

Machine Teaching for Online Judge [dev-helper](#)

[Go to another random problem](#) [Go to next problem](#)

===== problem info =====  
id: 1198  
case\_count: 1  
time\_limit: 500  
memory\_limit: 65536

===== problem features =====  
pf\_num\_submit: 19  
pf\_ac\_rate : 0.6842105263157895  
pf\_avg\_lines : 58.0  
pf\_avg\_bytes : 1263.6153846153845  
pf\_avg\_time : 18.846153846153847  
pf\_avg\_mem : 4893.846153846154  
pf\_avg\_score : 0.6842105263157895

===== problem description =====  
title: OddGraph  
## Description

Pangzi looks somehow odd recently. He started to love odd t graphs.  
He says, an odd graph is a non-empty graph (that is the set every vertex has an odd degree (that is, connected to an odd number of edges). If a graph is not odd, he will try to find a subgraph that subgraph of a graph  $G=(V, E)$  is composed by some vertices in  $G$  and all  $G$ .  
Mathematically,  $G'=(V', E')$  where  $V'$  is a subset of  $V$  and  $E'$  in  $E$ ].

Now Pangzi will give you a graph, please tell him if this g to find an odd subgraph.

Pay attention. As Pangzi is odd now, when he talks about gr undirected graphs.

## Input Format  
The first line of the input is an integer  $T$  ( $T \leq 100$ ), ind

Then,  $T$  test cases follow. For every test case, the first l 100,  $0 \leq m \leq 1000$ ).  
Then  $m$  lines follow, every line contains 2 integers  $u, v$  (1  $G$ .

There is no self-loop or parallel edge.

## Output Format

Output the answer for each test case.

\* If the graph is an odd graph, output "ODD GRAPH".  
\* If the graph is not odd and contains an odd subgraph, out format.

First output a number  $K$ , the vertices in this subgraph, a increasing order representing the vertices. These numbers should be printed in one line extra

spaces. If there are multiple solutions, first minimize  $K$  solutions, output the lexicographically smallest sequence of vertice

\* If the graph is not odd and contains no odd subgraph, out

For two sequences  $a[1], a[2], \dots, a[K]$  and  $b[1], b[2], \dots$

smaller  
than  $b$  if and only if for the smallest  $i$  such that  $a[i] \neq b[i], a[i] < b[i]$ .

See the sample output for clarifications.

## Sample Input

```
3
1 0
4 4
1 2
2 3
3 4
4 1
2 1
1 2
```

## Sample Output

```
NO ODD SUBGRAPH
2 1 2
ODD GRAPH
```

## Case Limits

Time limit: 500 msec

Memory limit: 64 MB

[Show another random accepted code](#)

```
// record_id: 45862

#include<iostream>
#include<cstring>
using namespace std;
int n,m;
int map[105][105],d[105];
int main(){
    int t,i,a,b;
    cin>>t;
    while(t--){
        cin>>n>>m;
        memset(d,0,sizeof(d));
        memset(map,0,sizeof(map));
        for(i=1;i<=m;i++){
            cin>>a>>b;
            map[a][b]=map[b][a]=1;
            d[a]++,d[b]++;
        }
        for(i=1;i<=n;i++){
            if(d[i]%2==0)break;
        }
        if(i>n) cout<<"ODD GRAPH"<<endl;
        else{
            if(m==0) cout<<"NO ODD SUBGRAPH"<<endl;
            else{
                for(i=2;i<=n;i++){
                    if(map[1][i]) break;
                }
                cout<<"2 1 ";<<i<<endl;
            }
        }
    }
    return 0;
}
```

- ☐ 数据结构
- ☐ 数据结构 - 基本数组

- ☐ 字符串
- ☐ 字符串 - KMP
- ☐ 字符串 - AC自动机
- ☐ 字符串 - 后缀结构
- ☐ 动态规划
- ☐ 动态规划 - 基础
- ☐ 动态规划 - LCS
- ☐ 动态规划 - 背包
- ☐ 动态规划 - 区间
- ☐ 动态规划 - 树形
- ☐ 动态规划 - 插头
- ☐ 动态规划 - 数位
- ☐ 动态规划 - 优化
- ☐ 动态规划 - 优化 - 单调队列
- ☐ 动态规划 - 优化 - 优先队列
- ☐ 动态规划 - 优化 - 矩阵
- ☐ 动态规划 - 优化 - 斜率优化
- ☐ 动态规划 - 优化 - 状态压缩
- ☐ 动态规划 - 优化 - 单调性

- ☐ 搜索
- ☐ 搜索 - DFS
- ☐ 搜索 - BFS
- ☐ 搜索 - 剪枝
- ☐ 搜索 - 记忆化
- ☐ 搜索 - 启发式

- ☐ 语言基础
- ☐ 语言基础 - 控制流
- ☐ 语言基础 - 类
- ☐ 语言基础 - 操作符重载
- ☐ 语言基础 - 递归
- ☐ 语言基础 - 标准库

- ☐ 计算几何
- ☐ 构造
- ☐ 其他

[save tags](#)