

题目：1314. 矩阵区域和

经典二维前缀和，先求出二维前缀和，根据二维前缀和求解对应大小的前缀和，注意下标映射关系

```
1 class Solution {
2 public:
3     vector<vector<int>> matrixBlockSum(vector<vector<int>>& mat, int k) {
4         // 二维前缀和 下标映射关系
5         // 计算出合适的范围
6         int m = mat.size();
7         int n = mat[0].size();
8         vector<vector<int>> dp(m + 1, vector<int>(n + 1));
9         for (int i = 1; i <= m; i++) {
10             for (int j = 1; j <= n; j++) {
11                 dp[i][j] = dp[i - 1][j] + dp[i][j - 1] - dp[i - 1][j - 1] +
12                     mat[i - 1][j - 1];
13             }
14         }
15         vector<vector<int>> answer(m, vector<int>(n));
16         for (int i = 0; i < m; i++) {
17             for (int j = 0; j < n; j++) {
18                 int x1, y1, x2, y2;
19                 x1 = max(i - k, 0) + 1;
20                 y1 = max(j - k, 0) + 1;
21                 x2 = min(i + k, m - 1) + 1;
22                 y2 = min(j + k, n - 1) + 1;
23                 answer[i][j] = dp[x2][y2] - dp[x2][y1 - 1] - dp[x1 - 1][y2] +
24                     dp[x1 - 1][y1 - 1];
25             }
26         }
27         return answer;
28     }
29 };
```