



Graph Traversal

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✓ Points: 100 (partial)② Time limit: 1.0s

Memory limit: 128M

→ Allowed languages

C, C++

You are provided with a graph consisting of n vertices and m edges. The vertices are numbered from 1 to n. The graph doesn't contain multiple edges, or self-loops.

After the graph description, you are given q queries. Each query contains a single integer r, representing the starting node. For each query, output all vertices that are reachable from node r in **ascending order**.

Constraints:

- $1 \le q \le 10^5$
- $1 \le u, v, r \le n$

Subtask 1

- $1 \le n \le 10^3$
- $0 \le m \le 10^5$, $0 \le m \le \frac{n(n-1)}{2}$
- $q \cdot n^2$ doesn't exceed 10^7

Subtask 1

- $1 \le n \le 10^5$
- $0 \le m \le 10^5$, $0 \le m \le \frac{n(n-1)}{2}$
- $q \cdot (n+m)$ doesn't exceed 10^7

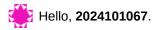
Input Format:

ullet The first line contains two space-separated integers n and m, representing the number of vertices and the number of edges, respectively.

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Output Format:

For each query, print a single line containing the vertices reachable from r, sorted in ascending order. The vertices should be separated by a single space.

Example:

Input:

```
Copy

1 2
2 3
1 4
5 6
5 7
6 7
3
1
5
3
```

Output:

```
1 2 3 4
5 6 7
1 2 3 4
```

Explanation:

- Query 1: Starting from node 1, the reachable nodes are $\{1,2,3,4\}$. After sorting, the output is: $\boxed{1\ 2\ 3}$
- Query 2: Starting from node 5, the reachable nodes are $\{5,6,7\}$. After sorting, the output is: [5,6,7].
- Query 3: Starting from node 3, the reachable nodes are again $\{1, 2, 3, 4\}$ because node 3 is part of the component that includes node 1.

Note:

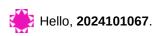
Ensure that the output for each query is in **sorted order** — regardless of the order in which nodes are discovered during the traversal, they must be sorted in ascending order before being printed.



Request clarification

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