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1  #include<iostream>
2  using namespace std;
3  #define N 3
4  int main()
5  {
6      srand((unsigned)time(NULL));
7      int a[N+5][N+5];
8      for (int i=0;i<N;i++) {
9          for (int j=0;j<N;j++) {
10             a[i][j]=rand()%4+1;
11         }
12     }
13
14     for (int i=0;i<N;i++) {
15         for (int j=0;j<N;j++) {
16             cout<<a[i][j]<<" ";
17         }
18         cout<<endl;
19     }
20
21     int maxn[N+5],minn[N+5];
22
23     // for (int i=0;i<N;i++) {
24     //     minn[i]=10;
25     // }
26     //han zui xiao lie zui da
27     for (int j=0;j<N;j++) {
28         maxn[j]=a[0][j];
29         for (int i=1;i<N;i++) {
30             if (a[i][j]>maxn[j]) {
31                 maxn[j]=a[i][j];
32             }
33         }
34     }
35
36     for (int i=0;i<N;i++) {
37         minn[i]=a[i][0];
38         for (int j=1;j<N;j++) {
39             if (a[i][j]<minn[i]) {
40                 minn[i]=a[i][j];
41             }
42         }
43     }
44     cout<<"_____ "<<endl;
45     cout<<"每行最小值";
46     for (int i=0;i<N;i++) {

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47         cout<<minn[i]<<" ";
48     }
49     cout<<endl;
50     cout<<"每列最大值";
51     for (int i=0;i<N;i++) {
52         cout<<maxn[i]<<" ";
53     }
54     cout<<endl;
55
56     cout<<"-----"<<endl;
57     int M_max[N][N],M_min[N][N];
58     for (int i=0;i<N;i++) {
59         for (int j=0;j<N;j++) {
60             M_max[i][j]=M_min[i][j]=0;
61         }
62     }
63     for (int j=0;j<N;j++) {
64         for (int i=0;i<N;i++) {
65             if (a[i][j]==maxn[j]) {
66                 M_max[i][j]=1;
67             }
68         }
69     }
70
71     for (int i=0;i<N;i++) {
72         for (int j=0;j<N;j++) {
73             if (a[i][j]==minn[i]) {
74                 M_min[i][j]=1;
75             }
76         }
77     }
78     int bj=0;
79     cout<<"列最大"<<endl;
80     for (int i=0;i<N;i++) {
81         for (int j=0;j<N;j++) {
82             cout<<M_max[i][j]<<" ";
83         }
84         cout<<endl;
85     }
86     cout<<"-----"<<endl;
87     cout<<"行最小"<<endl;
88     for (int i=0;i<N;i++) {
89         for (int j=0;j<N;j++) {
90             cout<<M_min[i][j]<<" ";
91         }
92         cout<<endl;
93     }
94     cout<<"-----"<<endl;
95

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96     for (int i=0;i<N;i++) {
97         for (int j=0;j<N;j++) {
98             if (M_min[i][j]+M_max[i][j]==2) {
99                 cout<<i<<" "<<j<<" "<<a[i][j]<<"是一个马鞍点"<<endl;
100                 bj=1;
101             }
102         }
103     }
104     if (bj) {
105         cout<<"存在马鞍点";
106     }else{
107         cout<<"不存在马鞍点";
108     }
109 }
110 return 0;
111 }

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1  4 3 2
2  3 3 2
3  4 1 1
4
5  每行最小值2 2 1
6  每列最大值4 3 2
7  -----
8  列最大
9  1 1 1
10 0 1 1
11 1 0 0
12 -----
13 行最小
14 0 0 1
15 0 0 1
16 0 1 1
17 -----
18 0 2 2是一个马鞍点
19 1 2 2是一个马鞍点
20 存在马鞍点

```