

Path with maximum average value

给定一个矩阵，求左上角到右下角最大和路径的平均值，每次只能往右走或者往下走

对于任何一个 $N \times N$ 的矩阵，从左上角到右下角，都 $2 * N - 1$ 步

```
#include <bits/stdc++.h>

using namespace std;

double maxPathAve(vector<vector<int>> &cost, int &N) {
    vector<vector<int>> dp(N, vector<int>(N));
    // 初始化第一列&第一行
    for (int i = 0; i < N; ++i) {
        i == 0 ? dp[0][i] = cost[0][i] : dp[0][i] = dp[0][i - 1] + cost[0][i];
        i == 0 ? dp[i][0] = cost[i][0] : dp[i][0] = dp[i - 1][0] + cost[i][0];
    }
    for (int i = 1; i < N; ++i) {
        for (int j = 1; j < N; ++j) {
            dp[i][j] = max(dp[i - 1][j], dp[i][j - 1]) + cost[i][j];
        }
    }
    return (double)dp[N - 1][N - 1] / (2 * N - 1);
}

int main() {
    vector<vector<int>> cost = {{1, 2, 3},
                               {4, 5, 6},
                               {7, 8, 9}};

    int N = 3;
    printf("%.1f\n", maxPathAve(cost, N));
    return 0;
}
```