



Hello, 2024101067.

# Disease

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C, C++

A new disease is widespread in IIITH. A student named *Roma* drew a graph of  $N$  students in IIITH. An edge between node  $A$  and Node  $B$  represents that  $A$  is a friend of  $B$ . (Assume **graph is undirected**)

The disease will spread from a node  $P$  to node  $Q$  if  $P$  and  $Q$  are connected (There is a path from node  $P$  to node  $Q$ ).

Now he has got  $q$  queries. In each query, given nodes  $X$  and  $Y$ , if  $X$  is infected by the disease will node  $Y$  also be infected. Note that all queries are independent of each other.

## Constraints

$$n \leq 100$$

$$q \leq 100$$

## Input

First line contains  $n, q$ .

Next  $n$  lines contains the adjacency matrix, with each line having  $n$  elements either 1 or 0. 1 represents edge, 0 represents no edge.

Next  $q$  lines contains 2 integers, node which has disease and target node. Assume nodes are 0 indexed. (They are labelled as 0,1,...,n-1)

## Output

Output consists of  $q$  lines, the answer for  $q$  queries. Print 1 if target node gets infected, Print 0 if target node does not get infected.

## Sample Test Case



Hello, **2024101067**.

```
0 0 1 0 0
0 0 0 1 0
1 0 0 0 1
0 1 0 0 0
0 0 1 0 0
0 3
0 4
1 2
```

## Output

```
0
1
0
```

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## ? Clarifications

[Request clarification](#)

No clarifications have been made at this time.