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Given an integer n, generate a square matrix filled with elements from 1 to n2 in spiral order.

For example,

Given n = 3,

You should return the following matrix:

[

[ 1, 2, 3 ],

[ 8, 9, 4 ],

[ 7, 6, 5 ]

]

way-1:找规律输出就行

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class Solution {

public:

void Matrix(int n,int pos,int count,vector<vector<int>> &result)

{

//上面一行输入

for(int i=pos;i<n-pos;i++)

result[pos][i]=count++;

//右边一列

for(int i=pos+1;i<n-pos-1;i++)

result[i][n-1-pos]=count++;

if(count>n\*n)

return;

//下面一行

for(int i=n-pos-1;i>=pos;i--)

result[n-1-pos][i]=count++;

//左边一列

for(int i=n-pos-2;i>pos;i--)

result[i][pos]=count++;

if(count<=n\*n)

Matrix(n,pos+1,count,result);

else

return;

}

vector<vector<int>> generateMatrix(int n)

{

vector<vector<int>> result;

if(n<=0)

return result;

else if(n==1)

{

vector<int> m1(1,1);

result.push\_back(m1);

return result;

}

else

{

for(int i=0;i<n;i++)

{

vector<int> m1(n,0);

result.push\_back(m1);

m1.clear();

}

Matrix(n,0,1,result);

}

return result;

}

};