**SENIOR DIVISION**

**FRIEND SUGGESTIONS** **[HARD]**

**Question Link:** <https://www.hackerrank.com/contests/codebash-2-0-senior/challenges/friend-suggestion>

**Solution:** **(C++)**

#include<bits/stdc++.h>

using namespace std;

typedef long long ll;

const int N=1e5+5;

int father[N],sum[N],ans[N];

int n,m,k,x,y;

int Findfather(int x){

return father[x]==x?x:father[x]=Findfather(father[x]);

}

void Union(int a,int b){

a=Findfather(a),b=Findfather(b);

if(a!=b) father[b]=a,sum[a]+=sum[b];

}

void init(){

for(int i=0;i<=n;i++)

father[i]=i,sum[i]=1;

}

int main(){

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

init();

while(m--){

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

ans[x]++,ans[y]++;

Union(x,y);

}

while(k--){

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

if(Findfather(x)==Findfather(y)) ans[x]++,ans[y]++;

}

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

printf("%d ",sum[Findfather(i)]-ans[i]-1);

}

return 0;

}