Problem B. 77G Network

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1.5 seconds
Memory limit:	1024 megabytes

The map of Meowland can be regarded as a rooted tree with n nodes and $n-1$ edges, where nodes represent cities and an edge represents a road connecting two cities. The capital is at the root, node 1.

Now Meowland wants to install brand-new 77G network base stations in some cities. To ensure that every road has sufficient network quality, at least one of the endpoint cities of each road must have a base station. However, due to unknown technical issues, the network system has m faults. Fault i can be described as follows: if a base station is installed at city x_i, then all cities within the subtree of x_i whose distance to x_i is exactly y_i cannot install base stations; otherwise, the stations will interfere with each other and become unusable.

Please help Meowland choose some cities so that installing base stations in those cities satisfies all the above requirements. If no valid scheme exists, output "No".

Input

Each test file contains multiple test cases. The first line contains the number of test cases T ($1 \le T \le 10^3$). The description of the test cases follows.

The first line of each test case contains an integer n ($2 \le n \le 2 \times 10^5$), denoting the number of cities.

The second line contains $n-1$ integers $f_2, f_3, \ldots, f_n$ ($1 \le f_i < i$), where f_i denotes the parent of city i.

The third line contains an integer m ($0 \le m \le 2 \times 10^5$), denoting the number of faults.

Each of the next m lines contains two integers x_i and y_i ($1 \le x_i, y_i \le n$), denoting the i-th fault. There may exist two identical faults.

For each test file, it is guaranteed that the sum of n over all test cases does not exceed 2×10^5, and the sum of m over all test cases does not exceed 2×10^5.

Output

For each test case, if there is no valid scheme, output a line "No".

Otherwise, output three lines representing your scheme:

- On the first line output "Yes".
- On the second line output an integer c, denoting the number of cities you choose.
- On the third line output c distinct integers, denoting the cities you choose.

If there are multiple valid schemes, you may output any one. When outputting the scheme, you may output the c cities in any order.

Example

standard input	standard output
3 6 1 1 2 2 4 2 1 3 2 1 6 1 1 2 2 4 6 1 1 1 2 1 3 2 1 2 2 2 1 8 1 1 3 1 1 2 4 10 1 2 3 2 1 3 5 1 6 1 3 2 4 1 3 2 5 1 3 1	Yes 4 5 3 4 1 No No