Problem B: One-Way Roads

In the ACM kingdom, there are N cities connected by M two-way roads. These cities are connected, i.e., one can reach from any city X to any other city Y by going through some of these roads. One day, the government wishes to assign for each road a direction, such that one can still reach from any city to any other. You are asked to determine whether this task is possible.

Input Specification

The first line of input contains $T(0 \leq T \leq 100)$, the number of test cases. The first line of each test case consists of two integers, $N(1 \leq N \leq 50)$, and $M(1 \leq M \leq N(N-1)/2)$. Each of the next M lines describes a road, and consists of two integers, X and Y, $(1 \leq X, Y \leq N; X \neq Y)$, indicating that there is a road between city X and Y. There is at most one road that directly connects each pair of cities.

Output Specification

For each test case, if it is impossible, output a single line `NO`. Otherwise, output `YES` on the first line, followed by M lines describing one possible direction assignment to these M roads. Each of these M lines should consist of two integers, X, Y, indicating that there is a one-way road from city X to city Y. These M lines can be output in any order.

Sample Input

```
3
3 3
1 2
2 3
1 3
4 3
1 2
1 3
1 4
4 5
1 2
2 3
```

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

Sample Output

```
YES
1 2
2 3
3 1
NO
YES
1 2
2 3
3 4
4 1
2 4
```

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