O(N*N)$

**Expected Auxiliary Space:**  $O(N*N)$

### Constraints:

$$1 \leq N \leq 100$$

$$1 \leq \text{Matrix}[i][j] \leq 1000$$

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