Problem K. Traveling Merchant

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Mr. Lawrence is a traveling merchant who travels between cities and resells products. Basically, to earn from it, he needs to buy products at a very low price and sell them at a higher price. Your task is to tell him whether there exists an endless traveling path that can earn money all the time.

To make things simple, suppose there are n cities named from 0 to $n-1$ and m undirected roads each of which connecting two cities. Mr. Lawrence can travel between cities along the roads. Initially he is located at city 0 and each of the city i has a starting price c_i, either Low or High. Due to the law of markets, the price status at city i will change (i.e. High price will become Low price, or vice versa) after he departs for a neighboring city j from i. (City j is a neighboring city of city i when one of the m roads connects city i and city j.) For some reasons (e.g. product freshness, traveling fee, tax), he **must**:

1. Start at city 0 and buy products at city 0. It is guaranteed that c_0 is Low.
2. When he arrives some city, he either sells products or buys products. It is not allowed for him to do nothing before he leaves the city.
3. After buying products at some city i, he must travel to some neighboring city j whose price c_j is High and sell the products at city j.
4. After selling products at some city i, he must travel to some neighboring city j whose price c_j is Low and buy the products at city j.

As a result, the path will look like an alternation between "buy at low price" and "sell at high price".

An endless earning path is defined as a path consisting of an endless sequence of cities $p_0, p_1, ...$ where city p_i and city p_{i+1} has a road, $p_0 = 0$, and the price alternates, in other words $c_{p_{2k}}$ = Low (indicates a buy-in) and $c_{p_{2k+1}}$ = High (indicates a sell-out) for $k \geq 0$. Please note here c_{p_i} is the price when **arriving** city p_i and this value may be different when he arrives the second time.

Your task is to determine whether there exists any such path.

Input

There are several test cases. The first line contains a positive integer T indicating the number of test cases. Each test case begins with two positive integers n and m indicating the number of cities and the number of roads.

The next line is a string c of length n containing 'H' or 'L'. The i-th ($0 \leq i < n$) charactor of c is H if the starting price c_i at city i is High. The i-th ($0 \leq i < n$) charactor of c is L if the starting price c_i at city i is Low.

The i-th line ($1 \leq i \leq m$) of the following m lines contains two different cities u_i and v_i, indicating a road between u_i and v_i.

The sum of the values of n over all test cases is no more than $200,000$. The sum of the values of m over all test cases is no more than $200,000$. For each test case, $c_i \in \{\mathrm{H}, \mathrm{L}\}$ holds for each $i \in \{0, \ldots, n-1\}$. c_0 is always L. $0 \leq u_i, v_i < n$ and $u_i \neq v_i$ hold for each $i \in \{1, \ldots, m\}$. No two roads connect the same pair of cities.

Output

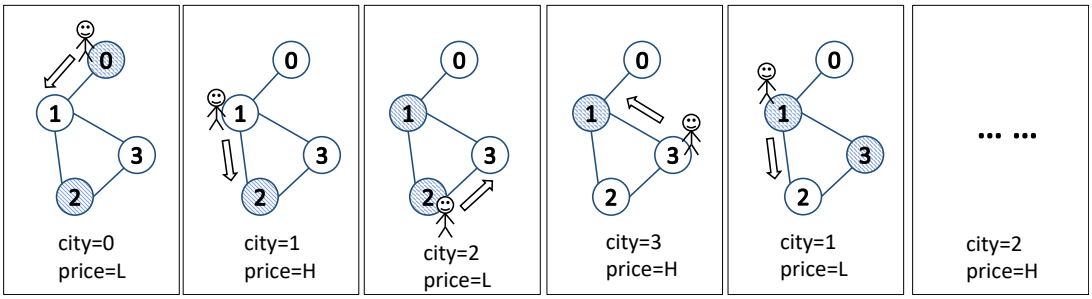
For each test case, output a line of "yes" or "no", indicating whether there exists an endless earning path.

Example

standard input	standard output
2 4 4 LHLH 0 1 1 2 1 3 2 3 3 3 LHH 0 1 0 2 1 2	yes no

Note

In the first sample test case, the endless earning path is $0 \to 1 \to 2 \to 3 \to 1 \to 2 \to 3 \to \ldots$. In the illustration, cities with Low price are filled with stripe.



In the second sample test case, Mr. Lawrence can only make one move from city 0 and after that all cities will have High price. Thus, no further moves can be made.

