

# Minimum Cost Path

Given a square **grid** of size **N**, each cell of which contains an integer cost that represents a cost to traverse through that cell, we need to find a **path** from the **top left** cell to the **bottom right** cell by which the total cost incurred is **minimum**.

From the cell (i,j) we can go (i,j-1), (i, j+1), (i-1, j), (i+1, j).

## Examples :

**Input:** grid = {{9,4,9,9},{6,7,6,4},{8,3,3,7},{7,4,9,10}}

**Output:** 43

**Explanation:** The grid is-

```
9 4 9 9
6 7 6 4
8 3 3 7
7 4 9 10
```

The minimum cost is-

$9 + 4 + 7 + 3 + 3 + 7 + 10 = 43.$

**Input:** grid = {{4,4},{3,7}}

**Output:** 14

**Explanation:** The grid is-

```
4 4
3 7
```

The minimum cost is-  $4 + 3 + 7 = 14.$

**Expected Time Complexity:**  $O(n^2 \log(n))$

**Expected Auxiliary Space:**  $O(n^2)$

**Constraints:**

$1 \leq n \leq 500$

$1 \leq \text{cost of cells} \leq 500$