

### **Find the number of paths in a graph**

```
public int countComponents(int n, int[][] edges) {
    if(n <= 1) return n;
    HashMap<Integer, List<Integer>> hm = new HashMap<>();
    for(int i = 0; i < n; i++) hm.put(i, new ArrayList<>());
    for(int[] i : edges){
        hm.get(i[0]).add(i[1]);
        hm.get(i[1]).add(i[0]);
    }
    HashSet<Integer> hs = new HashSet<>();
    int count = 0;
    for(int i = 0; i < n; i++){
        if(hs.add(i)){
            dfs(i, hs, hm);
            count++;
        }
    }
    return count;
}

public void dfs(int i, HashSet<Integer> hs, HashMap<Integer, List<Integer>> hm){
    for(int j : hm.get(i)){
        if(hs.add(j)){
            dfs(j, hs, hm);
        }
    }
}
```