#define \_CRT\_SECURE\_NO\_WARNINGS 1

#include <stdio.h>

int GetCount(int mine[][100],int x, int y)

{

return mine[x - 1][y] +//左

mine[x][y - 1] +//下

mine[x + 1][y] +//右

mine[x][y + 1] ;//上

}

void boom(int mine[][100], int x, int y,int n)

{

int offset\_x = 0;

int offset\_y = 0;

int count = 0;

//坐标合法

if (x >= 0 && x <= n && y >= 0 && y <= n)

{

//遍历周围坐标

for (offset\_x = -1; offset\_x <= 1; offset\_x++)

{

for (offset\_y = -1; offset\_y <= 1; offset\_y++)

{

//如果这个坐标不是病毒

if (mine[x + offset\_x][y + offset\_y] == 0)

{

//统计周围雷的个数

count = GetCount(mine, x + offset\_x, y + offset\_y);

if (count >= 2)//如果超过两边有病毒

{

mine[x + offset\_x][y + offset\_y] = 1 ;

boom(mine, x + offset\_x, y + offset\_y, n);

}

else

{

mine[x + offset\_x][y + offset\_y] = 0;

}

}

}

}

}

}

int main()

{

int n = 0, m = 0;

scanf("%d %d", &n, &m);

int min[100][100] = { 0 };//把培养皿看成一个棋盘

int d = 0;//病菌的数量

int x = 0, y = 0;

int x1 = 0, y1 = 0;

scanf("%d %d", &x1, &y1);

for (d = 1; d < m; d++)

{

do

{

scanf("%d %d", &x, &y);

} while (x == x1 && y == y1);//相同就重新输入

min[x][y] = 1;

boom(min, x, y, n);

x1 = x; y1 = y;

}

int i = 0, j = 0, count = 0;

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

{

for (j = 0; j < n; j++)

{

count += min[i][j];

}

}

if (count == n \* n) printf("YES");

else printf("NO");

return 0;

}

