

Set up

It was written in C++ 5.3. Run by command

```
g++ -lm -lcrypt -O2 -pipe -DONLINE_JUDGE FleaCircus.cpp
```

Algorithm overview

1. Build a graph
2. DFS to get the path between two nodes
3. If the path length is even number, they meet. If not, they jump forever.

Implementation detail

Graph

Graph is implemented by an array of vector.

Each element in the array represents one node. Each element in vector represents the connected nodes.

ex. a is connected with b,c,d, then g[a] is a vector has b, c, d

DFS

DFS(start, end, parent), which call itself recursion.

The para parent is to prevent it search back.

Path

ex. two nodes are 8,1

If we get path 854 - (1), where length = 3, then they jump forever between 5 and 4.

If we get path $8542 - (1)$, where $\text{length} = 4$, then they meet at 4.