Round D APAC Test

A. Cube IV

B. GBus count

C. Sort a scrambled itinerary

D. Itz Chess

Questions asked 4

Submissions

Cube IV

8pt | Not attempted **1708/2380 users** correct (72%)

15pt | Not attempted **1492/1679 users** correct (89%)

GBus count

9pt | Not attempted **2048/2354 users** correct (87%)

15pt | Not attempted **1865/2018 users** correct (92%)

Sort a scrambled itinerary

11pt | Not attempted **1623/1914 users** correct (85%)

15pt | Not attempted **1483/1602 users** correct (93%)

Itz Chess

12pt | Not attempted **654/1008 users** correct (65%)

15pt | Not attempted **393/622 users** correct (63%)

Top Scores

dreamoon	100
Kriiii	100
Balajiganapathi	100
uws933	100
NExPlain	100
culaucon	100
fahimzubayer18	100
pattara.s	100
buaamm	100
lijiancheng	100

Problem C. Sort a scrambled itinerary

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the Quick-Start Guide to get started.

Small input
11 points
Solve C-small

Large input
15 points
Solve C-large

Problem

Once upon a day, Mary bought a one-way ticket from somewhere to somewhere with some flight transfers.

For example: SFO->DFW DFW->JFK JFK->MIA MIA->ORD.

Obviously, transfer flights at a city twice or more doesn't make any sense. So Mary will not do that.

Unfortunately, after she received the tickets, she messed up the tickets and she forgot the order of the ticket.

Help Mary rearrange the tickets to make the tickets in correct order.

Input

The first line contains the number of test cases **T**, after which **T** cases follow. For each case, it starts with an integer **N**. There are **N** flight tickets follow. Each of the next 2 lines contains the source and destination of a flight ticket.

Output

For each test case, output one line containing "Case #x: itinerary", where **x** is the test case number (starting from 1) and **itinerary** is sorted list of flight tickets which represents the actual itinerary. Each flight segment in the itinerary should be outputted as pair of source-destination airport codes.

Limits

$1 \le \mathbf{T} \le 100$.
For each case, the input tickets are messed up from an entire itinerary bought by Mary. In other words, it's ensured can be recovered to a valid itinerary.

Small dataset

$1 \le \mathbf{N} \le 100$.

Large dataset

$1 \le \mathbf{N} \le 10^4$.

(The segment for second case in sample can be seen as below) MIA-ORD, DFW-JFK, SFO-DFW, JFK-MIA

Sample

Input	Output
2 1 SFO DFW 4 MIA ORD DFW JFK SFO DFW JFK MIA	Case #1: SFO-DFW Case #2: SFO-DFW DFW-JFK JFK-MIA MIA-ORD

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