///code by sonhotrung

///2 dòng này sẽ mất:)))

#include <bits/stdc++.h>

#define pb push\_back

const int maxn=1e4+5;

const long long oo=1e18;

using namespace std;

int n,m;

int nchild[maxn],low[maxn],num[maxn],Par[maxn];

vector <int> E[maxn];

int timee;

int KT[maxn];

void DFS(int u)

{

timee++;

low[u] = timee;

num[u] = timee;

for (int v : E[u])

if (Par[u] != v)

{

if (num[v])

low[u] = min(low[u],num[v]);

else

{

nchild[u]++;

Par[v] = u;

DFS(v);

low[u] = min(low[u],low[v]);

}

}

}

int main()

{

//freopen("","r",stdin);

//freopen("","w",stdout);

ios\_base::sync\_with\_stdio(false);

cin.tie(0);

cout.tie(0);

cin >> n >> m;

while (m--)

{

int u,v;

cin >> u >> v;

E[u].pb(v);

E[v].pb(u);

}

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

if (num[i] == 0)

{

Par[i] = 0;

DFS(i);

}

int cau = 0,khop = 0;

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

{

int v = Par[i];

if (v != 0 && low[i] >= num[i])

cau++;

}

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

{

int v = Par[i];

if (v == 0 && nchild[i] > 1)

KT[i] = 1;

}

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

{

int v = Par[i];

if (Par[v] != 0 && low[i] >= num[v])

KT[v] = 1;

}

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

if (KT[i])

{

//cout << i << endl;

khop++;

}

cout << khop << " " << cau;

return 0;

}

Nén cây

**void** **DFS**(**int** u)

{

KT[u] **=** false;

Low[u] **=** Num[u] **=** dem**++**;

top**++**;

DS[top] **=** u;

**for** (**int** v **:** E[u])

**if** (KT[v])

{

DFS(v);

Low[u] **=** min(Low[u],Low[v]);

}

**else**

Low[u] **=** min(Low[u],Num[v]);

**if** (Low[u] **==** Num[u])

{

**int** v;

kq**++**;

**do**

{

V **=** DS[top];

top**--**;

Low[v] **=** Num[v]**=**oo;

}

**while** (u **!=** v);

}

}