

```
#include <bits/stdc++.h>

using namespace std;

typedef pair<int,int> pii;
typedef vector<pii> vpii;
typedef vector<bool> vb;

vb used;
pii iniD,endD;
vpii all;
int n,m,x,y;
int ans;

void bt(int cont,int last){
    if(cont == n){
        if(last == endD.first)ans++;
        return ;
    }
    for(int i=0;i<all.size();i++){
        if(!used[i]){
            used[i]=1;
            if(all[i].first == last){
                bt(cont+1,all[i].second);
            }
            else if(all[i].second == last){
                bt(cont+1,all[i].first);
            }
            used[i]=0;
        }
    }
}

int main(){
    while(cin >> n){
        if(n==0) break;
        cin >> m;
        cin >> x >> y;
        iniD = make_pair(x,y);
        cin >> x >> y;
        endD = make_pair(x,y);
        while(m--){
            cin >> x >> y;
            all.push_back(make_pair(x,y));
        }
        used.assign(all.size(),0);
        ans=0;
        bt(0,iniD.second);
        if(ans)cout << "YES";
        else cout << "NO";
        cout << endl;
        all.clear();
    }
    return 0;
}
```