

POJ3352, 边双联通分量

```

1  #include <cstdio>
2  #include <cstring>
3  #include <algorithm>
4
5  using namespace std;
6
7  int a[1010][1010];
8  int visit[1010];
9  int deep[1010];
10 int back[1010];
11 int n,m;
12
13 int block[1010];
14 int dd[1010];
15
16 void dfs(int k,int fa,int d) {
17     visit[k]=1;
18     back[k]=deep[k]=d;
19     int tot=0;
20     for (int i=1;i<=n;i++) {
21         if (a[k][i] && i!=fa && visit[i]==1)
22             back[k]=min(back[k],deep[i]);
23         if (a[k][i] && visit[i]==0) {
24             dfs(i,k,d+1);
25             tot++;
26             back[k]=min(back[k],back[i]);
27             if (back[i]>deep[k]) {
28                 a[k][i] = a[i][k] = 2;
29             }
30         }
31     }
32     visit[k]=2;
33 }
34
35 void dfs2(int k,int fa) {
36     visit[k]=1; block[k] = fa;
37     for (int i=1;i<=n;i++) {
38         if (a[k][i] == 1 && !visit[i]) {
39             dfs2(i,fa);
40         }
41     }
42 }
43
44 int main() {
45     scanf("%d%d",&n,&m);
46     memset(a,0,sizeof(a));
47     memset(back,0,sizeof(back));
48     memset(deep,0,sizeof(deep));
49     memset(visit,0,sizeof(visit));
50     while (m--) {

```

```

51         int f,t;
52         scanf("%d%d",&f,&t);
53         a[f][t]=a[t][f]=1;
54     }
55     dfs(1,0,0);
56     memset(visit,0,sizeof(visit));
57     for (int i = 1; i <= n; i++) {
58         if (!visit[i])
59             dfs2(i,i);
60     }
61     for (int i = 1; i <= n; i++) {
62         for (int j = i; j <= n; j++) {
63             if (a[i][j] == 2) {
64                 dd[block[i]]++;
65                 dd[block[j]] ++;
66             }
67         }
68     }
69     int cnt = 1;
70     for (int i = 1; i <= n; i++) if (dd[i] == 1) cnt ++;
71     printf("%d\n",cnt >> 1);
72     return 0;
73 }

```