

```

import java.io.*;
import java.lang.reflect.Array;
import java.util.*;

public class Main {
    static ArrayList<nodo> la;
    static int n,m;
    static char caracter = '1';
    static ArrayDeque<Integer> topo = new ArrayDeque<Integer>(); // topo is
LIFO

    public static void main(String[] args) throws Exception {
        lectura txt
        StringBuilder sb = new StringBuilder();
        String ent;
        char linea[];

        while ((ent = br.readLine()) != null) {
            StringTokenizer st = new StringTokenizer(ent);
            n = Integer.parseInt(st.nextToken());
            m = Integer.parseInt(st.nextToken());
            la = new ArrayList<nodo>();
            //llenado de la lista de adyacencia
            for(int i = 0; i< n; i++){
                linea = br.readLine().toCharArray();
                la.add(new nodo(i));
                for(int k=0; k<m; k++){
                    if(linea[k] == caracter)
                        la.get(i).setChilds(k);
                }
            }
            //recorrer la lista.
            exploredfalse();
            for(int i = 0; i< n; i++){

                //DFSr(la.get(i));
                //DFSit(la.get(i));
                //System.out.println();
                //BFS(la.get(i));
                if(!la.get(i).isExplored())
                    topologicalSort(la.get(i));
            }

            Iterator<Integer> it = topo.iterator();
            //while(it.hasNext())
            //    System.out.print(la.get(it.next()).getIdNodo() + " ->
");

            //System.out.print(conectedComponents());
            sb.append("").append("\n");
        }
        System.out.print(sb);
    }

    public static void exploredfalse(){
        for(int i = 0; i<n; i++) la.get(i).setExplored(false);
    }
}

```

```

public static void DFSr(nodo nd){
    if(!nd.isExplored()){
        nd.setExplored(true);
        System.out.print("->> "+nd.getIdNodo()+" ");
        Iterator<Integer> it = nd.getChilds().iterator();
        while(it.hasNext())
            DFSr(La.get(it.next()));
    }
}

public static void DFSit(nodo nd){
    Stack<nodo> lista = new Stack<nodo>();
    lista.push(nd);
    while(!lista.isEmpty()){
        nodo u = lista.pop();
        if(!u.isExplored()){
            System.out.print("->> "+u.getIdNodo()+" ");
            u.setExplored(true);
            Iterator<Integer> it = u.getChilds().iterator();
            while(it.hasNext())
                lista.push(La.get(it.next()));
        }
    }
}

public static void BFS(nodo nd){
    nd.setExplored(true);
    Queue<nodo> q = new ArrayDeque<nodo>();
    q.add(nd);

    while(!q.isEmpty()){
        nodo u = q.poll();
        System.out.println("->> "+u.getIdNodo());
        Iterator<Integer> it = u.getChilds().iterator();
        while(it.hasNext()){
            nodo key = La.get(it.next());
            if(!key.isExplored()){
                key.setExplored(true);
                q.add(key);
            }
        }
    }
}

public static void topologicalSort(nodo nd){
    nodo u;
    nd.setExplored(true);
    Iterator<Integer> it = nd.getChilds().iterator();
    while(it.hasNext()){
        u = La.get(it.next());
        if(!u.isExplored())
            topologicalSort(u);
    }
    System.out.print(" ->> "+ nd.getIdNodo()+" ");
    topo.add(nd.getIdNodo());
}

```

```

    }

    public static int conectedComponents(){
        exploredfalse();
        int c=0;
        for(int i = 0; i< n; i++){
            nodo nd = La.get(i);
            if(!nd.isExplored()){
                BFS(nd);
                c++;
            }
        }
        return c;
    }
    //public static
}
class nodo{
    int idNodo;
    long value;
    boolean explored;
    ArrayList<Integer> childs;
    public nodo(){
        idNodo = -1;
        value = -1;
        explored = false;
        childs = new ArrayList<Integer>();
    }
    public nodo(int id){
        idNodo = id;
        value = -1;
        explored = false;
        childs = new ArrayList<Integer>();
    }
    public int getIdNodo() {
        return idNodo;
    }
    public void setIdNodo(int idNodo) {
        this.idNodo = idNodo;
    }
    public long getValue() {
        return value;
    }
    public void setValue(long value) {
        this.value = value;
    }
    public boolean isExplored() {
        return explored;
    }
    public void setExplored(boolean explored) {
        this.explored = explored;
    }
    public ArrayList<Integer> getChilds() {
        return childs;
    }
    public void setChilds(int child) {

```

```
        this.children.add(child);  
    }  
}
```