Task Trokuti

An undirected graph with $6 \cdot N$ vertices and M edges is given. An additional property of the graph is that it can be partitioned into $2 \cdot N$ disjoint triangles.

Find N disjoint triangles in the graph.

Input

In the first line, there is a natural number T ($1 \leq T \leq 100$), which indicates the number of test cases.

This is followed by T blocks of data.

In the first line of each block, there are natural numbers N and M ($1 \leq N \leq 300, 0 \leq M \leq 10^6$).

In the next M lines, there are two natural numbers x and y ($1 \leq x, y \leq 6 \cdot N$), which indicate that there is an edge between vertices x and y.

The sum of all values of N across all test cases will not exceed 300.

Output

For each test case, output N lines, each line containing three natural numbers a, b, c ($1 \leq a, b, c \leq 6 \cdot N$), which indicate that the vertices a, b, and c form a triangle.

Scoring

Subtask	Points	Constraints
1	13	$M = 6 \cdot N$
2	18	$N = 3$, $T = 1$
3	18	$N = 6$, $T = 1$
4	71	No additional constraints.

Examples

input

```
1
1 6
1 2
2 3
1 3
4 5
4 6
5 6
```

output

```
1 2 3
```

input

```
1
3 26
4 7
4 9
7 9
4 5
4 8
5 8
4 12
4 18
12 18
3 7
3 9
15 5
15 8
6 13
6 1
13 1
6 14
6 17
14 17
6 2
6 10
2 10
16 13
16 1
11 14
11 17
```

output

```
1 6 13
3 7 9
4 5 8
```