#include <fstream>

#include <algorithm>

#define DIM 1010

using namespace std;

int a[DIM][DIM], b[2\*DIM];

int n, i, j, k, t, L1, L2;

int main () {

ifstream fin ("mins.in");

ofstream fout("mins.out");

fin>>n;

for (i=1;i<=n;i++)

for (j=1;j<=n;j++)

fin>>a[i][j];

fin>>k;

for (t=1;t<=k;t++) {

fin>>L1>>L2;

int nr = 0;

for (j=1;j<=n;j++) {

b[++nr] = a[L1][j];

b[++nr] = a[L2][j];

}

sort(b+1, b+2\*n+1);

for (j=1;j<=n;j++)

a[L1][j] = b[j];

}

for (i=1;i<=n;i++) {

for (j=1;j<=n;j++) {

fout<<a[i][j]<<" ";

}

fout<<"\n";

}

return 0;

}