

# Iterative DFS

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import java.io.*;
import java.util.*;

public class Main {
    static class Edge {
        int src;
        int nbr;

        Edge(int src, int nbr) {
            this.src = src;
            this.nbr = nbr;
        }
    }

    public static void main(String[] args) throws Exception {
        BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));

        int vtces = Integer.parseInt(br.readLine());
        ArrayList<Edge>[] graph = new ArrayList[vtces];
        for (int i = 0; i < vtces; i++) {
            graph[i] = new ArrayList<>();
        }

        int edges = Integer.parseInt(br.readLine());
        for (int i = 0; i < edges; i++) {
            String[] parts = br.readLine().split(" ");
            int v1 = Integer.parseInt(parts[0]);
            int v2 = Integer.parseInt(parts[1]);
            graph[v1].add(new Edge(v1, v2));
            graph[v2].add(new Edge(v2, v1));
        }

        int src = Integer.parseInt(br.readLine());

        Stack<Pair> stack = new Stack<>();
        stack.push(new Pair(src, src + ""));
        boolean[] visited = new boolean[vtces];
        while(stack.size() > 0){
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        Pair rem = stack.pop();

        if(visited[rem.v] == true){
            continue;
        }
        visited[rem.v] = true;
        System.out.println(rem.v + "@" + rem.psf);

        for (Edge e : graph[rem.v]) {
            if (visited[e.nbr] == false) {
                stack.push(new Pair(e.nbr, rem.psf + e.nbr));
            }
        }
    }
}

static class Pair {
    int v;
    String psf;

    Pair(int v, String psf){
        this.v = v;
        this.psf = psf;
    }
}
}

```

Nothing much. Just pop from end in the queue instead of beginning.