Problem 1314: Matrix Block Sum

Problem Information

Difficulty: Medium
Acceptance Rate: 76.19%
Paid Only: No
Tags: Array, Matrix, Prefix Sum

Problem Description

Given a `m x n` matrix `mat` and an integer `k`, return _a matrix_ `answer` _where each_ `answer[i][j]` _is the sum of all elements_ `mat[r][c]` _for_ :

* `i - k <= r <= i + k,` * `j - k <= c <= j + k`, and * `(r, c)` is a valid position in the matrix.

Example 1:

Input: mat = [[1,2,3],[4,5,6],[7,8,9]], k = 1 **Output:** [[12,21,16],[27,45,33],[24,39,28]]

Example 2:

Input: mat = [[1,2,3],[4,5,6],[7,8,9]], k = 2 **Output:** [[45,45,45],[45,45,45],[45,45,45]]

Constraints:

* `m == mat.length` * `n == mat[i].length` * `1 <= m, n, k <= 100` * `1 <= mat[i][j] <= 100`

Code Snippets

C++:

```
class Solution {
public:
vector<vector<int>> matrixBlockSum(vector<vector<int>>& mat, int k) {
```

```
}
};
```

Java:

```
class Solution {
public int[][] matrixBlockSum(int[][] mat, int k) {

}
}
```

Python3:

```
class Solution:
def matrixBlockSum(self, mat: List[List[int]], k: int) -> List[List[int]]:
```