Disjoint Set Union

\*<https://uva.onlinejudge.org/external/7/793.pdf> (Network Connections

2 operations:

1. Connect (a, b)

2. Is Connected (a, b)

Print number of true and false operation 2)

\*<https://uva.onlinejudge.org/external/106/p10608.pdf> (Friends.

Add friendship between two peoples. Print size of the max community.)

\*\*<http://codeforces.com/problemset/problem/25/D> (Given N nodes and N-1 connectivity. Calculate how many extra edge will be required to connect all the nodes. )

\*\*<http://codeforces.com/problemset/problem/490/B> (Queue. Given the visibility order of a queue retrieve the original queue)

\*\*\*<http://codeforces.com/problemset/problem/371/D> (Vessels.

Initially, all the vessels are empty. In some vessels water is poured. All the water that overflows from the *i*-th vessel goes to the (*i* + 1)-th one. The liquid that overflows from the *n*-th vessel spills on the floor.

;Your task is to simulate pouring water into the vessels. To do this, you will need to handle two types of queries:

1. Add *xi* liters of water to the *pi*-th vessel;

2. Print the number of liters of water in the *ki*-th vessel.)

DFS

\*\*<https://uva.onlinejudge.org/external/117/11749.pdf>(Poor Trade Advisor)

Given set of nodes and edges. Each edge has some priority. Find Maximum component having same priority.

\*\*\*<http://codeforces.com/problemset/problem/14/D> (Two Paths)

The first line contains an integer *n* (2 ≤ *n* ≤ 200), where *n* is the amount of cities in the country. The following *n* - 1 lines contain the information about the roads. Each line contains a pair of numbers of the cities, connected by the road *ai*, *bi* (1 ≤ *ai*, *bi* ≤ *n*).)

Output the maximum possible profit where max profit equals to product of two non-intersecting paths

BFS

\*<https://uva.onlinejudge.org/external/7/p762.pdf> (We ship Cheap) (Given connectivity of a graph. You have to check whether it is possible to travel from source to destination. If yes print the path otherwise print “No”. )

\*\*[UVA-924](https://uva.onlinejudge.org/external/9/924.pdf) (Spreading the news)(Given a connectivity. For each source calculate the maximum #node on a particular component)

\*\*\*<https://uva.onlinejudge.org/external/106/10653.pdf> (Given a grid with source (sr,sc) and destination(dr, dc). Some cells have bomb in it. Print minimum time required to travel from source to destination.)

<https://uva.onlinejudge.org/external/106/10651.pdf> (Given a board of 1x12, each cell may or may not have negative forces. For two among three consecutive cells (A, B, C) have negative force then two negative forces disappears and one new negative force is created in the non-infected cell)

Suppose you are given three Mug having capacity (3, 5, 8). Among the mug the first two are empty and the third one is filled with water. From the combination is it possible to separate 4 unit of water using the given mugs?

uvaLive-5966: Teleport.

0-1 weighted shortest path:

Euler Circuit/Path:

<http://acm.split.hdu.edu.cn/showproblem.php?pid=1878> (Check Euler Circuit)

<http://acm.split.hdu.edu.cn/showproblem.php?pid=3018> (Ant Trip)

(Minimum number of people needed to visit all the edges)

<http://acm.split.hdu.edu.cn/showproblem.php?pid=1116>

Topological Sorting:

<http://acm.split.hdu.edu.cn/showproblem.php?pid=3342> (Given set of tasks and there dependencies. Tell whether it is possible to complete the task or not)

<https://uva.onlinejudge.org/external/103/p10305.pdf> (Given order of a task. Print any solution based on their execution order)

<https://uva.onlinejudge.org/external/4/p452.pdf> ( Given set of nodes and their processing time. You have some constraints about which task can be done after what task. Now you have to process all tasks without breaking the given constraints. Calculate how much time will be required to complete all the tasks.)

<http://poj.org/problem?id=3553> (Given dependence among projects. And processing time and deadline of each project. Calculate the optimal order to complete all the jobs)

<https://uva.onlinejudge.org/external/110/p11060.pdf>

<http://poj.org/problem?id=2367>

<http://acm.split.hdu.edu.cn/showproblem.php?pid=2647>