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1  const int MAXN = 210;
2  const int MAXM = 500010;
3  const int inf = 2E9;
4
5  typedef struct {int v,next,val;} edge;
6  struct SAP {
7      edge e[MAXM];
8      int p[MAXN],eid;
9      inline void clear(){memset(p,-1,sizeof(p));eid=0;}
10     inline void insert1(int from,int to,int val) {
11         e[eid].v=to;
12         e[eid].val=val;
13         e[eid].next=p[from];
14         p[from]=eid++;
15         swap(from,to);
16         e[eid].v=to;
17         e[eid].val=0;
18         e[eid].next=p[from];
19         p[from]=eid++;
20     }
21     inline void insert2(int from,int to,int val) {
22         e[eid].v=to;
23         e[eid].val=val;
24         e[eid].next=p[from];
25         p[from]=eid++;
26         swap(from,to);
27         e[eid].v=to;
28         e[eid].val=val;
29         e[eid].next=p[from];
30         p[from]=eid++;
31     }
32     int n;//为点数n 为边数m
33     int h[MAXN];
34     int gap[MAXN];
35     int source,sink;
36     inline int dfs(int pos,int cost) {
37         if (pos==sink) {
38             return cost;
39         }
40         int j,minh=n-1,lv=cost,d;
41         for (j=p[pos];j!=-1;j=e[j].next) {
42             int v=e[j].v,val=e[j].val;
43             if (val>0) {
44                 if (h[v]+1==h[pos]) {
45                     if (lv<e[j].val) d=lv;
46                     else d=e[j].val;
47                     d=dfs(v,d);
48                     e[j].val-=d;
49                     e[j^1].val+=d;
50                     lv-=d;
51                     if (h[source]>=n) return cost-lv;
52                     if (lv==0) break;

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53         }
54         if (h[v]<minh) minh=h[v];
55     }
56 }
57 if (lv==cost) {
58     --gap[h[pos]];
59     if (gap[h[pos]]==0) h[source]=n;
60     h[pos]=minh+1;
61     ++gap[h[pos]];
62 }
63 return cost-lv;
64 }
65 void read(int ll[MAXN][MAXN],int S,int T,int N) {
66     clear();
67     source = S; sink = T; n = N;
68     for (int i = 0; i <= N; i++) {
69         for (int j = 0; j <= N; j++) {
70             if (ll[i][j]) {
71                 insert1(i,j,ll[i][j]);
72             }
73         }
74     }
75 }
76 int run() {
77     int ret=0;
78     memset(gap,0,sizeof(gap));
79     memset(h,0,sizeof(h));
80     gap[source]=n;
81     while (h[source]<n) ret+=dfs(source,inf);
82     return ret;
83 }
84 } solver;

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