二维RMQ的模板题，但数据范围太小，暴力也能过

二维ST算法

#include <stdio.h>

#include <string.h>

#include <iostream>

#include <algorithm>

using namespace std;

int val[255][255];

int mm[255];

int dpmin[255][255][8][8];//最小值

int dpmax[255][255][8][8];//最大值

void initRMQ(int n,int m)

{

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

for(int j = 1;j <= m;j++)

dpmin[i][j][0][0] = dpmax[i][j][0][0] = val[i][j];

for(int ii = 0; ii <= mm[n]; ii++)

for(int jj = 0; jj <= mm[m]; jj++)

if(ii+jj)

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

for(int j = 1; j + (1<<jj) - 1 <= m; j++)

{

if(ii)

{

dpmin[i][j][ii][jj] = min(dpmin[i][j][ii-1][jj],dpmin[i+(1<<(ii-1))][j][ii-1][jj]);

dpmax[i][j][ii][jj] = max(dpmax[i][j][ii-1][jj],dpmax[i+(1<<(ii-1))][j][ii-1][jj]);

}

else

{

dpmin[i][j][ii][jj] = min(dpmin[i][j][ii][jj-1],dpmin[i][j+(1<<(jj-1))][ii][jj-1]);

dpmax[i][j][ii][jj] = max(dpmax[i][j][ii][jj-1],dpmax[i][j+(1<<(jj-1))][ii][jj-1]);

}

}

}

//查询矩形的最大值(x1<=x2,y1<=y2)

int rmq1(int x1,int y1,int x2,int y2)

{

int k1 = mm[x2-x1+1];

int k2 = mm[y2-y1+1];

x2 = x2 - (1<<k1) + 1;

y2 = y2 - (1<<k2) + 1;

return max(max(dpmax[x1][y1][k1][k2],dpmax[x1][y2][k1][k2]),max(dpmax[x2][y1][k1][k2],dpmax[x2][y2][k1][k2]));

}

//查询矩形的最小值(x1<=x2,y1<=y2)

int rmq2(int x1,int y1,int x2,int y2)

{

int k1 = mm[x2-x1+1];

int k2 = mm[y2-y1+1];

x2 = x2 - (1<<k1) + 1;

y2 = y2 - (1<<k2) + 1;

return min(min(dpmin[x1][y1][k1][k2],dpmin[x1][y2][k1][k2]),min(dpmin[x2][y1][k1][k2],dpmin[x2][y2][k1][k2]));

}

int main()

{

//freopen("in.txt","r",stdin);

mm[0] = -1;

for(int i = 1;i <= 260;i++)

mm[i] = ((i&(i-1))==0)?mm[i-1]+1:mm[i-1];

int N,B,K;

while(scanf("%d%d%d",&N,&B,&K)==3)

{

for(int i = 1;i <= N;i++)

for(int j = 1;j <= N;j++)

scanf("%d",&val[i][j]);

initRMQ(N,N);

int x,y;

while(K--)

{

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

printf("%d\n",rmq1(x,y,x+B-1,y+B-1)-rmq2(x,y,x+B-1,y+B-1));

}

}

return 0;

}

暴力：

#include<cstdio>

#include<iostream>

#include<vector>

using namespace std;

typedef long long ll;

const int INF=1000000007;

int a[260][260];

int main()

{

//freopen("input.txt","r",stdin);

int n,b,k;

scanf("%d%d%d",&n,&b,&k);

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

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

scanf("%d",&a[i][j]);

int x,y;

while(k--)

{

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

int maxn=0,minn=INF;

for(int i=x;i<x+b;i++)

for(int j=y;j<y+b;j++)

{

if(maxn<a[i][j])

maxn=a[i][j];

if(minn>a[i][j])

minn=a[i][j];

}

maxn-=minn;

printf("%d\n",maxn);

}

return 0;

}