A. Chain Mine Trap

Time limit: `1s`
Memory limit: `512MB`

Formal Statement:

Given a simple undirected bipartite graph $G(V, E)$ with left part L and right part R, determine whether there exists an orientation of all edges in E such that there is a pair of special vertices (u, v) with $u \in L$ and $v \in R$, and:

- u can reach every vertex in $R \setminus \{v\}$,
- v can reach every vertex in $L \setminus \{u\}$.

Input Format

This is a multiple-testcase problem.

The first line contains an integer T, the number of test cases. For each test case:

The first line contains three non-negative integers n_L, n_R, m, denoting the sizes of L, R, and E, respectively.

Then follow m lines, each containing two positive integers u_i, v_i, describing an edge (L_{u_i}, R_{v_i}) in E.

Output Format

For each test case, output one line containing either `Yes` or `No`, indicating whether such a construction exists.

If the answer is `Yes`, output one line containing a binary string of length m. The i-th character should be:

- `1` if the edge is oriented as $L_{u_i} \to R_{v_i}$,
- `0` if the edge is oriented as $L_{u_i} \leftarrow R_{v_i}$.

Then output one line containing two integers u, v.

Sample Input

```
3
2 2 2
1 1
2 2
5 3 8
1 1
1 2
2 3
3 1
3 3
4 1
4 2
5 1
5 3 7
1 1
1 2
2 3
3 1
3 3
4 1
4 2
```

Sample Output

```
Yes
10
1 2
Yes
01110000
2 3
No
```

Constraints

For all test cases, it is guaranteed that:

$1 \le T \le 10^3, \quad 1 \le n_L, n_R, \sum n_L, \sum n_R \le 10^5, \quad 0 \le \sum m \le 3 \times 10^5, \quad 1 \le u_i \le n_L, \quad 1 \le v_i \le n_R.$

Subtask	Special Property	Score
1	$n_L, n_R, m \le 10$	20
2	$m < n_L + n_R - 1$	20
3	$m \ge n_L + n_R - 1$	20
4	No additional restrictions	40