Week 11b - Connectivity using BFS

Find if a path exists between two vertices in an undirected graph using BFS. The graph must be implemented using a adjacency matrix.

Input:

Each input file begins with two integers **N** and **Q** in the first line, the number of nodes in the undirected graph (numbered 1 to N) and the number of queries, followed by the adjacency matrix that denotes the undirected graph. An adjacency matrix is represented in **N** lines having **N** space-separated integers (0s or 1s) in each line.

Following this, **Q** lines are provided, with one query in a single line. Each query is of the form "u v", and you have to find if a path exists between vertex u and v in the given graph.

Output:

Print Q lines, one for each query. For every query print "YES" if there exists a path between vertices u and v. Print "NO" otherwise.

Note: Print the output in uppercase letters and without the quotes.